VUZF UNIVERSITY

Finance Department

FINANCIAL AND ECONOMIC CRISIS AND ITS IMPACT ON TURKEY'S EXPORT SECTORS

Ahmet Saridogan

Dissertation for awarding educational and scientific degree "doctor"

Thesis supervisor:

Assoc. Prof. Yakim Kitanov, PhD

Contents

INTRODUCTION 3
CHAPTER I THE CRISIS OF 2008: REASONS AND EFFECTS 5
1.1. The Causes of 2008 Financial Crisis 6
1.1.1. Problems Concerning the Mortgage Loans 8
1.1.1.1. Mortgage Loan Fraud 8
1.1.1.2. Problematic Loans and Loosening of Loan Standards 11
1.1.1.3. The Absence of Transparency and Accountability 14
1.1.2. The Fluctuations in the Real Estate Market 14
1.1.3. Unstable Securitization and Derivative Financial Instruments 16
1.1.4. Credit Rating Agencies 20
1.1.5. High Leverage Rates and Uncontrolled Incentives 21
1.1.6. Shadow (Parallel) Banking System 24
1.1.7. Deregulation Activities and Loose Monetary Policy 25
1.1.8. Other Causes 28
1.2. Effects of the 2008 Crisis 30
CHAPTER II 2008 CRISIS EFFECTS ON THE EUROPEAN COUNTRIES 36
2.1. The Development Process of European Debt Crisis 36
2.2. The Causes of the European Debt Crisis 38
2.2.1. Problems of the PIIGS 39
2.2.1.1. Ireland's Problems 39
2.2.1.2. Problems of Greece 42
2.2.1.3. Problems of Portugal 44
2.2.1.4. Problems of Spain 47
2.2.1.5. Problems of Italy 48
2.2.2. Problems in the Eurozone 49
2.3. The Effects of European Debt Crisis' Development Process 52
2.3.1. Negative Effects on the Market Confidence Parameters 52
2.3.2. Negative Effects on the Growth Performances 55
2.3.3. Negative Effects Regarding the Labor Markets 57
CHAPTER III EFFECTS OF THE 2008 CRISIS ON TURKISH LOGISTIC SECTOR 59
3.1. The Definition of Logistics 59
3.2. Historical Development of Logistics 61
3.3 Developments Signifying The Enhancement Of The Concept Of Logistics After Wwii 65
3.3.1. Globalisation 65
3.3.2. Increasing Rivalry Between Companies 65
3.3.3. The Forming of Radical Changes in Stockpiling Philosophy 65
3.3.4. The Revolution in Computer and Communication Technologies 66
3.3.5. Green Logistics and Counter Logistics 66
3.4 The Development Process of the 2008 Crisis Effects on the Manufacturing Industry and its Sub-Sectors 66
3.4.1. The Development Process of the 2008 Crisis Effects on the Manufacturing Industry 67
3.4.2 Effects of Crisis of 2008 on Textile and Clothing Industry 74
3.4.3 Effects of the Crisis of 2008 on the Base-Metal Industry 81
3.4.4 Effects of the Crisis of 2008 on The Electrical Machinery and Equipment Industry 89
3.4.5 Effects of the Development Process of the 2008 Crisis on the Machinery Industry 95
3.4.6 Effects of the Development Process of the Crisis of 2008 on the Main Automotive Industry 99
3.5. Discussion about the Effects of the 2008 Global Crisis on Logistics Sector 100
3.5.1. World-Turkey Comparison 100
3.5.1.1. Foreign Trade 100
3.5.1.2. Transportation Services 103
3.6. European Union – Turkey Comparison 107
3.6.1. Foreign Trade 108
3.6.2. Transportation Services 113
CONCLUSION 115
REFERENCES 118

INTRODUCTION

In today's world which globalization is at its peak level, the adverse effects of the economic crisis can now spread quickly throughout the global economy due to the transnational financial and real sector dependencies. Interventions towards reducing the negative effects of the crisis have become organized requirements for the developed and developing countries to assure the stability of the global economy as of the 2008 Financial Crisis and the European Debt Crisis. For this reason, the efficiency of the interventions towards preventing the crisis is important by means of international and national economical stability.

The case of the European Debt Crisis' eruption stage gaining a global stance by becoming intense just like the crisis of 2008, is considered as a severe risky condition due to the Turkish Manufacturing Sector becoming highly dependent on the export to the European market by means of production performance indications. Therefore, in order to attain stability against the possible negative effects of the European debt crisis, the efficiency of the coordination and interventions towards enhancing the competitive capacity of the Turkish Manufacturing Sector is particularly important in this matter.

The thesis of the research is that Turkey is interrelated to the EU market and therefore is impacted by any developments in this market. Therefore there need to be specific interventions which to create prerequisites so as the Turkish manufacturing and logistic sectors to suffer minimal negative effects in the event of economic crisis in the EU.

The aim of this study is to reveal the necessity of the interventions that would provide the structural power to the Turkish manufacturing sector against the possible negative effects of the 2008 Crisis on EU Countries and the Turkish Logistic Sector, and especially its effects on the development process of the European Debt Crisis.

The study, carried out in line with this aim, is composed of **three chapters**.

In the First chapter of our study, we analyzed the crisis of 2008, its development process and its reasons. In the second chapter, we put forth the effects of the European Debt Crisis and the crisis of 2008 on European countries. In the last chapter, we tackled the effects of 2008 Crisis on the Turkish Logistics Sector. The main inferences from the research are presented in conclusion.

The **methodology of the research** is primarily from the area of qualitative analysis. In particular, analysis and synthesis, abstraction, induction and deduction are used. The main instruments though which research tasks are met are:

- literature review and analysis;
- theoretical analysis;
- collection, systematization, and analysis of statistical data and their presentation in tables and graphs.

The **scope of the research is restricted** to:

- the manufacturing and the logistics sectors in Turkish economy as those are the main sectors that are prone to suffering impacts from developments in trade partners of the country;
- the latest economic crisis in the EU and the Eurozone in particular as the they are among the main trade partners of Turkey.

CHAPTER I

THE CRISIS OF 2008: REASONS AND EFFECTS

The financial crisis that occurred in the late 2000s, is generally named as the Global Recession, the Global Financial Crisis, the Credit Crunch or the financial crisis of 2008. With regard to many economists and global foundations, the crisis of 2008 is considered as the most intensive global crisis that has occurred since the 1930s Great Crisis. Because this crisis had a negative influence on the financial and real industries of all the developed and developing countries. The production parameters in the global economy deteriorated severely due to the shrinkage of global trade. Ratios of governmental debts to GDP reached high levels due to large scale bailouts, particularly in the developed countries.

There are some precursors of economic crisis. Particularly in countries where large capital flows in, skyrocketing stock and estate values are regarded as the precursors of economic crisis. (M.Reinhart, S.Rogoff, 2008). One of the most obvious precursors of the 2008 Financial Crisis is the fluctuations of the stock and household prices being at high levels (Schwert, 2011).

The first indications of the development process of 2008 Financial Crisis occured in the mortgage loan market. In the USA mortgage loan market, the fluctuation in 2007 caused the shrinkage of credits in the market, and this credit shrinkage turned into a liquidity crisis, and caused some American banks to go bankrupt while giving others tough time. In the later stage, this crisis, originating from mortgage loan market, turned into a global scale crisis affecting global markets as well as various financial transfer mechanisms. Among the reasons for the Financial Crisis of 2008, a lot of factors are mentioned, and at the same time, this crisis being affected by the crisis that happened in the past is a point that has frequently been stressed in recent discussions. If the development process of the Crisis of 2008 is to be historically analyzed, it becomes clear that certain arrangements regarding the financial industries prepared the foundations for the crisis, and some financial innovations deepened the crisis. The reflections of the 2008 Crisis have been felt in a lot of fields. Especially the bankruptcy of the banks in

financial sector caused breakdowns in the stability of the global financial system, and as a result of the decreasing demand, the global trade went through shrinkage. In the introduction part of his book "The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What It Means", with regard to the development process of the crisis, George Soros (2008) writes as follows:

We are in the middle of the worst financial Crisis that has happened since the 1930s. This present crisis is similar to the crisis that has occurred in the last 25 years, however; there is a profound difference in between. This crisis is an parameter of the closing end of the international currency dollar based credit enlargement era. Periodic crisis were the pieces of a boom and bust process. The current crisis is the peak of a supernova that has lasted more than twenty five years."

Precautions taken against the 2008 Financial Crisis and especially the aid packages directed towards financial sector caused the GDP per capita public debts to increase extremely. At the same time, precautions taken against the negative effects of the crisis didn't prevent production parameters from collapsing. Especially the rates of unemployment has reached historically high levels and the parameters of production shrinked extremely. The shrinkage in the financial sector caused the indexes belonging to the stock market to deteriorate excessively.

1.1. The Causes of 2008 Financial Crisis

According to Tridico (2012), definitions regarding the causes of 2008 Financial Crisis can be divided into three groups. According to the first group, the economic instability between the years 2008-2009 has been caused by inflation. The second group views the cause as global oversaving, whereas according to the third group, this economical instability was caused by the structural flaws of the financial system (Tridico, 2012). It is acknowledged that Tridico's classification of the causes for the Crisis of 2008 is not adequately descriptive. For this reason, a detailed analysis should be conducted in order to comprehend the development stage of the Crisis of 2008, since it contains substantially complex structures within.

The first great financial crisis of 21st century includes esoteric (hidden) mediums, unconscious regulators and timid investors. Besides, in this financial craze,

the same determined course has been followed for hundreds of years." (M. Reinhart, S. Rogoff, 2008:2)

The Financial Crisis of 2008 contains within itself certain various development stages. The crisis, which started in the sub-prime mortgage loans, transformed into a liquidity crisis among banks, and consequently became a global scale crisis.

The stages are explained in the figure.

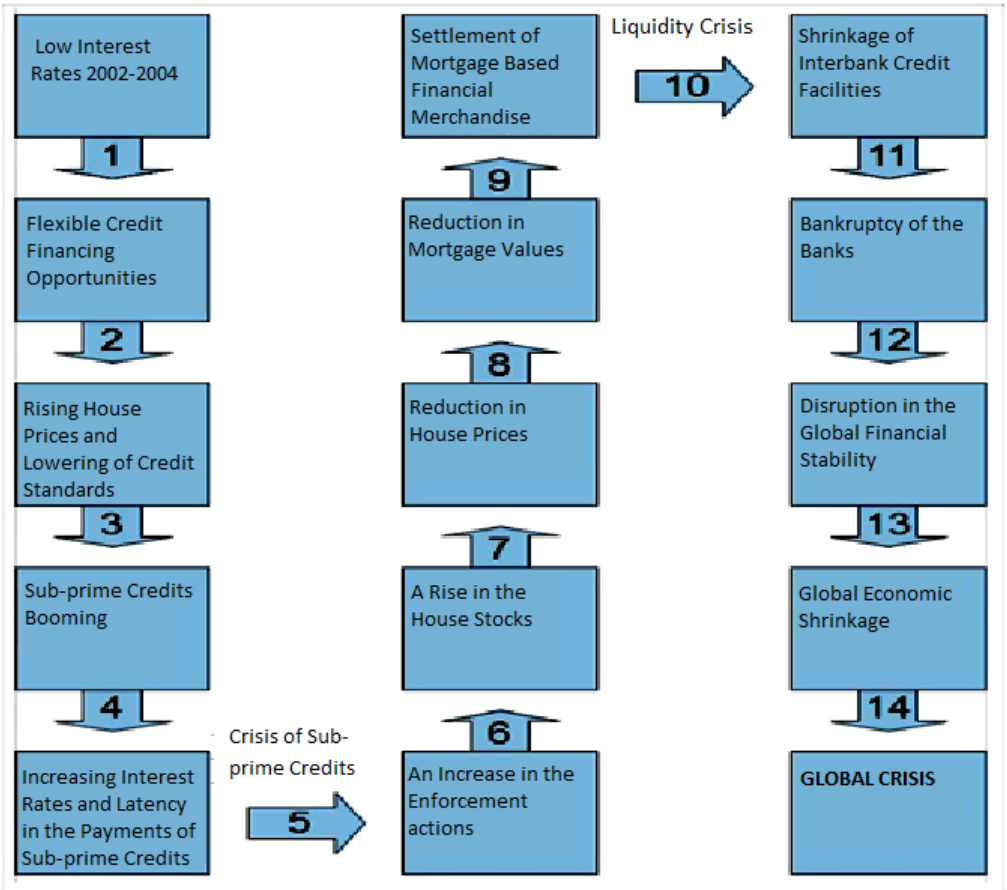


Figure1: Development Stages of 2008 Crisis

Certain causes of the 2008 Crisis derive from flaws belonging to some financial investment mediums dependent on the mortgage loans. This financial investment mediums emerging process began with some problems emerging in the

house market and mortgage loan market. The most important issue arising out of the house market is the process of excessive fluctuation of the house prices. The real estate values skyrocketing in 2000-2006 period and peaking in the year 2006, and their the tendency of rapid fall thereafter, caused the instabilities in the financial and real industries to aggravate. One of the most important flaws of the mortgage loan market is sub-prime credit users being unable to pay their debts in time. In the formation of problems regarding these markets; the fluctuations arising from the natural pattern of the markets, uncontrolled guiding in the incentive system along with the irregular structures in the supervision and coordination operations played significant roles. Under this title, directed towards the causes of the crisis in general; mortgage loan problems, excessive fluctuations in the real estate market, failure in regulatory and supervisory operations, and problems of financial investment mediums are going to be analyzed.

1.1.1. Problems Concerning the Mortgage Loans

In the formation of mortgage loans, there are some fundamental vulnerabilities. These vulnerabilities occur due to the risks accommodated by factors such as the loan parties, the existence of problematic loans and the messiness of the regulatory structure.

As a result of these vulnerabilities, rise in mortgage loan fraud activities, loosening the credit standards, increasing the weight of the risky credits and a decrease in the application of the credits, and problems as such keep occurring. These mortgage loan market problems had a profound effect on the development and deepening of the Financial Crisis of 2008.

1.1.1.1. Mortgage Loan Fraud

Mortgage loan fraud has appeared as a low risk and a high income criminal activity. Mortgage loan fraud can be divided into two categories; the act of fraud to own a house/estate and the act of fraud for profit.

In the act of fraud, perpetrators give false statements to make their income look higher and hide their debts. Act of fraud for profit is mostly an organized act in which detailed plans are made to gain illegal income through more than one credit loans and the selling of a real estate (FBI, 2007; FBI, 2003).

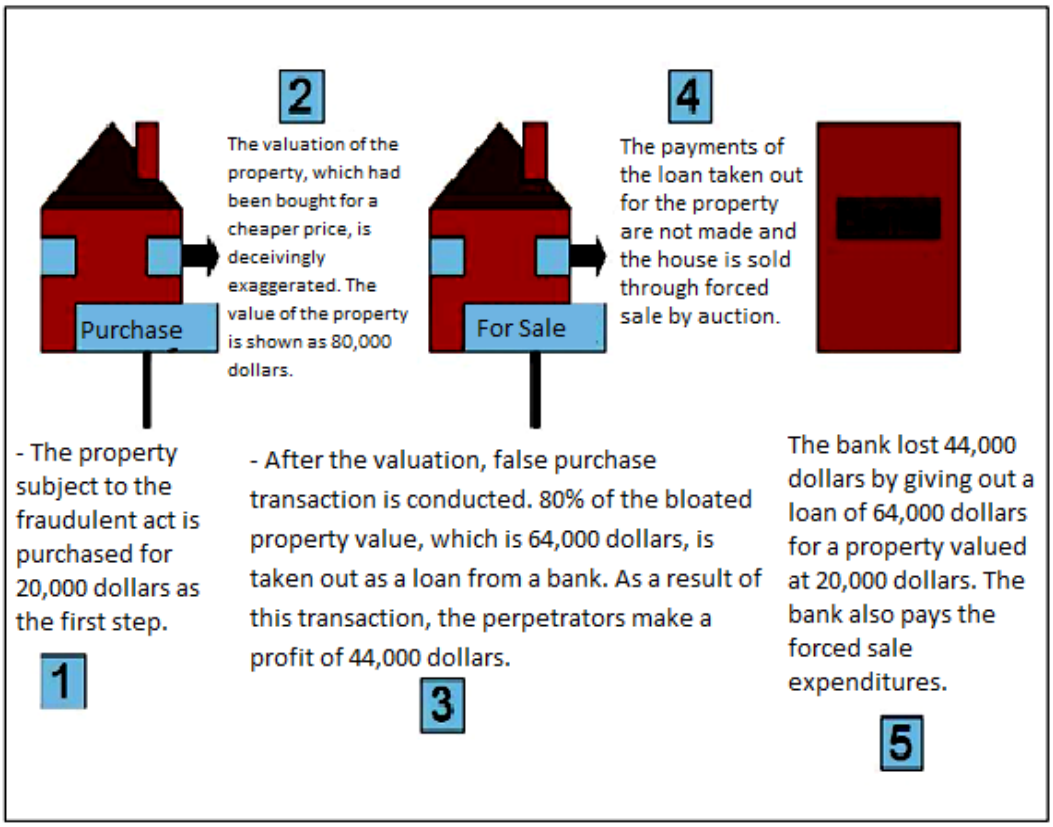
Including accountants, mortgage loan brokers and credits, jobs related to finance are considered as the most common and suspected occupations by means of fraud activities (FinCEN, 2006: 15). In other cases, mortgage loan fraud may be practiced by the employees of the financial institutions. Act of mortgage loan fraud committed by the financial institution employees has been affecting the credibility and the solidity of the financial and credit institutions negatively (A.Duke, 2009).

According to FBI (2009), various crime organizations and gang members have been detected to have involved in the act of mortgage loan fraud. Also according to FBI's report (2010), Asia, Balcan, Armenian, La Costa Nostra, Russia and Eurasia related organized crime gangs were confirmed to be involved with various mortgage loan fraud activities such as short sales and credit origination programs.

Tendency of prices in the house market to decline and the increase in the unemployment rates create an ideal environment for the acts of mortgage loan fraud. At the same time, sub-prime mortgage loan problems regarding the mortgage loan market is an important factor triggering the act of fraud directly and indirectly (FBI, 2008a). There is a positively strong relation between the activities of mortgage loan fraud and enforcement actions. The enforcement action numbers reaching up to 2.8 billion with a rise of 120 % between the years 2007 and 2009, were 2.9 billion with a rise of 2 % in 2010 (Realty Trac, 2010). Unemployment, the rearrangement of mortgage loans and credit amendment operations emerged as the most important factors causing the enforcement actions to increase (B. Maloney, E. Schumer, 2009).

In this course of the enforcement actions, acts of fraud has increased rapidly. Mortgage loan fraud acts are practiced by their perpetrators using various methods. Figure 2 below is an attempt to expose a simple act of mortgage loan fraud.

Figure 2: An Example of Mortgage Loan Fraud



Contractors are choosing to deplete the housing stocks by using some tricky ways. According to the FBI (2008b) example, a building contractor wants to sell a house valued at 200,000 dollars. The contractor shows the value as 240,000 dollars by inflating the features of the house and finds a purchaser whom he/she previously reached into an agreement with. The purchaser takes out a loan from the fund provider as much as 80% of the inflated house price, and actually the loan is equivalent to 100% of the house's real value. By this way, the contractor redeems the value of his/her estate and does not demand 40,000 dollars as required by their agreement.

Mortgage loan fraudulent activities has become an ever increasing problem in the USA. Fraudulence activities are causing billions of dollars of loss in the mortgage loan market and this deficiency is increasing year by year. Approximately

0,7% of all of the mortgage loans implemented in the year 2009 were carried out fraudulently (Whelan, 2010).

1.1.1.2. Problematic Loans and Loosening of Loan Standards

Another problem regarding the mortgage loan market is the loosening of loan standards, and thus the number of the problematic loans increase. Low interest rates in the USA and influx of the global funds have provided the conditions for an environment of easy loan give outs in the period before the crisis. Thanks to easy loan circumstances, there was an excessive increase in the house prices, and consumerism financed by debt was given incentive. Where there were abundance of loans, low interest rates and rising house prices, loan standards were loosened in the way that especially lower income class could buy houses they wouldn't be able to otherwise. However, with the decline in the housing prices and the loan standards deteriorating the financial system fell into a serious Crisis (Murphy, 2008).

While the mortgage loan market was limited to a narrower mass, there was a skyrocketing in the sub-prime mortgage loans with the loosening of loan standards (Dell' Aricca, IgAN, Laeven, 2008). Especially at times when the interest rates were low, the sub-prime mortgage loans, given without the inspection credit ratings and income levels, increased excessively in proportion.

Automatic loan applications (automated underwriting) has been an important factor that speeded up the process of loosening loan standards. With the automated underwriting, costs of loaning have decreased, and this contributed to profitability greatly (Passmore, Sparks, 1997).

The loosening of mortgage loan standards and the loan process became quicker with the automated underwriting have been effective in the rapid expansion of the sub-prime mortgage loans.

One of the most significant reasons of the volumetric increase of risky loans is that the funding institutions in financial the market before the crisis changed the

preferences of extending loans for the sake of higher profit to be made from risky customers. Institutions began to behave as if they were on a hunt to extend loans to riskier clients. Due to changing loan policies of the banks, sub-prime mortgage loans have gained the upper hand against the safer mortgage loan credits (Kirchoff, Keen, 2007).

The decrease in the quality of loans caused the risks in the financial markets to increase excessively and more than estimated. While the sub-prime mortgage loans value was 35 billion dollars in 1994, it roughly tripled in the year 1999. In 2006, the total volume of these loans reached up to 600 billion dollars. In the period of 2004-2007, risky loan options and indebtment were promoted by lowering the standards of mortgage loans and by taking the risky debtors into account. Financial institutions acting in the direction of extending risky loans, caused the average interest rate gap between sub-prime and prime loans to decrease greatly in 2001-2007 (S. Demyanyk, Van Hemert, 2008). In other words, bad credit kicked the good credit out of the market. In the Figure 3 below, the changes in the sub-prime mortgage loan total volumes and in the total mortgage loan shares

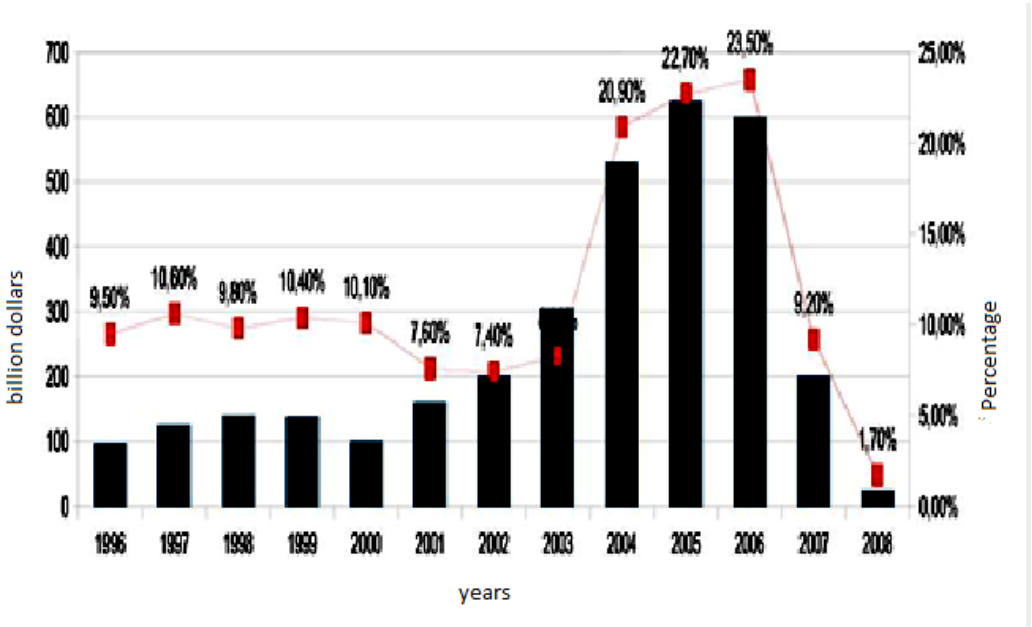


Figure 3: Subprime Mortgage Loan Development (1996-2008) Source: GPO (2011: 70)

As can be seen from the figure above, the volume of the sub-prime mortgage loans every year rose from 100 billion dollars in the year 2000 to 600

billion dollars in 2006. This rise was also reflected highly on the share of sub-prime mortgage loans in the total of mortgage loans. The sub-prime mortgage loan share which was 7,1% in 2001, rose to 23,50% in 2006 with an approximate rise of 200%. However, with the crisis process aggrevating, sub-prime mortgage loans that were extended by years, came to experience a drastic shrinkage both volumetrically and proportionately. Deterioration of the loan opportunities and financial institutions leaving their preferences of extending risky loans because of the deteriorating market circumstances, reveal as the most important reasons behind the shrinkage sub-prime mortgage loan. The total sub-prime mortgage loan sum of 600 billion dollars in the year 2006 recessed to 30 billion dollars volumetrically in 2008. Sub-prime mortgage loans which were 600 billion dollars in 2006 declined to 30 billion dollars in 2008 by means of volume. In the same way, sub-prime mortgage loans proportion of share in the total mortgage loans declined from 23.50% in 2006 to 1.7% in 2008.

The loosening of loan standards in the pre-crisis era caused an increase in the usage mortgage loans with adjustable interest rates. In times when the interest rates were expected to drop, the loanees turned towards mortgage loan agreements with adjustable interest rates. However, the gradual rise in the interest rates in the period of 2004-2006, caused the advantageous situation to reverse and therefore caused problems to arise in the back payment of the loans (Simkovic, 2011).

The geographical distribution of the sub-prime mortgage loans, has a challenging structure. Sub-prime housing loans are concentrated in the fastest growing regions, where there are newly built construction sites, such as in Florida, California, Nevada and Washington D.C. The housing prices in these regions have shown a faster increase averagely compared to other regions. Besides, in areas which have lower income and higher unemployment rates, sub-prime mortgage loans are more intensely concentrated (J.Mayer, Pençe, 2008).

Lag and enforcement actions in the payments of the mortgage loan market are concentrated among the lower income loanees. In the payment of the mortgage loans, the increase in the lags and enforcement actions are generally related to macro economic reasons such as an increase in interest rates and in the unemployment rates, and a decline in housing prices. These depreciations in the macro economic

parameters have contributed to the deepening of the crisis (J.Mayer, Pençe, M.Sherlund, 2008).

1.1.1.3. The Absence of Transparency and Accountability

The absence of transparency and accountability in the mortgage loan market, occurs as an important factor influencing the development of the crisis. The parties not being accountable of the other parties' actions and their possible loss, provided the basis for making arrangements freely for the financial products.

Especially, the sale of investment mediums, which contain potential loss within, without any transparent notice, the sale of risky marketable securities and forming of the risky mortgages has shown a large increase as the contracting parties don't have mutual liability. As a result of the absence of transparency and accountability, high-risk financial mediums put up for sale and high-risk mortgages, caused the crisis to deepen and the fragility to increase in a way that it would distort the stability in the financial market

1.1.2. The Fluctuations in the Real Estate Market

Sudden fluctuations gone through in the housing prices, emerged as an important factor affecting the development of 2008 Crisis and its effect growing larger through various mechanisms. The fluctuations in the housing prices have a profound effect on the mortgage loan values. Especially in the period of the Financial Crisis in 2008, the decline in the housing prices caused the mortgage loan values to decrease. This case caused sharp declines in the values of the financial products related to these loans, and in the values of the mortgage loans.

Sharp fluctuations in the housing prices in general; occur due to the fragility that formed with the deteriorating loan standards and harsh changes in the interest rates. The excessive rise in the housing prices is considered as one of the most significant precursors of the 2008 Crisis. Since the rise of the housing prices gave incentive to excessive loan use and the use of risky financial products dependent on the mortgage loans. This development of the process caused an increase in the

financial fragility and led to the housing prices to decline drastically, and triggered financial instability.

Some factors arise in the background of the excessive rise in the housing prices in the pre-crisis period until the year 2006. Robert Shiller mentions that the reasons behind the society to acquire houses are one of the most important of these factors.

"Since the late 1990s, there has been a boom in the housing prices and realty ownership, and investing in a house for financial security and even for wealth was seen as a right course of action."(Shiller, 2008:5).

In the figure 4 below, government policies, banking policies and client preferences that rise to prominence in the booming of the housing prices until the year 2006, have been attempted to put forth.

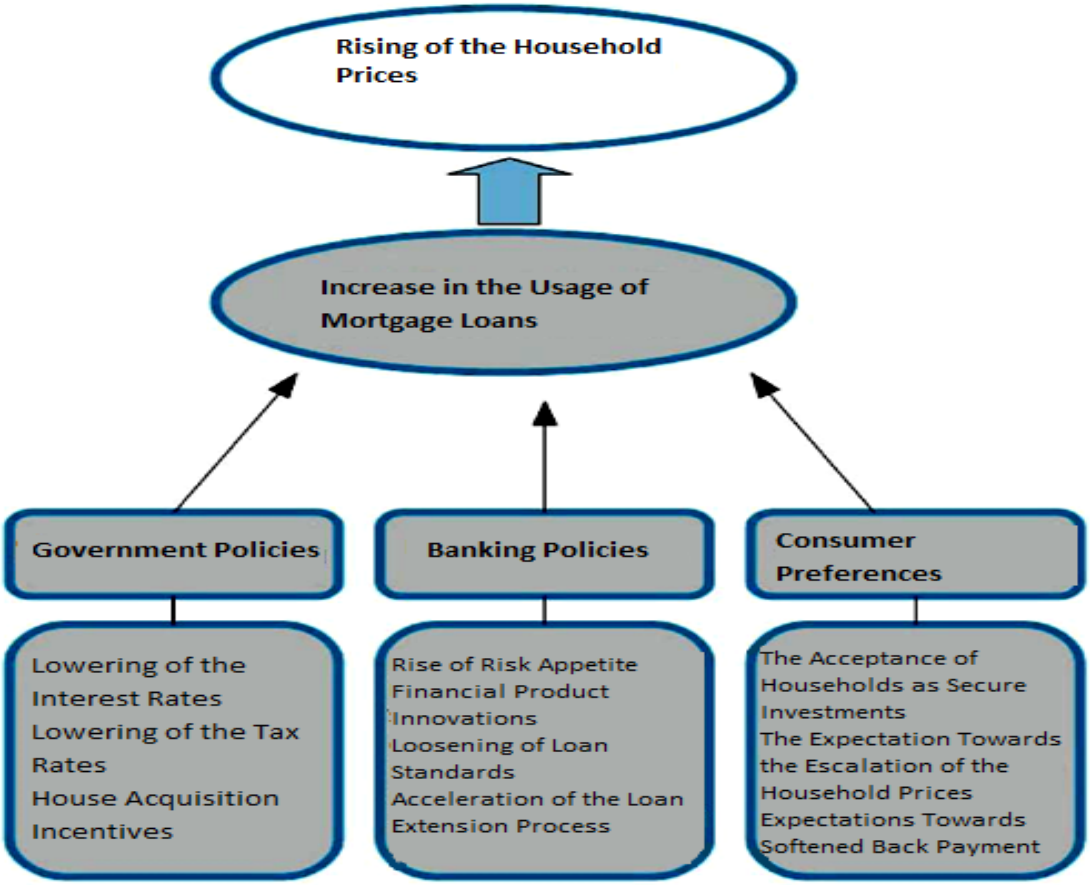


Figure 4: Factors Causing the House Prices to Rise

In the period between the years 2001-2003, national average housing prices in the USA changed between 2,9 and 3,1 times an average household income

Figure 4: The Factors that Boost the Real Estate Prices

In the period between the years 2001 and 2003, national average of the housing prices changed between the 2,9 and 3,1 times higher than the income of an average household. This rate rose to its peak level from 4 times in 2004 to 4,6 times in 2006. Estate owners encouraged by the rising housing prices between the years 2000 and 2006, with the temptation of the low interest rates of the period, according to their consumption expenditures and in parallel with the rise in their properties for the payment of debts, they followed the course of taking a second mortgage loan.

1.1.3. Unstable Securitization and Derivative Financial Instruments

Unstable securitization implementations have been an important factor influencing the development of 2008 Crisis (Boeri, Guiso, 2007). At the same time, the implementations of unstable securitization have been accepted as one of the most important mechanisms that transferred the effects of 2008 Crisis to the global economy. Securitization implementation ways are classified as mortgage based securitization (MBS), asset based securitization (ABS), covered debt obligations (CDO) and commercial mortgage based securities (CMBS).

Securitization is considered as an important instrument in the matter of diluting the risks. Dilution of risks in the financial market carries great importance by means of the stability of the economical structure and its solidity against possible crisis. At the same time, securitization implementations provide financial convenience and finances for the loans to be extended, from the point of banks.

"…securitization gives the global investors more opportunities than their potential assets provide and ensures a full calibration to the amount of risk in their

portfolios. Government regulators and policy makers also approve securitization in order to diffuse the concentrated risk and to decrease the possibility of financial risks" (Zandi, 2008: 12).

As well as the securitization implementations having important benefits for the financial system and financial institutions, the implementations contain some risks within. Especially unstable securitizations cause the financial pressure to increase as a result of the problems they convey by means of riskiness. Especially in the implementations of securitization in the USA, increasing the weight of the risky sub-prime loans, and having no information about who holds how much of these risky loans, are enhancing the uncertainty and the fragility of these implementations. (Wylosz, 2007).

The total volume of the securitizations directed towards the mortgage loans and realty sales in the period of 2003-2008 reached up to 2 trillion dollars.

In the issuance of securities supported by mortgage loans, especially the share of sub-prime loans doubled up between the years 2005 and 2007. In the balance sheets of the banks, holding these assets excessively caused the sub-prime loan problem to become a deep crisis.

The securitization implementation, which contributed to the development of the Financial Crisis of 2008 on a global scale the most, is the collateralized (secured) debt obligations. The total cost of CDO (collateralized debt obligations) implementations for the financial institutions between the years 2007-2008 were approximately equivalent to 542 billion dollars. This negative CDO performance that caused a loss of 542 billion dollars in the financial institutions, occurred as a resulf of some fundamental problems in the market they belong. These issues in CDO market were;

CDOs forming in the way that they would accommodate unstable and excessively risky debts, a nonliable structure in underwriting operations, and a flawed credit noting procedure's existence can be set forth as problematic (Barnett-Hart, 2009).

In the Figure 5 below is given the global CDO issuances' change graphic between the years 2000-2011.

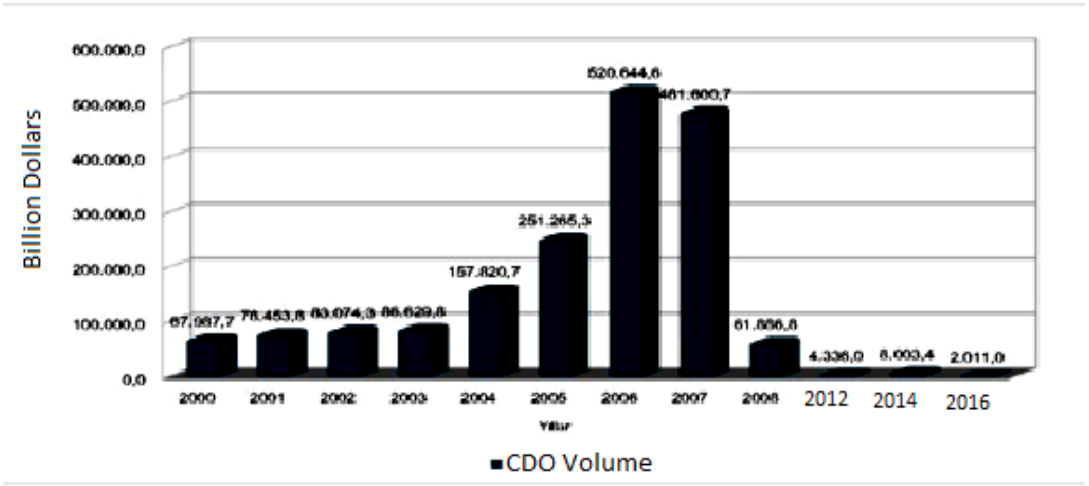


Figure 5: The Volume of Global CDO Issuances as the years (2000-2016)

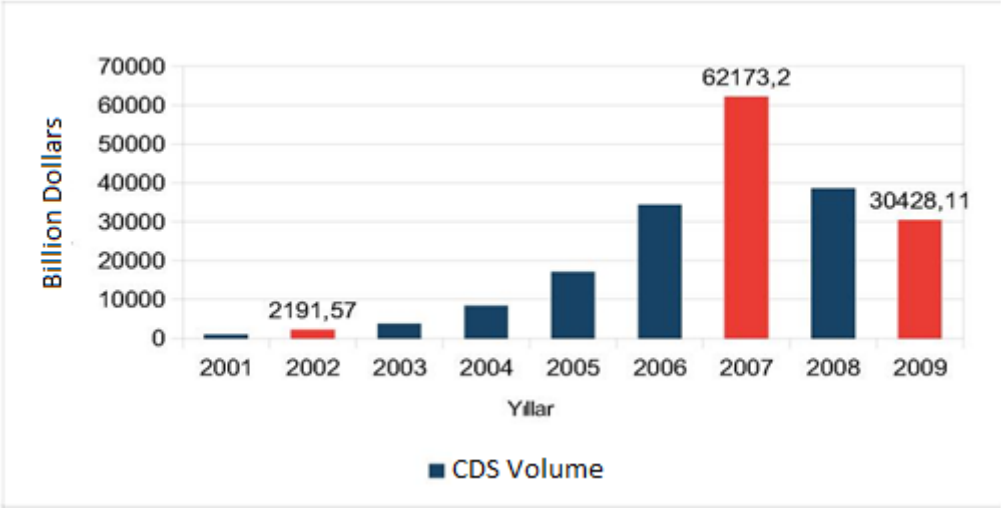
Above in the Figure 5, the pre and post crisis era fluctuations of the global CDOs are clearly shown. In the pre-crisis period, the global CDO issuance which was approximately 68 billion dollars in the year 2000, reached up to 520,6 billion dollars until 2006 with a rise of 6,6 times. However; CDOs, which were discharged due to the excessive risk they carried at the time of the crisis, shrinked by the rate of 99% from 2006 to 2009, and then declined to 4,3 billion dollars.

Financial product innovations and especially complex derivative financial instruments arose as two important factors influencing the development and the spreading of the Crisis of 2008. Due to the complex structures of the derivative financial instruments, it is impossible for the individual investors to make risk evaluations. For this reason, the investors are acting by taking the evaluations of the credit rating institutions as references. Yet, according to Nouriel Roubini (2008), doing an accurate gradation for the complex derivatized products, is not possible due to the structure of these products.

As one of the derivatized investment instruments, especially credit default swaps (CDS) played an important part in the development of the global financial crisis. Credit default swaps expanded dramatically in the pre-crisis era and shrinked

drastically in the post-crisis era. In the Figure 6 below, changes in CDSs are pointed out by years.

Figure 6: Changes in Credit Default Swaps (CDS) (2000-2009)



Source: Bank For International Settlements www.bis.ora

In the Figure 6 above, CDS fluctuations in the pre and post crisis era is explicitly noticeable. In the pre-crisis era, CDS issuance, which was rougly 2.2 trillion dollars in 2002, reached up to 62.17 trillion dollars by 27 times as much. Nevertheless, worsening market conditions and excessive risk environment caused these type of complex financial products to shrink volumetrically. From 2007 to 2009, CDS issuance, which shrinked by 50%, declined to 30,4 trillion dollars.

As far as Carmen Reinhart M. (2008) is concerned, similar development processes in several economic crisis have been gone through for hundreds of years. The case in which an innovation appears, is generally defined as the starter of these processes. The instruments such as collateralized debt obligations, which were designed by financial engineering, can be shown as an example of this process of innovation. Investors, who approached these products carefully at the first stage, were triggered in the direction of making an invesment on these instruments as extraordinary benefits revealed. So, as in 2007, values of these instruments swell

depending on the demand and go up to the blasting point. When the presence of the risks grow intensely, the process is reversed, and as in 2009, decisions regarding the discharge of these kinds of instruments, are triggering the demand-induced crisis.

According to Spaventa (2008), the mortgage loan crisis is a product of the recent financial innovations that developed unevenly and the deep flaws that originates from the new business models of the banks. Thanks to instantaneously operating computer softwares and the internet, global financial instruments trade is made possible in every hour of the day. As well as inadequate adjustments and absences of transparency, instantaneous global trade along with computer transactions have had an ever growing status for the financial sector. Rapid fluctuations in the volumes of the transactions, deriving from the nature of special technologies, are emerging as one of the factors that feed the bubbles in the financial products (Perez, 2009).

1.1.4. Credit Rating Agencies

Credit rating agencies emerged as an important factor in the development of the Crisis of 2008 and have been the subject of recent discussions about its functioning.

Credit rating agencies took no legal obligation for any ratings that they graded in the pre-crisis era (Portes, 2008). In the USA, many lawsuits were filed against the market actors of the financial instruments relying on mortgage loans and these credits. In the lawsuits, credit rating agencies advocated that their grading only consisted of the institutional idea. For this reason, they stressed that they were not responsible for any of the investors complying with these ratings or not (Efing, Hau, 2013).

With regard to IMF's global financial stability report in 2007, the volume of the derivative products related to financial assets, were recorded as 3,7 times higher than the world GDP by the end of the year 2005 (IMF, 2007). Complex-structured products that formed as a result of the financial innovation being graded highly by the credit rating agencies, have given incentive to investments on these products.

High credit ratings that were attained to these instruments have intensively directed a wide range of investors such as smaller banks, retirement funds, insurance companies, hedge funds, other types of funding and individual funds. (Onado, 2007)

Rating agencies failed at evaluating the possible risks of sub-prime credits correctly. This was caused by the serious questioning of the credit rating agencies' credit ratings related to their risk assessments in 2007-2009 period. Credit ratings regarding the structured finance products rapidly deteriorated as of 2007. With this deteriorating, credit rating agencies were subject to many criticisms claiming that they used inadequate statistic grading models. (Benmelech, Dlugoz, 2009)

Joseph Stiglitz (2009) points out to the credit rating agencies as one of the most important causes of the crisis. Credit rating agencies giving high credit ratings for the new financial products caused the demand on these products to rise. In Stiglitz's view, if the credit rating agencies had not graded complex financial products highly, the demand regarding these products would have been low, and the crisis would not have followed such an intensive course. Credit rating agencies contributed to the development of the crisis by supporting the low standard loans given by investment banks. (Stiglitz, 2009: 3)

1.1.5. High Leverage Rates and Uncontrolled Incentives

High leverage rates and wrong incentive implementations emerge as important factors in the development and the deepening of the crisis. High leverage rates have some advantages and risks from the point of the financial institutions.

High leverage rates not only support the bubble creating activities of the investment banks and other banks, but also enables them to gain more pricing power in the economic activities. These advantages that were provided by the high leverage rates assured the banks to make more profit.

Profitability of the banks, which have high leverage rates in the USA, were extremely high in the pre-crisis era, but high profitability could not prevent the crisis from developing and this condition revealed the vulnerabilities of the bank's assets

and equities. (Tregenna, 2009)

High leverage rates cause a lot of risks for banks in the time of crisis. Banks in debt which engage in extremely risky activities, are facing dificulties in times of crisis and some of them, due to not being able to fulfil their liabilities, go bankrupt.

Capital stock of a financial institute acts as an insurance against the possible fluctuations in the values of their assets. While under adverse market conditions such as in the crisis, an investment of capital in the aim of fulfiling liabilies and providing adequate funds for depositors is of vital importance. But the banks, which think that the alternative cost of holding the capital is high, are looking for other ways to loosen the rule of capital. In the pre-crisis era, some investment channels and financial instruments were given incentives with warranties for the banks in an attempt to fix the problem. Especially financial instruments such as structured investment vehicles (SIV), provided the basis for the loosening of this obligatory capital rule. The banks made extremely high profits through structured investment vehicles during the pre-crisis period. However, serious problems arising from structured investment vehicles caused the banks to go through liquidity crisis (Cecchetti, 2007a).

Deposit insurance and lender of last resort implementations, besides having beneficial aspects, also have some negative aspects which trigger some excessively risky behaviour. Implementations such as these provoke the financial institutions to take more risks and cause the moral hazard problem to arise (Cecchetti, 2007b).

Moral hazard problem caused by high leverage rates and incentive implementations makes it clear that these implementations are risky in nature. Specifically, a mortgage loan creditor in England, Northen Rock's financial deficiency revealed the vulnerabilities of these implementations. Northen Rock took on the task of being a mortgage loan creditor by financing the long term loans with the funds he received from the short term loan market. In August 2007, with the pressure escalating in the commercial paper market, Northen Rock was confronted with the problem of liquidity in fulfiling his liabilities and went bankrupt. Financial institutions are considered to be vulnerable against crisis due to the financial pressure that such problems cause. (Cecchetti, 2007b)

Risk taking behaviour of the credit agencies emerge as a necessity of the financial markets. Generally, high risk loans have higher potential of profit. In the USA, state-subsidized credits of this kind has created the problem of moral hazard and triggered the investor behaviour in the direction of taking too much risks. (Monacelli, 2007)

The Crisis of 2008 has become the topic of recent discussions as a modern version of the traditional banking crisis. Incentive system in the market, causing the financial institutions to make wrong decisions, is explained by the concept, moral hazard. The source of the moral hazard problem caused by incentives, is considered as a highly important case for eliminating the effects of the crisis that may occur in the future (Vives, 2008).

Against their debts, financial institutions kept hold of the illiquid assets. With the occurence of the financial shock, financial institutions trying to discharge the illiquid assets at the same time caused a liquidity depreciation in the financial market. This condition threatened the financial stability due to the escalating financial pressure (Giovanni, Spaventa, 2007). One of the most important factors, affecting this unstable financial structure to develop, is the high leverage rates. In the figure 7 below, changes in the USA's five biggest invesment bank leverage rates are given by years. Among these banks, Lehman Brothers went bankrupt, and Bear Stearns was sold to JP Morgan Chase at a reduced price. For this reason, there aren't any leverage rates belonging to the year 2008 for these two banks.

Bear Stearns is shown as "BSC", Goldman Sachs as "GS, Lehman Brothers as "LEH", Merill Lynch as "MER" and Morgan Stanley as "MS" on the figure below.

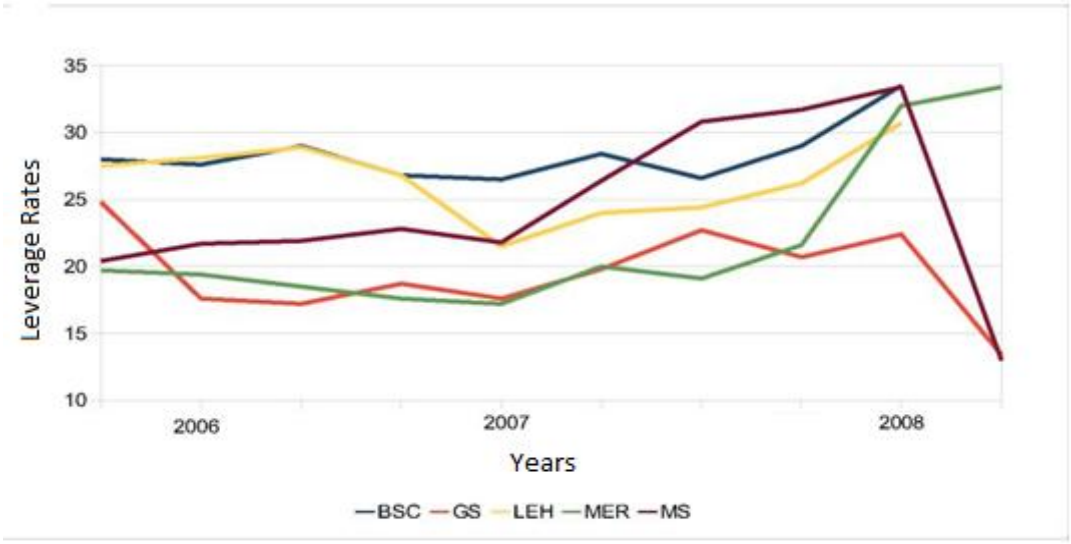


Figure 7: USA Investment Banks Leverage Rates (1999-2008)

It is obvious from the figure that the leverage rates in the pre-crisis period are realizing at high levels. However, in the post-crisis period, Morgan Stanley reduced its previous leverage rate of 34 to 13 by 50%. The most important cause of this situation is riskiness, dependent on the indebtedness in the financial market, escalating extremely.

1.1.6. Shadow (Parallel) Banking System

Shadow banking system emerges as an influential factor in the development process of the 2008 Crisis. Shadow banking system has been an important transmission mechanism in the spreading of sub-prime loan losses to the financial system (Hsu, Moroz, 2010:18).

Shadow banking system provides financing funds for credits by turning long-term assets into liquid with short-term loans. Transformation of the due dates and loans that happened through shadow banking system, contributed greatly to the value increments in the prices of housing and of commercial real estates before the Crisis in 2008 (Pozsar vd, 2012: 4).

In the shadow banking system, credit intermediation activities are operated

without direct or open access to public fundings such as liquidity and credit warranties. Shadow banks contributed to the boom of the credits in the early 2000s and went through a general depreciation with the fundamental flaws occuring during the development process of the Crisis in 2008 (Adrian, B.Ashcraft, 2012: 1). Harboring extremely risky and hazardous assets due to the absence of supervision and high leverage rates, shadow banks went through hard times with the conjuncture reversing and played an important part in the deepening of the crisis.

In the pre-crisis period, shadow banking system has volumetrically become larger than the traditional banking system. Its disorganised structure and higher leverage rates were effective in its expansion (GPO, 2011: 32).

The increasing integration of global banking as a result of securitization and capital market developments, displayed the growing market dominance of the shadow banking system. Growing market dominance of the shadow banking system has had a profound effect on the global financial system (Adrian, Shin, 2009).

Shadow banking system conveys some irregularities within such as its structure being left out of the supervision activities and higher leverage rates compared to the traditional banking system. Besides, these structures increase the fragility of the shadow banking system (K.Tarullo, 2012).

1.1.7. Deregulation Activities and Loose Monetary Policy

The financial system, obtaining an irregular and fragile structure as a result of the deregulation activities and loose monetary policies, was an important factor in the development of the Crisis in 2008.

Certain issues about the sub-prime mortgage loans have been in the scope of recent discussions in the USA. Mortgage loan creditors have some clauses and brokers that are left out of the federal banking regulations. For brokers, high risk credits mean higher brokerage. For this reason, the weight of riskier credits in the market are enhanced through brokers and the fragility in the market is aggravating (Dehesa, 2007).

Problems arising out of the sub-prime mortgage loan market in the USA has made way for the development of the crisis, however; flawed institutional structure of the financial system and financial regime implementations since the 1980s, were revealed as the deep causes of the crisis. The deregulation activities since the 1980s in the company of the new financial architecture, caused the extreme volumetric expansion of the financial sector, financial products to become more complex and financial leverage rates to increase excessively. In consequence of these conditions, financial crisis have become a constant menace global economy. Key structural flaws of the financial system were an important factor in the triggering of 2008 Crisis and the spreading of it to global markets (Crotty, 2008).

Some law amendments were also seen as the causes of the crisis and its growing influence. In November 1999, Gramm-Leach-Billey law (Financial Modernization Law) was adopted. With the law amendment in 1999, Cam-Steagall Law dated 1933 was abolished. This code of conduct was regulated in order to control the market after the painful lessons in 1929 Great Crisis. With the Financial Modernization Enactment dated 1999, deregulations were realized in these markets so that financial institutions can freely act in fields such as Banking, Insurance, Securities and Financial Services (A. Calabria, 2009).

Supervisory and regulatory activities are considered to be more efficient in times when economy is good, but more inefficient when the economy deteriorates. For this reason, regulatory and supervisory activities should be operated not to eliminate crises, but to prevent them from happening. Because, within the periods of economic crisis, these activities can not be realized efficiently in the suitable environment. The same thing applies to the moral hazard preventing policies. In the periods when asset values have excessive fluctuation tendencies, the implementation of the moral hazard preventing policies, contains a difficult process within as in the Crisis of 2008 and the desired efficiency could not be attained (Ubide, 2007).

B. Taylor (2009a) views the interaction between financial bubbles and loose monetary policies as an important source for the crisis. Monetary policies, tax policies and home ownership promotion policies in the USA has created the convenient circumstances for the credits to expand precariously (Steil, 2009: 27).

Banks having an infinite source of money and their speculative activities have caused the prices of the financial products to fluctuate excessively (King et al; 2012).

B. Taylor (2009b) suggests that monetary excessiveness is the main cause of the housing boom and bust which caused financial turmoil in the USA and other countries. Between the years 2001 and 2004, the federal reserve reduced the interest rates from 6,5% to 1%. This reduction of interest rates is claimed to be done in order to smooth the devastating effects of the dot-com boom and the attacks of 9/11. Later on, FED increased the federal interest rates considerably between the dates July 2004 and July 2006. The reason behind the increase of the interest rates in this period is to deplete the housing boom and reduce housing speculations. However, this condition caused the 2008 Crisis by triggering financial issues with various mechanisms. Due to the inverse proportion between the interest rates and housing prices, adverse market conditions forming speedened up the development of the crisis and boosted its effect.

Central banks only aiming the price stability is a topic of discussion in the current issues. Besides the aim for inflation, a lot of economist suggest that with regard to stability, the supervision of financial institutions and the prevention of the bubbles regarding the asset prices should be controlled by the central banks (DeGrauwe, 2007). Yet, the view regarding the effects of monetary policies on realty prices being very slow, has been put forth as an opposing view.

Central banks are declaring the price stability as an initial aim for sustainable growth. But financial stability also has an importance as much as the price stability in providing sustainable growth. In the absence of a fully functioning stabile financial system, there is no way for an economy to develop in a sustainable way. As was seen in the last global crisis, financial markets and institutions can go through instability in a small time period. For this reason, it is of great importance to assure the financial stability to be among the primary aims of central banks (Cecchetti, 2007c).

Housing acquisition (mortgage) programs, applied by the US government is considered as one of the most important reasons behind the crisis. Mortgage rates in

the US were an important aim for the government policies. In parallel with this aim, as an easiness provided in the access to mortgage loans for lower income and middle class debtors, this was subsidized by the government (B.Avery, P. Brevoort, 2011). The inflation of housing boom by lower credit standards and busting in the end, is accepted as a result of the government housing acquisition policies (Wallison, 2011:2).

Government in the USA used institutions such as Fannie Mea and Freddie Mac in order to reach its aims by means of housing acquisition. Government subsidized mortgage loan institutions were among the most important actors of the crisis starting in the year 2007 (Bolotnyy, 2012). The aims directed at increasing the affordability of houses in the USA, caused the governmet subsidized mortgage loan institutions to extend loans to high risk debtors since 1992. These implementations speedened up the process of mortgage loan market to go into crisis by causing the housing boom to inflate (Roberts, 2010).

1.1.8. Other Causes

Other factors influencing the development process and the deepening of the Crisis of 2008 are as follows;

- the shrink of sharing in the knowledge-based economy
- the deteriorating of governance
- the rise of economical inequality
- speeding up the globalization process
- global instabilities to arise
- speeding of the capital flow globally.

According to Pagano and Rossi (2009), some reasons of the 2008 Crisis are caused by the knowledge-based economy becoming the closed world of global monopolies and its over-institutionalization. In other words, the weaking of the sharing mechanism in the knowledge-based economy has caused problems deriving

from the lack of information to arise.

The wearing off happening in the governance since the Crisis of 1929, is considered as an important factor in the happening of the 2008 Crisis (Konzelmannvd, 2010).

According to Rajan (2010), increasing rate of income inequality caused a credit balloon to form and created the basis for a financial crisis to occur in the USA. With the growing inequality, low income group was supported by means of credit standards in an effort to keep the consumption alive (D. Bordo, 2012).

As the Crisis of 2008 is on a global scale, it is accepted as a crisis of globalization by a lot of economists (Rochan, Rossi, 2010; Tropeno, 2010 ; N. Pitelis, 2010). Financial system acquiring a global dimension more and more, has caused the inflow of capital to speed in an uncontrolled way. Capital inflow and outflow being minimized to instantenous transactions have accelerated the capital mobility and this condition caused an increase of financial pressure by making the financial system more fragile.

In Stiglitz's (2000) view, concept of free movement of capital showed a fundamental difference to the concept of free movement of goods. Capital flows materialize depending on assymetric information, mediation problems, reverse decision, moral hazard and undercapitalized market. These kinds of problems may occur in the trade of goods ve services, but they are more efficient and inherent in financial capital flows (Arestis, Sing, 2010).

In the financial markets where the capital movements are intense, the presence of these negative factors caused bubbles to occur in the financial assets. The accelaration of capital flows in the USA, caused the financial asset prices to rise excessively.

The Crisis of 2008 has caused the fundamental security flaws in the states and the world in general, to reveal. These security flaws created instabilities in the dynamics of trade, investment and consumption (Morgan, 2008, 2009, Wade, 2008). Global instabilities reveal as one of the most important reasons of the Crisis in 2008.

Transnational high rate of savings and investment instabilities are

considered to be among the main causes of the crisis' development (Duanavvay, 2009:13).

There is a positive correlation between conditions such as moral hazard and inverse decisions, and loan amount and assumed enforcement transactions (Adams, Einav, Levin, 2007). Mortgage loan brokers were the major mechanism in the forming of sub-prime loans. The case, in which sub-prime mortgage loans are more appealing compared to other loans, has given incentive to the brokers in mediating these credits more (Berndt, Hollifield, Sandas, 2010).

1.2. Effects of the 2008 Crisis

The crisis of 2008, has taken hold of every economic unit under its influence with various mechanisms directly and indirectly. According to Greenspan (2009), the crisis emerging in the USA, caused depreciation in the capital resources in the real sector and in the financial sector. The collapse of the financial sector caused a shrinkage in the credit funds of the real sector and in the consumer loan market. The real sector, which went through a shrinkage in its credit funds and in demand towards production, was faced with a financial crisis (Greenspan, 2009).

The Crisis of 2008 caused the global economy to shrink with various transmission mechanisms. Countries holding securities dependent on the USA have been exposed to the Crisis of 2008 via financial channels for the first time (K.Rose, M.Spiegel, 2009). The collapse of the financial system in the USA deeply influenced the real economies of the other developed and developing countries (Ocampo, 2009). Due to the crisis in the sub-prime mortgage loan market of the USA, trust in the financial risk management decreased (N. Goetzmann, Peng, Yen, 2009).

Especially after the bankruptcy of Lehman Brothers, the anticipation of a global recession grew high and the credit portfolio of the banks depreciated (Eichengreen et al, 2009).

With the triggering of the mortgage loan market in the USA, global financial institutions and funds that make investments in the securities based on the

market, resorted to disposing off all the assets they had in their portfolios. But due to growing risks and the loss of value, these assets were sold under their values. A lot of financial institutions that declare loss, stopped their funds in line and discharged their present assets in order not to have a liquidity crisis. This condition has caused discrepancies in the global liquidity.

Asset-backed commercial papers (ABCP) market in the USA, has shrinked excessively by the end of 2007, and played an important role in the global financial crisis that was triggered. In the last five months of the year 2007, asset backed commercial papers market shrinked by 350 billion dollars, and this situation caused growing concerns regarding the loan credits of the assets related to the mortgage loans. This shrinkage also caused the banks to go through liquidity problems in fulfilling their liabilities (Covitz, Liang, Suarez, 2009).

In August 2007, a panic movement started in the banking market. Depositors wanted their money back as a result of the panic atmosphere in the banking market (B. Gorton, 2010). With the recession of the fund flow, the banks were in the position of not being able to extend loans any more. With the deteriorating market environment, households in the USA stopped their consumption immediately. With the decline in the consumption, there was a sharp shrinkage in the purchase of white goods, automobile, electronics, clothes and housing.

Because of shrinkage in demand and credits, a lot of manufacturor firms tended towards shrinking their production and firing their employees.

Deteriorating economic conditions caused a lot of companies in the financial sector and real sector to go bankrupt during the period of 2008-2009 in the USA. In the Table 1 below, characteristics and bankruptcy dates of the largest companies that went bankrupt belonging to the financial sector and real sector, were given by years.

Table: ABD 2008 - 2017 Bankrupt Companies:

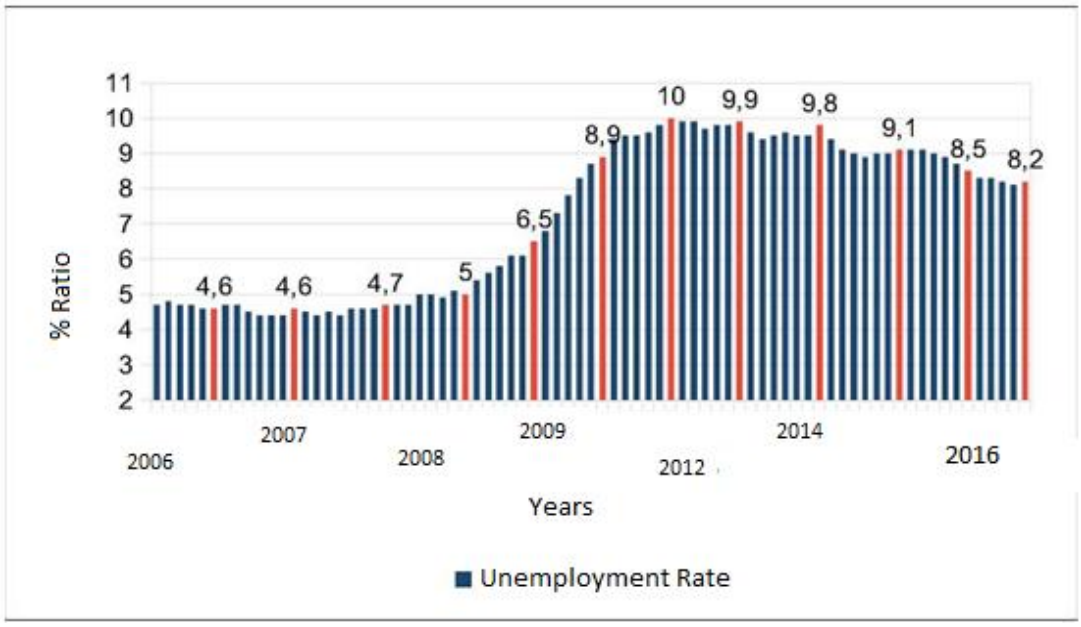
Company	Date of Bankruptcy	Pre-crisis Total Assets	Company Description
IndyMac Bancorp	7/31/2008	$32,734,000,000	Bank Holding Inc.
Lehman Brothers Holdings, Inc.	9/15/2009	$691,063,000,000	Investment Bank
Washington Mutual	9/26/2010	$327,913,000,000	Investment and Credit Holding Inc.
Lyondell Chemical	01/06/2011	$27,392,000,000	Manufacturor of Chemicals
General Growth Properties	4/16/2012	$29,557,000,000	Real Estate Investment Company
Chrysler	4/30/2013	$39,300,000,000	Automobile Manufacturor
Thornburg Mortgage	05/01/2014	$36,521,000,000	Mortgage Loan Company
General	06/01/2015	$82,290,000,000	Automobile Manufacturor
Motors			
CIT Group	11/01/2016	$71,000,000,000	Bank Holding Inc.
MF Global	11/08/2017	$41,000,000,000	FinancialDerivativeMediat

It is clear from the Table 2 that as a result of the crisis in 2008-2017 period, financial and real sector companies which have large capitals went bankrupt. The bankruptcy wave in 2008 which started in the financial sector, grew gradually with the bankruptcy of the real sector companies.

The effect of bankruptcies in the period 2008-2017 have been excessively felt by the macro-economic parameters. Financial sector and real sector which went through shrinkage, caused a sharp downfall in the growth rates of the GDP and an increase in the rates of unemployment.

In the Figure below, the change in the unemployment rates in the USA are given by years.

Figure 8: USA Unemployment Rates (2006-2017)



As can be seen from the Figure 8 above, with the severity of the 2008 Crisis growing more, unemployment rates reached to really high levels. The increase in the unemployment rates in the USA and with the credit opportunities worsening caused severe shrinkages to happen especially in the demand of the consumers. Rising unemployment rates caused 40% of the households to have latency in their mortgage

payments and to be exposed to enforcement actions (D.Hurd, Rohvvedder, 2010).

The demand shrinkage in the USA affected the global production and trade severely in the direction of shrinking through the channel of international trade. The USA has a claim of 1/4 on the global trade. With the chain shrinkage of the global trade, unemployment rates have shown an increase on a global scale and global production shrinked greatly.

Growing unemployment, bankruptcies in the financial and the real sector caused the implementation of aid packages by the USA government. Economic stimulus packages directed towards the banking crisis in the USA, has caused the government expenditure to rise excessively (M.Reinhart, S. Rogoff, 2010).

In the Figure 9 below, the change in the state debts in terms of GDP in the USA is given by years.

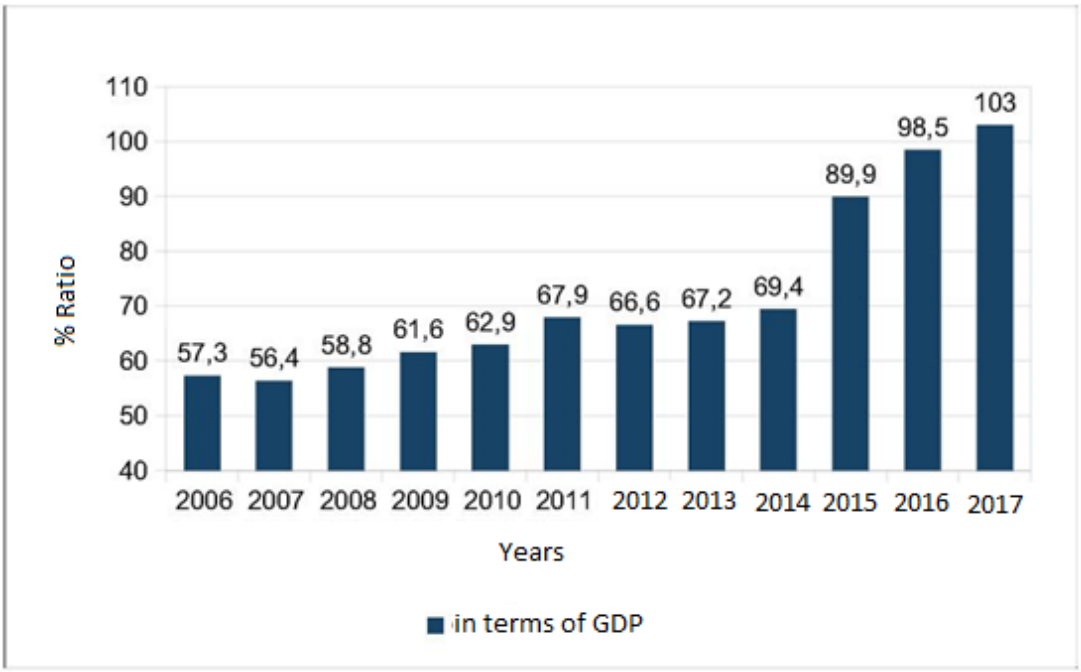


Figure 9: The USA Government Debts in terms of GDP (2006-2017)

It is seen in the figure above that state debts in the USA in terms of GDP, have risen sharply due to the economic stimulus packages. The governmental debts

in terms of GDP which was 66,6% in the year 2006, rose up to approximately 90% in the year 2009. As well as the bailouts, decline in GDP also has an influence on this rate to rise up. Despite the rise in GDP in 2010, government debt rates kept on rising and reached 98,5%.

Sub-prime mortgage loans ,which are the most marginal financial product of the quarter century, made the global financial system kneel and pushed the USA economy into recession (M.Zandi, 2008: 29). In the Figure 10 below, GDP growth rate change in the USA is given by years.

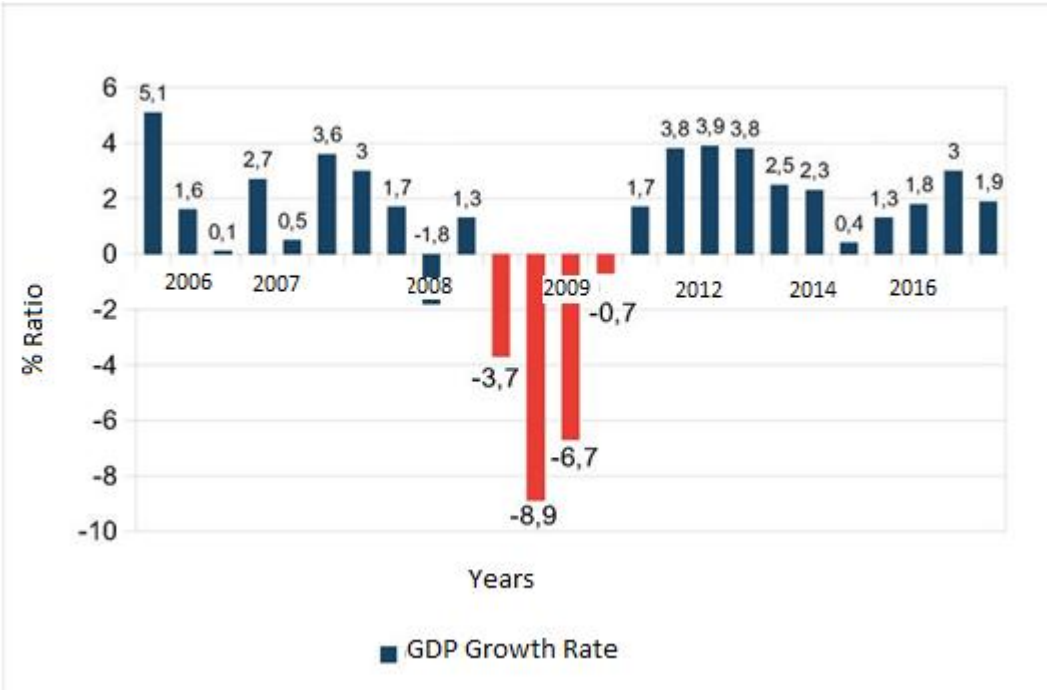


Figure 10: GDP Growth Rates in the USA (2006-2016)

It is seen above in Figure 10 that GDP shrinked greatly at the time of the crisis. GDP of the USA first began to shrink in the first quarter of the year 2008 at the rate of 1,8%. GDP proportion, which recovered by 1,3% in the second quarter of 2008, went through its most drastic shrinkage by 8,9% in the third quarter of the same year. GDP in the USA finally went through a shrinkage by 6,7% and 0,7% in the first and the second quarters of the year 2009.

CHAPTER II

2008 CRISIS EFFECTS ON THE EUROPEAN COUNTRIES

European Debt Crisis is caused by the rollover risk of the public debts that some problematic countries have in the "Euro Zone". The aggravation of the adverse market expectations about the rollover of the public debts that problematic countries in the Euro Zone have caused the public debt rollover risks to aggravate and spread to other member countries rapidly. The aggravation of the adverse market expectations in discussion, is revealed by some structural fragilities belonging to member countries and through various adverse processes.

2.1. The Development Process of European Debt Crisis

The adverse processes, caused by the contractionary effects of the 2008 Crisis and deadlock of the Debt Crisis in the Eurozone, gradually led to the deterioration of the market expectations on the rollover of the public debts, and the Debt Crisis in the Eurozone gained depth. Increasing public expenditure and rapidly decreasing public income due to the Crisis of 2008 caused the public finances of the countries in the eurozone to gradually become more volatile.

Members in the Eurozone facing the gravest problems by means of public finances, which are named as PIIGS countries (Portugal, Italy, Ireland, Greece, Spain), were the most striking figures in the development process of the Debt Crisis. Inability to put into practice the adequate bailout operations for PIIGS countries in the Eurozone, triggered adverse market expectations, and especially caused the credit rating agencies to lower their sovereign gradings. In this case, it also caused the risks regarding the rollover of governmental debts to spread from troubled countries to other countries.

The structural vulnerabilities of the PIIGS countries being more volatile in comparison to other countries, has caused the Debt Crisis to be more intensive in the

PIIGS countries. Structural fragilities in the troubled countries have also weakened the efficiency of the measures taken against the Debt Crisis. PIIGS countries being in worse condition especially by means of governance, caused the inefficient use of the measures intended at the Debt Crisis.

The fertile environment formed in the Eurozone countries with various global connections by the effects of 2008 Crisis, caused the Debt Crisis to develop rapidly. In the Figure 11 below, the process starting from the Crisis of 2008 and ending with The Debt Crisis in the Eurozone is shown.

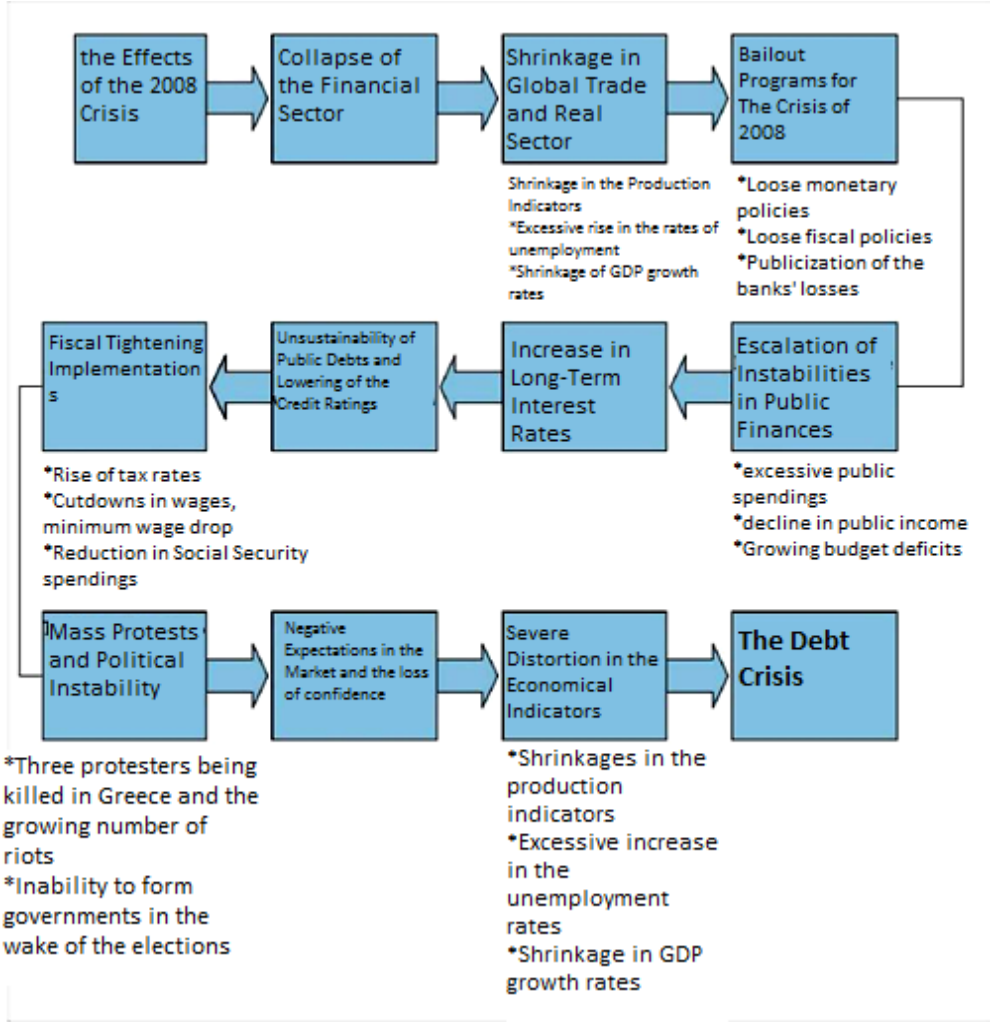


Figure 11: The Development Process of the Debt Crisis in Europe

In the Figure 11 above, the adverse effects of the 2008 Crisis over the global financial and real sectors caused the The Debt Crisis to erupt in the Eurozone in the later phase. The structural vulnerabilities to form due to the Crisis of 2008 in the troubled countries of the Eurozone and these countries not being able to use the monetary policy instruments in parallel with their needs in the Eurozone, caused them to experience the Debt Crisis more deeply.

As can be seen from the Figure 11, The Crisis of 2008 development process globally caused a crash in the financial and real sectors to happen and the countries implemented various bailout programs in order to reduce the adverse effects of this crash. However, bailout programs caused instability in the public finances of the troubled countries in the Eurozone dut to their structural vulnerabilities.

In the following phase, especially the growing risk premium expectations of investors caused the long-term sovereign bond interest rates to rise. Thus, unfavorable expectations towards the rollover of the public debts intensified and credit rating agencies lowered the sovereign ratings subsequently.

The aggravating public indebtment irreversibility put the governments decision making mechanisms under pressure. Therefore, troubled countries had to accept the fiscal tightening programs in return for the the financial aid which international institutions provided. Putting into practice the implementations such as rising the tax rates, dropping the minimum wage, cutting down on the retirement pensions and cutting down on the social security expenditure, decreased the level of welfare even more. In opposition to the cutdowns made on the level of welfare, mass demonstrations and acts of violence occurred. The environment of turmoil, which caused the negative expectations and the loss of trust in the economies to aggravate, also caused the economic performance parameters to aggravate drastically.

2.2. The Causes of the European Debt Crisis

Analyzing the causes of the Debt Crisis in the Eurozone in two different categories is of great importance with regard to the descriptiveness of the study.

In the first category, it is essential to put forth the unique structural problems of the PIIGS countries that experienced the Debt Crisis most excessively. In the second category, it is vital to put forth the fragilities that the phase of the Euro Monetary Union caused, which is seen as one of the most important steps towards the European integration process.

2.2.1. Problems of the PIIGS

The countries in the Eurozone which are called as PIIGS (Portugal, Italy, Ireland, Greece, Spain), were the countries on the forefront of the current discussions in the framework of the Debt Crisis' occurrence and its development. If the development of the Debt Crisis is to be analyzed seperately in the PIIGS countries, it is observed that the crisis depended on some various reasons among these countries (Kibritçioğlu, 2011).

2.2.1.1. Ireland's Problems

Ireland's economic position in 2007 seemed reliable to many investors and economists. Ireland was above the European Union average by means of the parameters regarding the economic performance in the period between the years 2000-20007. However, after the Crisis of 2008, Ireland performed under the European Union averages and therefore, it was revealed that Ireland had an economically fragile structure. Aykut Kibritçioğlu relates the crisis in Ireland to the impelemntation of loose monetary policies and inflated housing prices.

" When the 'housing prices bubble', inflated by extremely low interest rates, tax concessions and loose banking adjustments in Ireland in the 1990s, began to deflate in the early 2000s, serious problems began to emerge in both banking sector and the housing sector, and with the effect of the crisis in the USA which began to spread to the rest of the worlds as of 2008, the debt crisis in Ireland deepened between the years 2008-2010." (Kibritçioğlu, 2011:6)

The skyrocketing housing prices in Ireland is accepted as one of the most

important factors that explain the boom of the economic performance between the years 2000-2007. It is acknowledged that the skyrocketing housing prices fostered some instabilities in the financial and real sector. The excessive downfall of the housing prices during the Crisis of 2008 caused the negative fluctuations in the parameters of the economic performance through the instabilities that developed in the financial and real sector with the rise in the housing prices in the pre-crisis era. According to the data of the Central Statistics Office Ireland, housing price index based on 2005, reached to its peak level 130,5 as of September 2007. However, the housing price index started to decline after this period shrinking by 50 % and dropped to 64,8 by June 2012. This drastic downfall in the housing prices, caused a collapse in the production of the construction sector that accomodates an important share of the employment. The total production index of the construction sector in Ireland, shrinked drastically between the years 2006-2011. According to the data of the Central Statistics Office Ireland, while the housing construction production index was 100 in the year 2005, it reached to the peak level in 2006, which is 107,6. But due to the deteriorating housing prices, the housing construction production index shrinked by 90% until the year 2011, and fell down to 10,2. With the collapse of the construction sector which provided an important share of the economic activity, there was a big eruption in unemployment and a great decline in the tax income that is vital for public finances.

The process of the crisis gone through in the USA mortgage loan market, has shown a similar development in Ireland. With the collapse in the housing prices, there was a decline of wealth in the households of Ireland, and this condition caused more drastic latencies in the payments of the mortgage loans. The financial problems brought forward by the latencies in the repayment of the mortgage loans, caused the banks in Ireland to suffer losses at high levels.

As a result of the deteriorating financial system and the unfavourabla data, in January 2009, the government of Ireland publicized the third biggest bank in the country, Anglo-Ireland Bank for 34 billion Euros and declared the decision of the capitalization of AIB and Bank of Ireland which are the other two big banks.With the loss of the banks being publicized this way, public expenditure increased

excessively(Mc.Carthy, 2009: 53).

However, as the public spendings in Ireland could not be subsidized by public income due to the adverse conditions caused by the crisis, public indebtments and deficits reached high levels. In accordance with Eurostat's data, public indebtments as percentages of GDP in Ireland were 24.8% in 2007, 44.2% in 2008, 65.3% in 2009 and 92.5% in 2010. As percentages of GDP by the same years, public deficit/surplus was 0.1 in 2007, 7.3% in 2008, 14% in 2009 and 31% in 2010.

The gradually rising public indebtment level and the increasing budget deficit on the one hand, and inadequate rates of growth on the other, reduce Ireland's competence by means of public debt rollover, and fail the expectations of the investors towards Ireland. In the consequence of the investor's unfavourable expectations, the rise in the risk premia has caused the Debt Crisis of Ireland to deteriorate and the process transformed into a self-fulfiling crisis.

To sum up, the most important factor behind the development of the Debt Crisis of Ireland is the excessive rate of fluctiation in the housing prices. The economical recovery between the years 2000-2007 in Ireland, was provided by the skyrocketing housing prices. But the housing prices starting to decrease drastically as of 2007, caused serious problems and shrinkages to emerge in construction and banking sectors. The crisis emerging in the mortgage loan market in 2007 and spreading to a global scale as of 2008, caused the instabilities in the public finances of Ireland to deepen between the years 2008 - 2010, and the expectation of debt crisis in the following era to rise drastically (Mc.Carthy, 2012:5).

Negative expectations towards the affordability of the increasing public debts due to bailout programs in Ireland, and sovereign ratings being lowered by the credit rating agencies in compliance with this reason, caused the government securities long-term interest rates to increase excessively. The insustainibility of public debts due to the increasing long-term interest rates forced Ireland to ask for financial help from international organizatons (EU,IMF).

2.2.1.2. Problems of Greece

Public debts to GDP ratio reaching high levels in Greece through the end of the year 2009, had a negative effect on the investors' expectations towards the rollover of debts (Higgins, Klitgaard, 2011). This situation leading to a crisis of confidence, caused the government securities interests rates and credit default swaps (CDS) to increase excessively in comparison to the other Eurozone countries and especially to Germany (Oakley, Hope, 2010;Amisano,Tristani,2011:2).

In the increase of the negative expectations towards the convertibility of public debts that caused the development of the Debt Crisis in Greece, several factors come into prominence. With the deteriorating GDP growth rates in tendency to shrink drastically after the Crisis of 2008, public indebtment level in GDP increasing excessively, loose budget policies due to the elections and the inability to provide statistical reliability, were the most important reasons behind the increase of unfavourable expectations towards the rollover of the public debts in Greece (Greek Ministry of Finance, 2010).

Greece, implemented higher growth rates than the Eurozone average during the period of 2000-2007, and went through a potentiality of indebtment at high levels with lower interest rates in comparison with the period of 2009-2011. But the adverse effects of the 2008 Crisis which struck all countries in September, suddenly revealed the fragility of the Greek economy in terms of structure. There was an increase in the interest rates and the GDP growth rates turned negative by shrinking drastically based on the Crisis of 2008. Going through high levels of indebtments with low interest rates in the period between the years 2000-2007, Greece was confronted with the risk of inability to rollover its debts due to the negative circumstances. Growth rates following a negative path by shrinking drastically with the development stage of the Crisis in 2008, caused the public debts and budget deficit rates in GDP to increase. Also with the decline in the growth rates of GDP, there was a funding need for the rollover of the public debts and a deepening in the expectations towards the Debt Crisis.

The revenue of tourism and transportation, which are the two biggest sectors of Greek economy, declined by 15% in 2009. In parallel with Eurostat's data, in

consequence of the shrinkage went through in these two sectors, unemployment rates in Greece were 7.5% by September 2008; 10.1% by December 2009, 14.3 by December 2009 and 21% by December 2011.

As a result of the growing unemployment, shrinking economy and escalating tax fraud, government income declined, and there was an increase in government expenditure towards fixing these problems. With the decline of income and the growth of expenditures, the budget deficit in Greece economy reached high levels. The increase in the budget deficit caused the long-term government securities interest rates to rise.

Another problem of Greece was caused by the inefficient structure of public spendings. In other words, the inefficient distribution of public spendings caused the waste of public resources (OECD, 2009b:1). Instead of reinforcing its economy structurally and investing in productive fields, the government of Greece made spendings in populist fields more. Greece made public spendings in a lot of non-productive fields (Afonsa et al, 2003). Especially as a result of the excessive military spendings, a large part of its GDP was transferred to a non-productive field. In the consequence of these unprofitable spendings that the Greek government made, its reel sector was not developed, and it tried to sustain its economy based on solely the sectors of tourism and transportation. One of the most important reasons for not being able to gather the adequate amounts of tax, is considered as the presence of a weak real sector.

Being admitted into the Eurozone in 2001 on the grounds that its economy complied with the Maastricht criteria, Greece actually owed this to twisting the macroeconomic data, belonging to the period 1997-2003 (Kibritçioğlu, 2011: 7). In accordance with the Maastricht criteria, the highest limit of public debts and budget deficit in ratio to GDP for Eurozone countries was respectively determined as 60% and 3%. However, according to the corrected data after the truth about the previous data was revealed in 2004, Greece's real public deficits and public debts rates to GDP had already exceeded the Maastricht criteria (Eurostat, 2004:4). With regard to the corrected data, Greece's public debts and budget deficit to GDP were respectively 103.7% and 4.5% in 2001. The unmasking of the forgery that had been committed in

order to enter the Eurozone, damaged the market credibility of Greece to a considerable extent.

The government of Greece agreed to the condition of implementing strict austerity measures that contained cuts in expenditure and rise in taxation in order to attain the EU/IMF bailout package since the Debt Crisis was intensifying day by day. Austerity policies were taken by the Greek people with great anger and reaction. In consequence of mass protests and riots, social discontent peaked up.

The first austerity package that the Greek government had to accept in order to have access to the credit packages, was put into action in February 2010. With this package being put into action on 9th of February 2010, a 10% cut on the bonuses of the public employees, cuts on overtime payments and implementations such as these were made. With the second austerity package that was brought in March 2010, implementations such as raising the rates of VAT, increasing the taxes on gasoline and tax increases on imported vehicles were put into practice. In March 2010, the belt-tightening measures taken with the third austerity package were put into action by being intensified even more. In June 2011, tax rates and cuts on payments were raised more with the fourth austerity package. Inspite of all these austerity packages, a fifth austerity package was on the agenda for the Greek economy that showed no sign of recovery. Papandreu proposed a referandum with a concern to make the decision of taking the last austerity package, but he had to resign from presidency as he was unable to resist the internal and external pressure. As a last resort, the fifth austerity package was accepted and put into practice in February 2012. With the fifth austerity package, 25% deduction in minimum wages, canceling the bonuses permanently and cutbacks on the retirement pensions were agreed upon.

2.2.1.3. Problems of Portugal

In line with Eurostat's data, with the effect of the 2008 Crisis in Portugal, while the budget deficit rate to GDP was 3.1% and the rate of public debts to GDP was 68% in 2007, the rate of budget deficits and public debts to GDP were respectively realized as 10% and 83% in 2009. Potugal's GDP shrinkage in 2009 was

almost smoother than the shrinkages in other Eurozone countries. In accordance with the data provided by the world bank, Portugal's GDP shrinked by 2.91%. At the same time, precursors such as public debt and budget deficit were in better condition compared to other countries. However, Portugal being considered as a country that is closer to the Debt Crisis, was due to the existence of some structural flaws. In this sense, Portugal's economical performance was not identical to the performances of other neighbouring countries in growth and shrinkage periods, and it presented different circumstances.

Portugal is the third economy in the Eurozone after Ireland and Greece asking for fiscal aid. Three fundamental issues are considered to have caused Portugal to slip into economic trouble and ask for help. Low GDP growth expectations, uncertainty in the process of inflation after joining the Eurozone, high volatility in the interest rates and the issues of political credibility and governance were considered as the most important problems of Portugal (Kibritçioğlu, 2011: 7).

The first issue was that Portugal's economical growth performance having gone into recession as of the year 1999. This issue was caused by the low levels of human capital investment in Portugal due to the inability to implement structural reforms mainly in the labour market. Besides, EU expansion with new members and China's the World Trade Organization membership in 2001, caused Portugal to have difficulty in competing with the global market, and led to a declination in its economical performance. These developments caused Portugal's GDP to shrink by leading to a deterioration its competitiveness.

Portugal showed a rapid economical growth performance before joining the Eurozone in 1999. However, after joining the Eurozone, especially with the rise in the labor costs (salaries) in Portugal and the decline in labor productivity, decreased its competitiveness against other countries, and caused a serious downfall in the speed of the country's growth rate (Minescu, 2011: 99 - 100). Portugal's average growth rate between the years 2001-2008 was realized as 1.56% according to the data presented by the World Bank.

Portugal is considered to be one step closer to the Debt Crisis in comparison

to some countries with worse financial stability. The most important reason for the unfavourable expectations towards the rollover of public debts being more intense than the other countries' negative expectations is; Portugal having the lowest growth performance in the Eurozone and being considered as more risky by the market participants. The recovery of the growth environment in Portugal is seen as the most important issue of uygency in medium and long term. This is because the serious problems in the growth performance are considered as the most important factors behind the debt-interest rate issue in Portugal (H. Bryson, 2011).

One of the worst vulnerabilities of the Portugal economy is the low productivity rate which is a central deficit. In comparison to the other peripheral countries of the Europe, Portugal's productivity is considered to be hopelessly weak (Blanchard, 2006: 6). The reduction in the companies' scales of production in the period between the years 1980 - 2010 is considered among the most important reasons affecting the productivity rate in Portugal (Braguinsky vd, 2011: 8). Also with regard to some social parameters which are essential for productivity (level of eduction, health status etc.), Portugal ranks lower than the other Eurozone countries (Lenz, 2011: 3). Portugal goes through a structural growth problem different than the other peripheral countries due to some vulnerabilities in its social parameters.

The second issue is about the adverse conditions caused by monetary integration. After joining the Eurozone, Portugal was able to contract debts with low interest rates just like other developed countries. However, with the rise in the interest rates of long term sovereign bonds and their low resistance against the Crisis of 2008, had adverse effects on public finances.

Due to the low interest rates and appropriate financing conditions in Portugal during the period of 2001-2007 prior to the Crisis of 2008, private sector and public sector spending, and indebtment levels in general went upwards. At this stage, private sector debts rate to GDP in Portugal rose up to 260% and peaked to the highest level to be experienced in the Eurozone (M. Thomsen, Roaf, 2011: 33). Austerity rates in Portugal were regarded in normal levels prior to the EU integration. However, the downfall of austerity rates later on caused a serious external disequilibrium in the balance of payments (Blanchard, 2006: 2). External

national debt which was fostered by the private sector indebtments and high current deficit have been increasing the volatility of the economy(Anandvd, 2012:12).

The third issue was the detection of flaws in political accountability and governance by means of transparency. These issues are damaging the market confidence of Portugal and causing the risk premia expectations to escalate. These issues, are among the most important reasons for the Credit rating agencies to lower the sovereign grading of Portugal.

2.2.1.4. Problems of Spain

With the Crisis of 2008, the escalation of unfavourable expectations towards the rollover of public debts in Spain, was triggered by the excessive decline in the housing prices causing a collapse in the financial and the real sectors. For this reason, stages towards the Debt Crisis in Spain and Ireland show significant similarities in this respect (Kibritçioğlu, 2011: 7-8).

Similar to Ireland and Greece, Spain had high growth rate performances in GDP between the years 2001 and 2007. However, Spain's GDP growth rate performance also declined sharply following the adverse effects of 2008 Crisis, as in Ireland and Greece.

At the same time, Spain's GDP growth rates being unable to meet its former performances as of 2008, continues to trigger the expectations towards the Debt Crisis.

In Spain, downward tendencies of growth rates and being far away from former performances due to the Crisis of 2008 caused the interest rates to rise excessively and led to a serious instability in public finances, and this condition raised the unfavourable market expectations towards the rollover of public debts, which caused the Debt Crisis to aggravate.

The crisis happening in the housing market in Spain caused the construction sector to shrink excessively as in Ireland. This situation led to an excessive increase in the unemployment rates and caused the labor market to collapse (Godino, Molina,

2011:6). This downfall trend in the real sector added to the negative expectations towards the rollover of debts by causing the tax income to decrease.

In summary, escalation of the expectations towards the Debt Crisis in Spain, as in Ireland, mainly originated from the adverse effects of the fluctuations happening in the housing market (Carballo, Cruz, 2011: 326).

For the banks suffering from immense loss due to the crisis in the housing market, Spain made interventions of support with bailout funds. Yet, this condition caused Spain to undergo a severe debt burden due to the downward trend of the growth performances. Also, the growing negative expectations of investors due to the negative growth performances, caused the long-term sovereign bond interest rates to increase. Therefore, Spain had difficulty in finding the appropriate funds with low interest rates for the rollover of its debts and this condition increased the risk of latency for the rollover of Spain's debts.

2.2.1.5. Problems of Italy

Italy has the third biggest economy in the Eurozone. Italy exhibited a low GDP growth rate like Portugal throughout the period between the years of 2000 - 2007. According to several economists, among Italy's biggest problems, there are low productivity and low GDP growth rates resulting from low productivity (Lambert, 2011; Henningsen, 2012: 17).

Pointing out to low GDP growth rate expectations and inefficitent interventions of the Italian government, credit rating agency Standart and Poor's decided to lower Italy's credit ratings by one digit on 19 September, 2011 (Standart and Poor's, 2011: 3). Bias towards Italy grew higher after this decision, and this condition caused the Debt Crisis to become even more dangerous for the Eurozone.

Italy's public debt rate to its GDP being at high levels, aggravated the negative expectations towards the Debt Crisis for Italy, by increasing the rollover risks of public debts. To sum up, the factors that play an active role in the growing

negative expectations towards the rollover of public debts in Italy are namely low productivity rates and low GDP growth rates. The high level of public debts also aggravated these negative expectations (Rushe, 2011).

2.2.2. Problems in the Eurozone

Eurozone has several advantages and disadvantages for the member countries and especially for the PIIGS countries. In the 2000-2007 period, especially PIIGS countries contracting debts with low interest rates in secure market environment, nearly with the same rates as Germany and France, provided a huge advantage for the public finances. Yet, PIIGS countries spent the low cost funds that were acquired by benefiting from the appropriate market environment, on non-productive fields rather than reinforcing their economic structures.

The adverse effects of the 2008 Crisis destroyed this secure market environment and long-term sovereign bond interest rates began to go under an upward trend of increasing excessively, especially in PIIGS countries.

Prior to the founding of the Monetary Union, the design of it had been discussed by the academicians for a long time. Mainly, three fundamental design weaknesses of the Eurozone are pointed out.

Firstly, price and wage flexibility in the Eurozone along with the workforce and capital flow are considered to be inadequate. To talk of a successful optimal currency area theory, it is essential to fulfil the principles of wage and price flexibility, trade integration, conjunctural convergence and factor mobility (Krugman, 2012). However, these principles were not fulfiled in the Eurozone and the internal instabilities could not be prevented. Since the wage and price flexibilities could not be provided, cost of labor in the troubled countries showed an increase, and the rates of unemployment increased excessively, especially in Spain and Greece.

Secondly, a single or a mutual fiscal policy does not exist. In other words, Euro Monetary Union was founded without the formation of a mutual fiscal consolidation (Bordo et al, 2011). On the grounds that a mutual fiscal union could

not be established, especially the public finances of the PIIGS countries were confronted with excessive instabilities against the financial crisis. The risks, formed by these instabilities, were not only limited to those countries, but also began spread to the others.

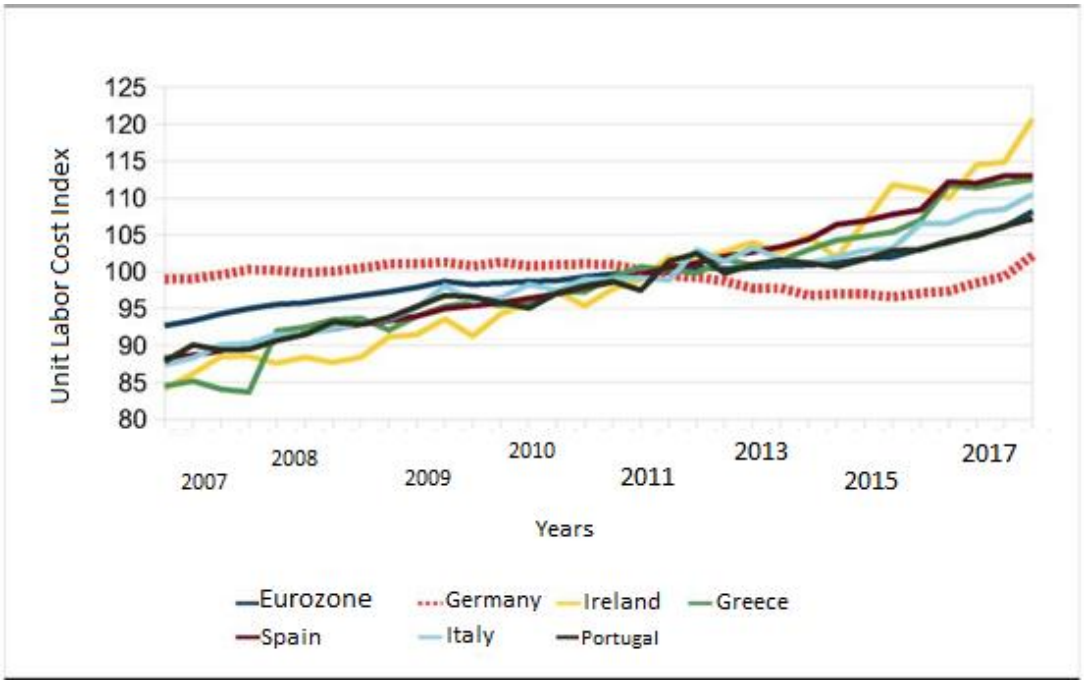
Thirdly, countries with different growth and inflation rates, being managed under a single monetary policy, have caused some instabilities among the member countries to aggravate (Dehesa, 2011a). Besides, this complex structure among the Eurozone countries, is causing the fragility in the financial system to increase. The structural and conjunctural differences among the countries played an important role in triggering the Debt Crisis in the Eurozone (B.Smaghi, 2010). These structural differences are more intensively present particularly in the PIIGS countries in comparison to other countries. PIIGS countries in the Eurozone being in a weaker structural status and the same monetary policy being implemented as in the developed countries inspite of these vulnerabilities, have caused the Debt Crisis to deepen.

Inability to provide the fiscal cooperation between the countries in the Eurozone, or troubled countries not getting the required financial support from developed countries in the crisis environment in other words, have left them alone and inefficient in dealing with the crisis. Governments' fragilities towards the rollover of debts were aggravated as a result of the insufficient intervention against the Debt Crisis, and this problem spread to other countries too. Economies that were not built upon solid infrastructures, lost the confidence of financial market and this condition caused the Debt Crisis to aggravate since the financial support from other regional countries could not be provided (Schauble, 2010).

Milton Friedman (1998) stressed the riskiness of establishing Euro Monetary Union and he pointed out that this was gambling with the future of the Eurozone countries. In Friedman's view, Eurozone countries don't meet the criteria for a shared currency zone. When the conjunctural shocks occur in the monetary union zones, where price and wage flexibility do not exist, and where the labor and capital mobility could not be attained in the adequate level, instabilities between the member countries aggravate excessively (Friedman, 1998).

The highly valuable currency has caused the PIIGS countries to lose competitiveness in global trade, and the export performances of these countries shrank. Because of the high value currency implementation in the Eurozone, labor costs particularly in PIIGS countries rose up, and the competitive power of these countries weakened. In the Figure 12 below, the changes in the unit labor cost index for some Eurozone countries is shown by years.

Figure 12: Unit Labor Cost Index of the Selected Eurozone Countries (2007-2017)



It is clear from the Figure 12 above that after the 2008 post-crisis period, unit labor costs in PIIGS countries were in an excessively upward trend especially against Germany. Unit labor costs increasing excessively at this level had a negative effect on the competitiveness of PIIGS countries against Germany. PIIGS countries, whose productivity rates declined, were faced with current account instabilities during this period. Particularly countries, which did not have the adequeate productivity level and could not implement the productivity boosting reforms, were exposed to excessive current account instabilities (Roubini et al, 2007: 20).

2.3. The Effects of European Debt Crisis' Development Process

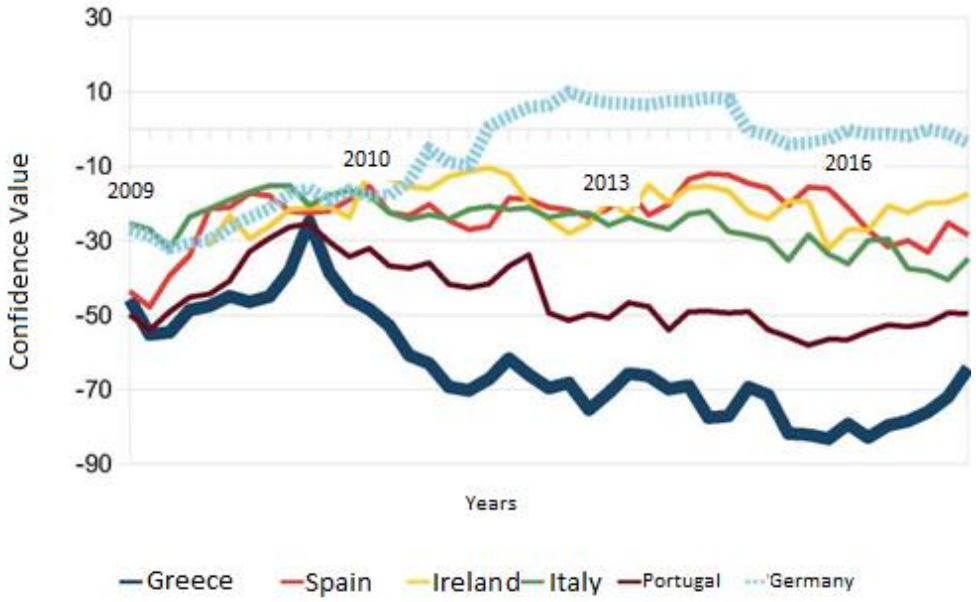
The adverse effects of the 2008 Crisis and the Debt Crisis in the Eurozone, occured more clearly in PIIGS countries in comparison to the other countries. The Crisis of 2008 and the Debt Crisis in the Eurozone had negative effects on various macro-economic parameters. These processes of crisis, caused the market confidence parameters of the PIIGS countries to decrease, the labour markets to deteriote, the growth performances to shrink and the public finances balance to be distorted.

2.3.1. Negative Effects on the Market Confidence Parameters

In the Eurozone countries after the Crisis of 2008, recovery interventions, which were particularly done to provide financial stability, failed and this condition caused the market confidence parameters to deteriorate.

The excessive deterioration of the consumer and producer confidence parameters, has an effect on the economical performances to shrink drastically in the forthcoming process (Garner, 1991: 58). As well as the effects of 2008 Crisis on the market confidence parameters, high debt stock levels in PIIGS countries, caused by the Debt Crisis in the Eurozone, also have a profound effect on the market expectations (De Broeck, Guscina, 2011: 22). It is acknowledged that the consumer and producer confidence parameters have a significant effect on the investment and the expenditure decisions taken by the actors in the economic market. In other words, the actors in the market form their economical decisions based on the confidence parameters that establish the expectations of the producers and the consumers. In the Figure 23 below, changes in the consumer confidence parameters for the Eurozone countries are shown by years.

Figure 13: Consumer Confidence Parameters for the Eurozone Countries(2019-2016)



It is clear from the figure above that the consumer confidence parameters followed negative downward trends in the Eurozone countries in general during the period of 2014 - 2017. The consumer confidence index in Greece, which showed signs of recovery as of March 2014, began to deteriorate severely by January 2014 with the effect of the debt crisis expectation. In Greece, the consumer confidence value fell down to its lowest with 83.2 in December 2015. Consumer confidence parameters belonging to Portugal and Greece were affected by the Crisis of 2008 and the Debt Crisis more severely compared to other countries'.

In the Figure 13 above, it can be inferred that in the period when expectations towards the Debt Crisis aggravated, the consumer confidence parameters in Germany show a better performance compared to the other countries. In the occurrence of this distinctive situation, the better status of the German economy by means of structure in comparison to the other economies was of great importance. In the period of 2009 - 2011, growth performance of Germany standing in better condition than the pre-crisis period, and the recovery of the unemployment

rates have contributed to the boost of consumer confidence greatly. In the PIIGS countries, unemployment rates reaching up to high levels and the excessive shrinkage in the growth performances year by year as of the 2008 Crisis, caused the consumer confidence parameters to deteriorate generally in these countries.

The aggravating negative expectations towards the Debt Crisis and the downward tendency of the consumer confidence parameters caused the industrial confidence parameters to be affected badly after a while. In the Figure 24 below, the change of industrial confidence parameters belonging to some Eurozone countries was attempted to be made clear.

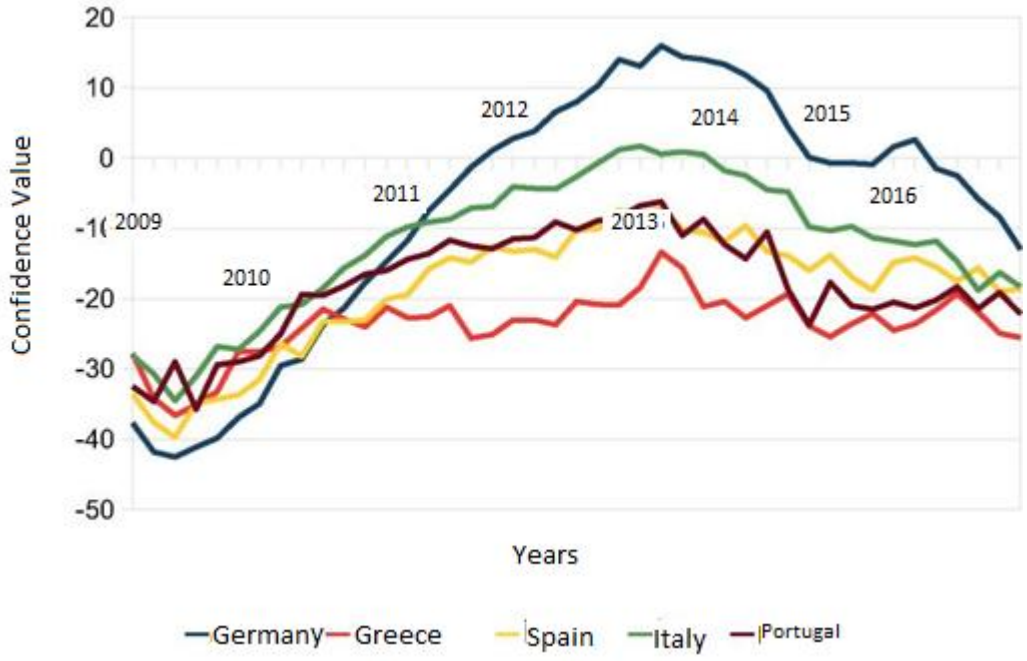


Figure 14: Industrial Confidence Parameters of the Eurozone Countries (2009-2016)

From the Figure 14 above, it can be inferred that the industrial confidence parameter deteriorating drastically with the effect of the 2008 Crisis, had a powerful upward recovery trend by the start of the year 2014. However, with the drastical increase of the negative expectations towards the rollover of sovereign debts throughout the Eurozone and the potentially shrinking effects of the austerity measures that were put into practice, caused rapid deterioration of the industrial

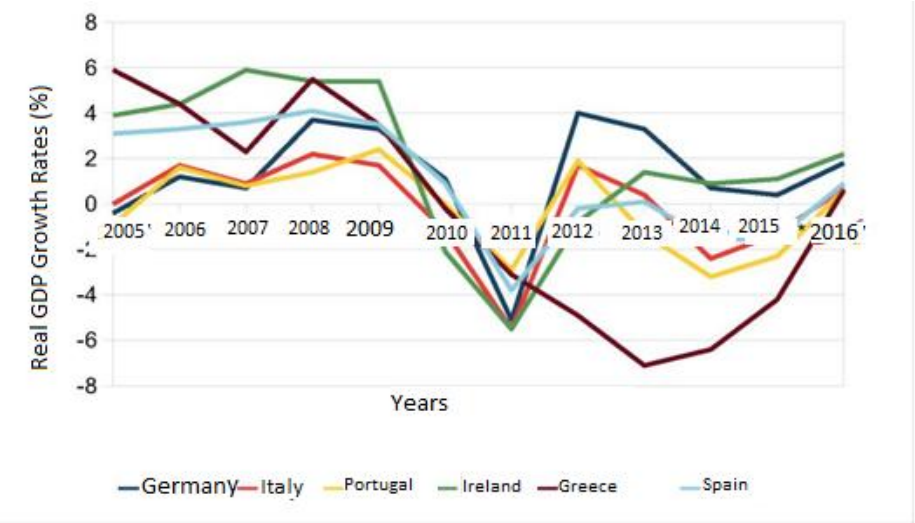
confidence parameters as of the year 2016.

The industrial confidence parameter in Germany which exports the most of its industrial production, went through a downward trend more drastically than the other countries, with the effect of the potential market shrinkage expectation. Industrial confidence parameter value which was 16 in Germany, in February 2011, deteriorated excessively until July 2012, and fell down to -13. This negative expectation in Germany, the largest economy in the Eurozone, has revealed that the Debt Crisis was taking the real sector under its influence and that its adverse effects were gradually getting deeper.

2.3.2. Negative Effects on the Growth Performances

With the Crisis of 2008, GDP growth rate performances across the globe have shrinked drastically. Most of the developed and developing countries' GDP growth rate performances, were recognized as negative between the years 2008 and 2009. Due to these downward trend growth rate performances, global economy shrinked excruciatingly. The global economic performance that began to recover after 2009, provided the GDP growth rates to reach its former levels. Yet, the Debt Crisis expectations coming on the agenda in the Eurozone after the Crisis of 2008, caused the economic performance in this region to go under pressure. In the Figure 15 below, GDP growth rate performances of some Eurozone countries were put forth by years.

Figure 15: GDP Growth Rates of the Selected Eurozone Countries (2005-2016)

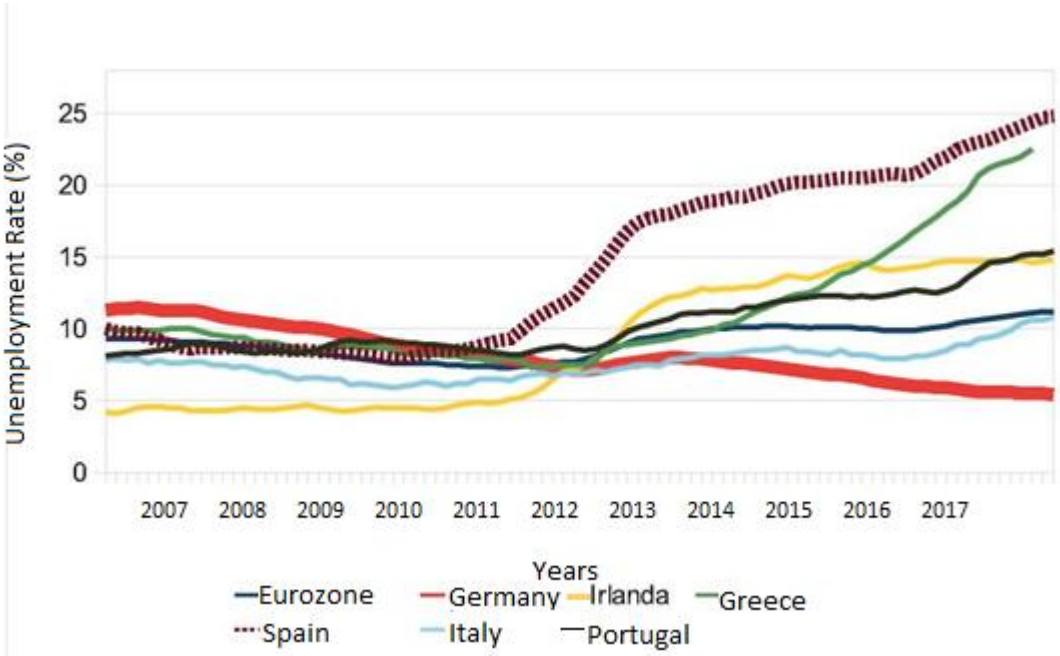


It can be inferred from the Figure 15 above that the adverse effects of the 2008 Crisis in the period of 2008-2009 and the adverse effects of the expectations towards the Debt Crisis in the period of 2011-2012, caused the real GDP growth rates to shrink drastically in the PIIGS countries. Especially, the severity and the durability of the negative performance in the real GDP growth rates of Greece is remarkably striking. The real GDP performance in Greece constantly followed a negative trend and lost 20.5% of its volume in the period between the years 2008-2012. Greece went through its most drastic shrinkage in this period with 7.1% in 2011. It can be clearly seen in the Figure 15 that even in the periods when the expectations towards the Debt Crisis in Germany aggravated, a powerful economical growth performance was displayed. Also, this growth performance in Germany was better than the growth performance prior to the Crisis of 2008. At the same time, Eurostat's expectations of growth performances regarding the years 2013 and 2014 are pointed out in the Figure 15. In accordance with Eurostat's expectations, PIIGS countries are going to shrink in real GDP with negative growth performances in 2013. Expectations regarding the year 2014 are positive oriented, though low. This situation indicates that the deadlock towards the Debt Crisis in Eurozone causes the negative expectations to become deeper.

2.3.3. Negative Effects Regarding the Labor Markets

Labor markets in the Eurozone were exposed to a violent crackdown in the process which started with the Crisis of 2008 and continued with the Debt Crisis in the Eurozone. The adverse effects of the Crisis in 2008, causing the global trade to shrink, led to the shrinkage of labor markets almost in the whole world and resulted in with the escalating unemployment rates. In the aftermath of the 2008 Crisis, the recovering labor markets throughout the World, deteriorated even worse especially in PIIGS countries with the influence of the Debt Crisis in the Eurozone. In the Figure below, changes occurring in the unemployment rates of some Eurozone countries' are shown

Figure 16: Unemployment Rates of the Selected Eurozone Countries(2007-2017)



In the Figure 16 above, it is inferred that labor markets in the PIIGS countries display a highly volatile structure against the economic crisis. PIIGS countries not being able to implement the adequate reforms in the labor market, is considered as the most important reason behind this volatile structure. Due to the volatile nature of the labor markets against the crisis, while the unemployment rate

particularly in Spain were 9% in January 2008, this rate finally rose up to 24.8% in June 2012 with the effects of the 2008 Crisis and the Debt Crisis in the Eurozone. The same negative condition was also actualized in the labor market of Greece. The unemployment rate in Greece drastically rose from 7.8% in January 2008 up to 22.5% in April 2012. Germany was not affected by these unfavourable circumstances thanks to the powerful reforms in its labor market, and managed to lower the unemployment rates by turning the crisis into its advantage. The unemployment rate of Germany which was 11.5% in January 2010, was lowered down to 5.4% in June 2017 owing to its high growth performance particularly between the years 2010 and 2016. Reduction of the unit labor costs in Germany played an important role in the declination of the unemployment rates.

CHAPTER III

EFFECTS OF THE 2008 CRISIS ON TURKISH LOGISTIC SECTOR

The term 'logistic', originating from Latin, is derived from the compound of the words 'logic' and 'statistics'. From this point of view, we can name logistics as 'statistical logic'.

3.1. The Definition of Logistics

In general meaning, the concept of logistics is the transfer of the goods from the manufactured spots to warehouses, stocking of it, delivery of the goods to the desired places in the desired way and the planning of these deeds to be carried out in the most productive and the fastest way. In other words, it is an updated version of the transportation in the past (Çevik and Kaya, 2010: 22). The most prevalent definition of logistics was made by The Council of Logistics Management (CLM) and by Supply Chain Management Professionals (CSCMP). In accordance with this definition, logistics; is the planning, the implementation and the controlling of materials, goods and services and the flow of information in the supply chain in order to meet the needs of the customers. It also includes the stages of receiving goods from the production spot and delivering these goods and services to their end-use spot. The two-way mobility is provided in an efficient and productive way (Gülenç, Karagöz, 2008: 3).

To comprehend the definition of logistics, the seven facts of logistics should be taken into account. These are namely (Çekerol, 2013:10):

- The right product
- The right quantity
- The right conditions
- The right place
- The right time
- The right consumer

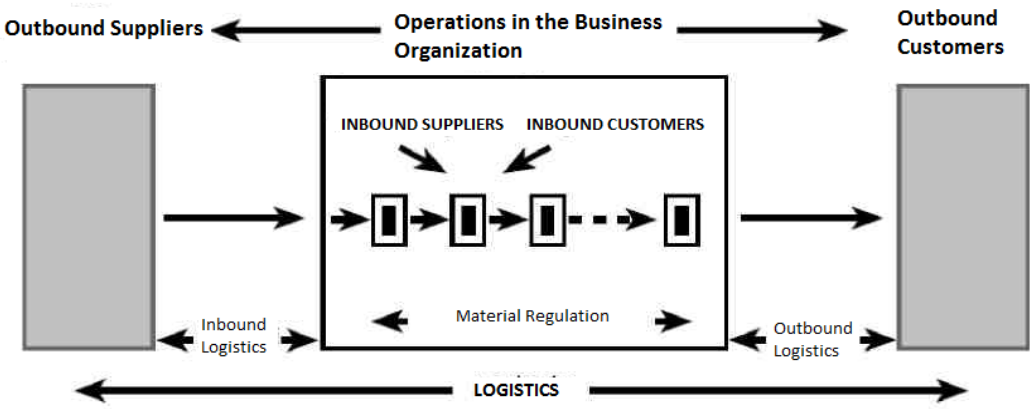
- The right price

Moving from this line of view, we are to say that logistics is the delivery of the product to the right consumer for the right price, in the right place and time range in the right conditions.

The product here can be raw material, semi-product or end product. The right time for logistics operators is the quickest time possible. Profitability is the aim of every commercial business, so the delivery of goods to the receiver in the lowest cost possible is another important point for the businesses.

In businesses, either in pre-production stage, during production or in post-production stage, flow activity of raw materials and supplies, semi-products and end products are defined around the concept of logistics (Gümüş, 2009:98). In line with this point of view, all activities of the raw materials and semi-products until the production line are called inbound logistics, and all activities in post-production stage regarding the delivery of the goods and services to the customers are called outbound logistics.

While inbound logistics include the activities which regulate the acquisition of raw materials from the supplier, the storage of these materials and their production in the framework of the supply chain, outbound logistics is actualized with the functioning of the system that provides the storage of end-product by acquiring them from the supplier and the delivery of these products, which is a supplementary factor to the inbound logistics process. This whole process enables the control of activities through the bilateral notification of the parties, and therefore provides the delivery of services to the customer under the most proper circumstances (Çekerol, 2013: 10, 11).



Scheme 1. Logistics Flow (Çekerol, 2013:10,11)

We can see the whole logistic flow of a company in Scheme 1.

3.2. Historical Development of Logistics

Although the term logistics was first used in the military jargon, in the historical course, logistic activities firstly began with the preparation and storage of the food that primitive people hunted or gathered. Later on, logistics was used in all military operations ranging from storage of ammunition to planning of military mess hall, and the logistics was defined in military for the first time.

In the literature, logistics was defined as the implementation and design of all elements that would support the operation capability of the military troops, and as securing efficiency at war and peace by supplying the related equipment and materials (Tutar, Tutar ve Yetişir, 2009: 192). With the transition of the world from war economy to trade economy after the World War II, logistic activities also changed in form and integrated to the commercial activities.

When we analyze the historical development of logistics, it was developed and shaped in parallel with humanity, showing a quality that contains all fields of science within.

I. ERA	II. ERA	III. ERA	IV. ERA
Primitive Logistics	**Military Logistics**	**Commercial Logistics**	**Modern Logistics**
The first logistic activities started. There was no planning. The production activities remained on the forefront. There was no control over the operational activities such as storage and distribution.	This era encompasses all activities that involve the procurance, supply, storage, transportation, distribution, maintanence, repair and discharge of the materials of the military inventory.	With rapid changes occurring in the technological and economical need in commercial field, new organizations containing all functions of logistics began to form. This era encompasses the link between material management and physical distribution.	As a result of the modernization of the activities, logistics began to be applied in managerial and operational levels. Managerial Logistics • Supply Logistics •Logistics Management Operational Logistics • Management of Materials • Management of Production-Operation • Management of Distribution

Scheme 2. Historical Development of Logistics (Çekerol, 2016: 6).

As can be seen in Scheme 2, the first era is named as the primitive logistics era. No planning exist and production activities are more important in this era.

The second is the military era. It includes all processes that involve the procurance, supply, storage, transportation, distribution, maintanence, repair and discharge of the materials of the military inventory.

This is the era that the world quits war economy, and logistics occur as a preface in commercial activities with the changing commercial needs. Material management and physical distribution links are added to the picture.

In Modern Era, as a result of the modernization of logistics activities,

logistics began to be applied to managerial and operational levels. In this era, logistics was divided into departments of professions such as supply chain management, logistics management, material management, production and operation management and distribution management.

Stages of logistics with a modern look are given in detail on the Scheme 3 below.

STAGES	ADMINISTRATION	ORGANIZATIONAL DESIGN
	1960s	
Stocking and Transfer	Sales Marketing Storage Stock Control Transportation Activity	Scattered Logistic Activities Weak Interconnectivity of Logistic Activities Weak Management of Logistics Authority Affects the Success of a Business
	1930s	
Total Cost	Centralization of Logistics Total Cost Management Process Optimization Logistics as a Competitive Advantage	Centralized Logistic Activities Growing Logistic Management Authority Computer Applications
	1990s	
Integrated Logistics Management	Logistic Planning Supply Chain Strategies Integration withBusiness Operations Integration with Process Channels	Expansion of Logistic Activities Supply Chain Planning Support for Total Quality Management Logistic Management Activities
	2000s	
Supply Chain	Strategic Supply Chain View Usage of Extranet Technology	Commercial Partnership Virtual Organization Changes in Demand Benchmarking and

Management	Cooperation in the Total Quality Management Parameters of Supply Chain in order to Use the Channel Power as a Joint Enforcement Instrument	Reorganization
	2000 and beyond	
E-Supply Chain Management	The application of Internet to the Concept of Supply Chain Instantenous Low Cost Share of Database Electronical Info Supply Chain Management Synchronization	Commercial Partnership with the Network of Supply Chain .com. Add-in and Market Changes As such Organizational Agility and Measurability

Scheme 3. Logistics Development Stages with a Modern Look (Karagöz and Gülenç, 2008;77)

3.3 Developments Signifying The Enhancement Of The Concept Of Logistics After Wwii

3.3.1. Globalisation

When looking at it from only a commercial point of view and putting aside itssocio cultural effects, a lot of companies aim to assert themselves in the international arena. In a world where rivalry is seen on a daily basis, all companies dream of opening up to different markets, and carrying out product or service trades. In this sense, the only way to reach cross the border in a rapid and reliable way and form commercial relations is to work with a good logistic source provider or for the company to form a robust logistics network within its scope.

3.3.2. Increasing Rivalry Between Companies

The increasing rivalry between companies has brought with it the necessity to offer the highest quality products and services to the consumer. As a consequence, companies use external sources rather than creating resources for logistics and use this resource to develop their existing products or to create new products.

Aside from this, the cost of transport as an important logistic sub-process has a notable share in the overall cost; moreover in some industries it is indicative in the rivalry (*i.e.* mines, core chemistry, iron and steel, cement).

Another point to be made is the desire to instantaneously meet client expectations. Meeting the client requirements without losing time and keeping the client waiting is also an outcome of the desire to create rivalry advantages. As a result the distribution networks and storages have expanded.

3.3.3. The Forming of Radical Changes in Stockpiling Philosophy

Retailers have undertaken half the function of stockpiling, while wholesalers and manufacturers have undertaken the other half. In the beginning of the 1950's, especially in the field of raw vegetable and fruit, more complicated stockpiling techniques have been developed and the ratios have changed to 10% retailers, 90% distributors and manufacturers (Çekerol, 2013:8).

Moreover, new insights in the field of production such as on time production have also brought new viewpoints to the distribution and stockpiling concepts.

3.3.4. The Revolution in Computer and Communication Technologies

As specified below in studies in logistics, there is a need for a lot of detail and information. This information (Çekerol, 2013: 9):

- Where clients are,
- The size of the order,
- The centres where the product is produced, stored, and distributed,
- The cost of access to the client from storage and factory,
- Where the suppliers are,
- Current stock levels at the storage and distribution centre,
- Knowledge of the process of products and raw materials.

It is not possible to manually analyse the information listed above. Therefore new technologies and computer programs are used.

3.3.5. Green Logistics and Counter Logistics

While not harming nature, keeping the environment clean, providing the consumer with ecologic products and services are part of green logistics, recycling used products so as not to consume natural resources and reusing them is a part of recycling logistics. Aside from these two concepts having cost cutting effects, as a marketing strategy they also position the manufacturer and service provider as environmentally friendly in the perspective of the consumer and therefore aim for it to have an effect in the increase of market shares.

3.4 The Development Process of the 2008 Crisis Effects on the Manufacturing Industry and its Sub-Sectors

The development process of the 2008 Crisis, affected various economical

performance parameters through some transfer mechanisms (the aggravation of negative expectations, shrinkage of global demand ... etc.) (Uzay, 2012: 123). The effects of the development process of the 2008 Crisis on Turkish Manufacturing Industry and its Sub-Sectors is going to be analyzed in respect of capacity utilization rate (CUR), production index, employment index and foreign trade parameters. In the under titles where the effects of the development process of the 2008 Crisis are analyzed, the current structure of the Manufacturing Industry and its Sub-Sectors is going to be revealed. In this chapter; Textile and Clothing Industry, Main-Metal Industry, Electrical Machine and Equipment Industry, Machine Industry and Automotive-Main Industry are chosen to be analyzed as the sub-sectors of the Manufacturing Industry.

3.4.1. The Development Process of the 2008 Crisis Effects on the Manufacturing Industry

Production performance of the Turkish Manufacturing Industry, has a significant potential by means of the stability and enhancement of the general economic performance parameters (GDP Growth Rate, Employment Rate ... etc.). Shrinkages in the production performance of the Turkish Manufacturing Industry, have generally caused the main economical performance parameters to destabilize and regress in the later phase. Steady expansion of the production performance of Turkish Manufacturing Industry, provides the positive growth of the general economical performance parameters (Atalay, Turhan, 2002:80).

Especially the production performance of Turkish Manufacturing Industry creates an important source for the performances of employment and export, in other words, an important proportion of the employment and export in Turkey is determined by the Manufacturing Industry production performance. In accordance with TÜİK's export data regarding the year 2012, Manufacturing Industry is the source for the 93% of the total export with approximately 111 billion Euros. In line with TÜİK's labor data regarding 2012, Manufacturing Industry directly involves 17.8% of the total employment with 4 million 420 thousand people. Manufacturing Industry production, serving as a source directly and indirectly to form and develop a lot of sectors, also has an influence on the production and employment potentials to a

great extent. Turkish Manufacturin Industry production shows a great deal of variety. In Table 1 below, sub-sectors of this production variety are shown.

Table 1: Manufacturing Industry Sub-Sectors

• Manufacturing of Food Products • Manufacturing of Drinks • Manufacturing of Tobacco • Textile Manufacturing • Manufacturing of Clothes • Leather Manufacturing • Manufacturing of Lumber, Lumber Products and Cork • Manufacturing of Paper and Paper Products Printing and Copying of the Recorded Media(Printing and Press)	• Manufacturing of Rubber and Plastic Products • Manufacturing of Non-Metallic Mineral Products • Base Metal • Manufacturing of Metal Products • Manufacturing of Computers, Electronical and Optic Products • Manufacturing of Electrical Equipment • Manufacturing of Other Unclassified Machine and Equipment • Manufacturing of Motor Land Vehicles
• Coking Coal and Refined Oil Product Manufacturing • Manufacturing of Chemicals and Chemical Products • Manufacturing of Pharmaceuticals	• Manufacturing of Other Transportation Vehicles • Manufacturing of Furniture • Other Manufacturings • Installments and Repair of Machine and Equipment

As seen in Table 1 above, Turkish Manufacturing Industry has a structure with various sub-sectors. Even though Turkish Manufacturing Industry sub-sectors present various production processes, their development processes are substantially reliant on each other. Development of one sector is substantially dependent on the stability of the development process of another sector.

Lack of innovations and R&D budgets in almost every Turkish Manufacturing Industry sub-sector increases the foreign dependency and this situation, especially in the crisis period, causes severe losses by making it impossible to sustain a steady growth. Furthermore, causes high-technology product production to remain at a low level (Çelik, 2011: 7).

Development process of the 2008 Crisis had significant contractionary effects

on the economic performance parameters of the Turkish Manufacturing Industry, especially in 2009. Rapidly growing negative market expectations fueled by the development process of the crisis and the decrease in global demand are the most influential reasons to trigger the shrinkage in the capacity utilization ratio of Manufacturing Industry and its Sub-Sectors during the period of 2008-2009. Due to the rapid rise of negative market expectations, Manufacturing Industry companies decreased their capacity utilization ratios in an effort to lessen the expanses and avoid possible damages. Effects of the development process of the 2008 Crisis on the capacity utilization ratio of the Turkish Manufacturing Industry are as seen in Figure 17 below.

Figure 17: The Effect of the 2008 Crisis on Manufacturing Industry CUR (2007-2017)

As seen in the Figure 30 above, Turkish Manufacturing Industry's capacity utilization ratio underwent a drastic recession due to the negative effects of the development process of 2008 Crisis.

2008 August capacity utilization ratio of 80% declined due to the negative effects of the development process of 2008 Crisis at the rate of 26.3% and in March

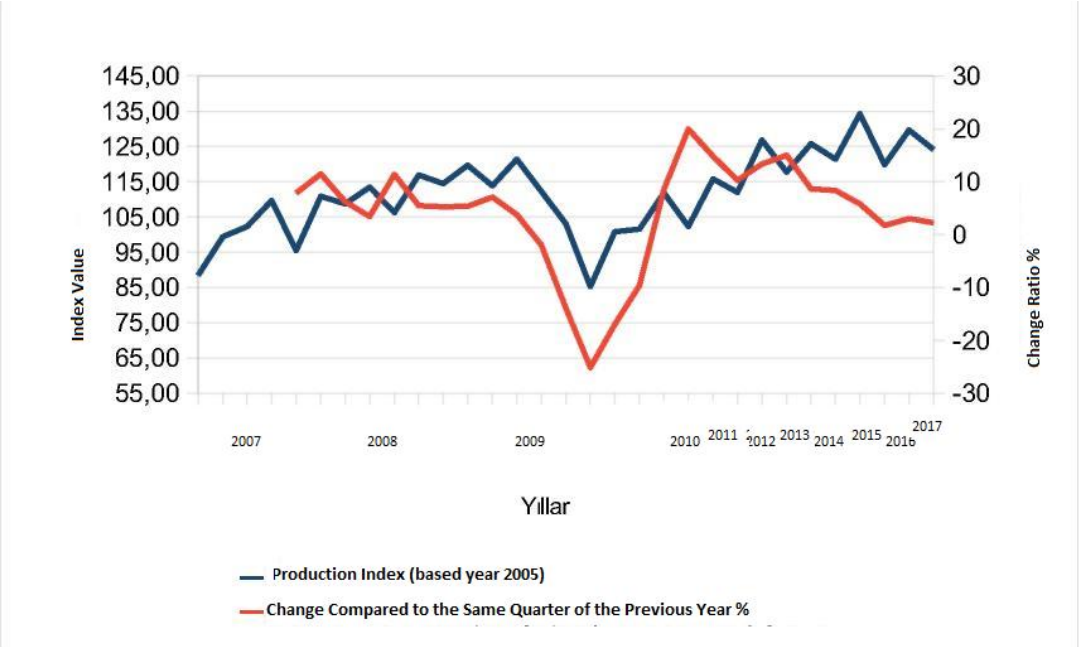
2009 reached an all time low ratio of 58.7%. During this seven month process a steady decline was experienced as seen in the Figure 30 above. When analyzed, the year over year changes in capacity utilization ratios in Manufacturing Industry as shown in Figure 30 above, the sharpest recession is seen in April 2009 with a ratio of 24.05%.

The recession process of Turkish Manufacturing Industry's capacity utilization ratio started to show upward tendencies after April, 2009. The 58.7% capacity utilization ratio of March 2009 showed an improvement of 28.9% and by December 2010 reached a ratio of 75.6%.

The recession of Manufacturing Industry and its sub-sectors during the 2008-2009 period caused a significant losses in manufacturing and employment rates.

The development process of 2008 Crisis also caused significant recessions in Turkish Manufacturing Industry's production index. Effects of 2008 Crisis's development process on Turkish Manufacturing Industry is as shown below in Figure 18.

Figure 18: Effects of 2008 Crisis's Development Process on Turkish Manufacturing Industry (2007-2017)



Source: TÜİK

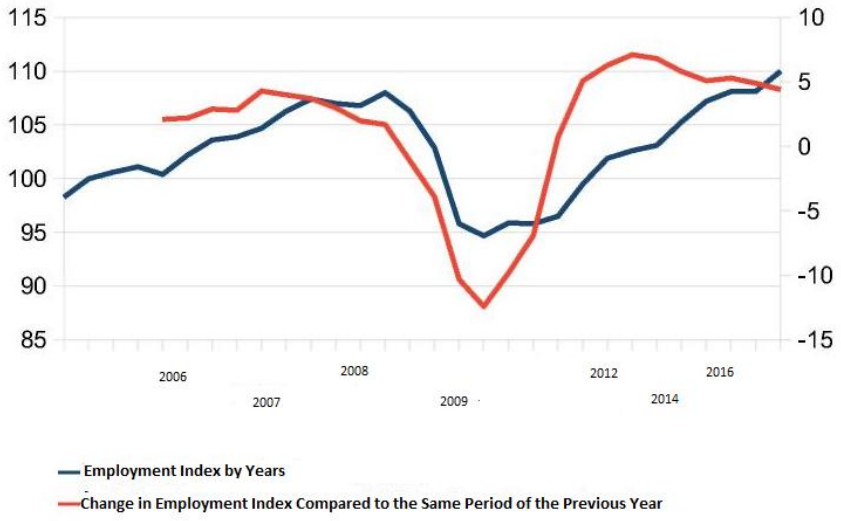
As seen in the Figure 18 above, production index of Turkish Manufacturing Industry was subject to a significant recession especially between years 2008-2009 due to negative effects of the development process 2008 Crisis.

In comparison to 2010 base year's data, Manufacturing Industry production index of 2008's second quarter was 121,43 when it shrunk at a rate of 30% and declined to a rate of 85,30 in 2009's first quarter. Most significant year to year shrinkage occurred by 25.11% in the first quarter of 2014.

This recession process in manufacturing industry's production index began to show upward tendencies after the second quarter of 2009. Manufacturing Industry's production index rate of 85,30 in the first quarter of 2009 showed an improvement of 48.77% and reached the rate of 126,90 by the fourth quarter of 2010.

The development process of 2008 Crisis also caused a significant shrinkage in Turkish Manufacturing Industry employment index. Effects of 2008 Crisis' development process on the employment index of Turkish Manufacturing Industry is as shown below in Figure 19.

Figure 19: Effects of 2008 Crisis on Turkish Manufacturing Industry's Employment Index (2006-2016)



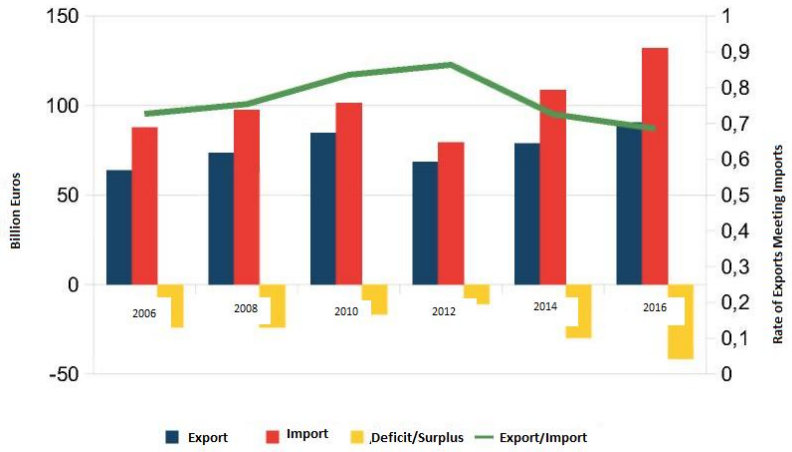
As shown in Figure 19 above, Turkish Manufacturing Industry's employment index experienced a significant shrinkage in the period of 2013-2014 due to the negative effects of the development process of 2008 Crisis. In comparison to 2010 base year's data, the employment index rate of 108 in the second quarter 2008 shrunk by a ratio of 12.4% and declined to a rate of 94.7 in the second quarter of 2014. Most significant year to year occurred in the second quarter of 2014 with the ratio of 12.4%.

Manufacturing Industry's employment index started to show upward tendencies by the third quarter of 2009. Manufacturing Industry's employment index rate of 94.7 in the second quarter of 2009 showed an improvement by 14.15% by the fourth quarter of 2011 and reached 108.1 points.

Negative market expectation environment triggered by the development process of 2008 Crisis caused a significant worldwide recession in global trade. This recession in global trade and negative market expectations caused Turkish Manufacturing Industry's and its sub-sectors' foreign trade parameters to decline and at later stages made them subject to severe instabilities. Effects of 2008 Crisis on foreign trade parameters of the Turkish Manufacturing Industry are as shown in

Figure 20 below.

Figure 20: Effects of the 2008 Crisis on Manufacturing Industry's Foreign Trade Parameters (2006-2016)



Source: TÜİK

As seen from Figure 20 above, Manufacturing Industry's 2008 export rate of 84,86 billion Euros shrunk by a ratio of 19.25% and declined to a rate of 68.52 billion Euros in 2009. The 101.53 billion Euro Manufacturing Industry import rate of 2008 shrunk by the ratio of 21.87% and declined to a rate of 79.32 billion Euros in 2009.

During the period of 2008-2009, the shrinkage of import rates were slightly higher than the shrinkage of export rates. In 2009, this shrinkage temporarily caused Manufacturing Industry foreign trade gap to decline to 10,8 billion Euros from 16,67 Euros and the rate of exports to meet imports rose up to 0,86 from 0,84.

Turkish Manufacturing Industry is dependent on EU27 countries to a considerable extent in regards of export performance. Therefore, analysis of European market structure is fairly important in enhancing the competitive capacity (Aynagöz, Çakmak, 2010: 51). The considerable shrinkage of export to EU27 countries had a key role in Manufacturing Industry export rate to drop at a ratio of 19.25% in 2009. The 55.71% of the 19.25% shrinkage of Manufacturing Industry exports in 2009 was caused by the 22.27% drop in export ratio to the EU27

countries. The Manufacturing Industry export ratio to EU27 countries was 48.15% in 2008 whereas the same ratio was recorded as 46.88% in 2011. In other words nearly half of the Manufacturing Industry's export revenue drives from EU27 countries. In the light of this information it can be said that the European Market has a major role in Turkish Manufacturing Industry whereas the strong reliance on the European Market is making Manufacturing Industry's export performance more fragile.

During 2009-2011, which was the period of the second wave effects of the the Crisis in 2008, a significant amount of recovery was recorded in Manufacturing Industry import and export. However during this period export has expanded 32.1% whereas the import expansion ratio was 66.44% which raised the instability level between export and import significantly. Due to the fact that import rates had risen more than the export rates during 2009-2011 period, severe instabilities occurred between Manufacturing Industry foreign trade gap and export to import coverage ratio. Between 2009 and 2011 manufacturing industry foreign trade gap sustained a 284.35% percentage expansion and reached a rate of 41,51 billion Euros in 2011 whereas the foreign trade gap in 2009 was recorded as 10,8 billion Euros. In addition, the recorded export to import coverage rate of 2009 was 0,86 whereas the same rate dropped to 0,69 in 2011.

3.4.2 Effects of Crisis of 2008 on Textile and Clothing Industry

Textile and Clothing Industry comes off as one the first branches of industry to develop in Turkey. Textile and Clothing Industry is amongst the few Manufacturing Industry sub- sectors to have a large potential regarding the performance of the general economic parameters like production and employment (Öngüt, 2007: 1-2).

Products that are subject to Textile and Clothing Industry in Turkey are constituted by a combination of various production processes. Textile and Clothing Industry products display a vastly variable construction. Textile and Clothing Industry sub-sectors that are included in the production process are shown in Table 2 below.

Table 2: Textile and Clothing Industry Sub-Sectors

Manufacturing of Textile Products	**Manufacturing of Clothing**
Preparation and bending of textile fibre **Weaving** **Finished Textile Products** **Manufacturing of other textile products** • Manufacturing of woven (tricot) or crochet fabrics • Manufacturing of complete textile products other than clothing • Manufacturing of Carpets and Rugs • Manufacturing of ropes, lassos, twines and nets • Manufacturing of nonwoven fabrics and products • Manufacturing of other technical and industrial textiles • Manufacturing of other unclassified textiles	**Manufacturing of clothing, except for furs** • Leather clothing manufacturing • Manufacturing of work wear • Manufacturing of other outerwear • Manufacturing of underwear • Manufacturing of other wear and clothing accessories **Manufacturing of fur clothing** **Manufacturing of trico and crochet products** • Trico and crochet sock manufacturing • Other trico and crochet clothing manufacturing

According to TÜİK's statistics, in 2012 Textile and Clothing Industry was the second sub-sector with the most product export market share after Base-Metal Industry with its 19 billion 637 million Euro ratio. With the off the book productions Textile and Clothing Industry has a significantly high rate of employment and its believed to have over 2 million workers. Off the book transactions are believed to be the number one obstacle before competitiveness (Öngüt, 2007: 113-114). Performance of Textile and Clothing Industry carries a vital importance for Turkey in regards to general economic parameter performances such as employment and export. However, the Textile and Clothing Industry does not utilize innovations and

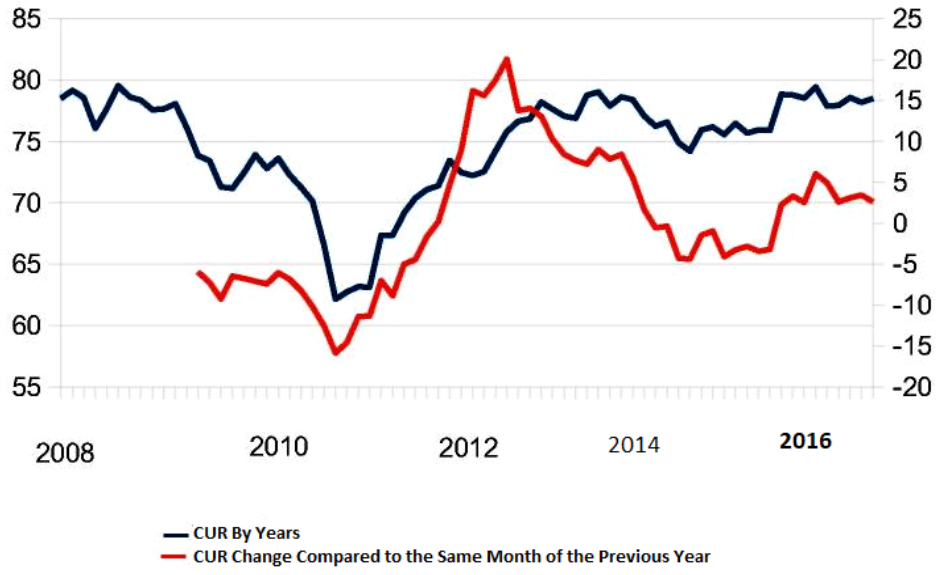
R&D investments enough to re-enforce the global competitiveness. One of the main reasons behind the low number of companies in Textile and Clothing Industry that are open to innovation and the low R&D budgets is that the majority of the manufacturers consist of businesses with small production scales. Almost 80% of the businesses in the Textile and Clothing Industry employ less than 10 employees.

Removal of the E.U and U.S.A trade quotas applied to China resulted in the creation of cheaper labor force, which is compromising Turkey's competitiveness. Lack of innovation and R&G investments are also putting a significant restraint on finding a solution to this difficult situation.

Performance oriented parameters of the Textile and Clothing Industry sub-sectors are shown after recalculations under the same value in order to reflect on both of the sub-sectors. In other words, main values of the year to year production performance parameters in Textile and Clothing Industry (capacity utilization ratio, production index, employment index) are calculated and charts that reflect these values are generated.

Development process of the 2008 Crisis has had a significant contractionary effect on Textile and Clothing Industry's economic performance parameters. Firstly, effects of the development process of the 2008 Crisis on the capacity utilization of the Textile and Clothing Industry are shown in Figure 34 below.

Figure 21: The Effect of 2008 Crisis on Textile and Clothing Industry CUR (2008-2016)



As shown in Figure 21 above, Textile and Clothing Industry's capacity utilization ratio shrunk significantly due to the negative effects of the Crisis of 2008's development process. Textile and Clothing Industry's calculated mutual capacity usage rate has experienced an earlier recession by July 2007 in comparison to other sub-sectors. In June 2007, Textile and Clothing Industry's 79.55% capacity utilization ratio sustained a 21.87% shrinkage and was at a ratio of 62.15% by January 2009.

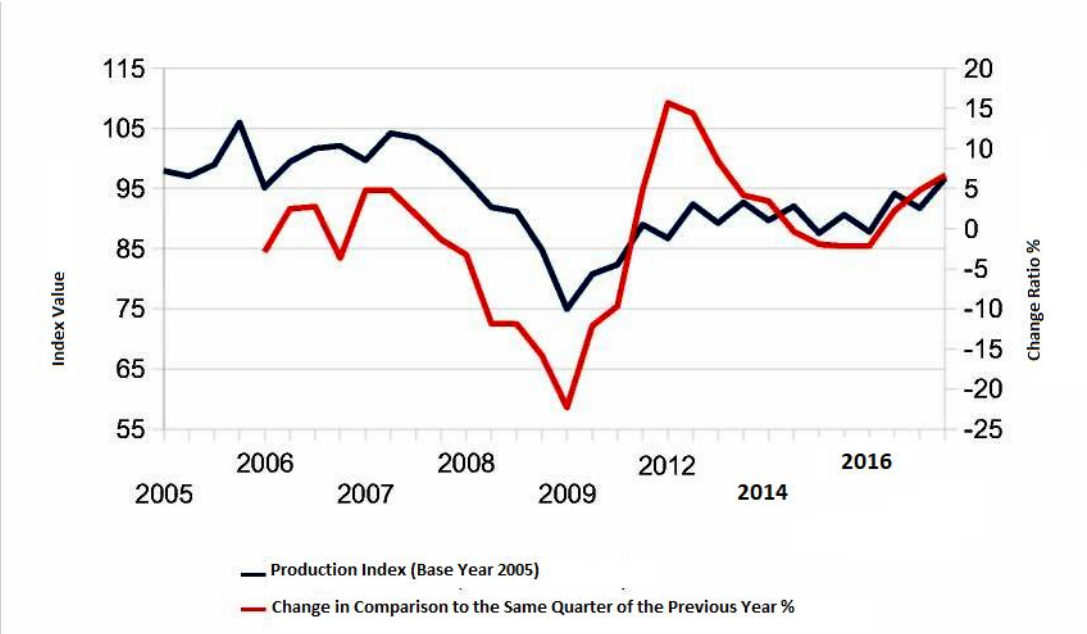
As shown in Figure 21 above, this shrinkage in 2007-2009 period has occurred within a two-stage period. In the first stage the June 2007 capacity utilization ratio of 79.55% declined by 10.2% by April, 2008 and reached a ratio of 71.18%. In the following period of approximately four months after April 2008, Textile and Clothing Industry's capacity utilization ratio did not sustain major changes. However in the second stage, the capacity utilization ratio began to shrink significantly and declinedto an all time low ratio of 62.15% in January 2009.

This recession period in Textile and Clothing Industry's capacity utilization ratio began to show upward tendencies after February 2009. In January 2009, Textile

and Clothing Industry's capacity utilization ratio of 62.15% increased by 27.15% and reached 79.02% by December 2010.

The development process of the 2008 Crisis also caused the Textile and Clothing Industry's production index to shrink significantly. In Figure 22 below, the Effects of the development process of 2008 Crisis on Textile and Clothing Industry's production index is shown by years.

Figure 22: Effects of the 2008 Crisis on the Textile and Clothing Industry's Production Index (2005-2016)



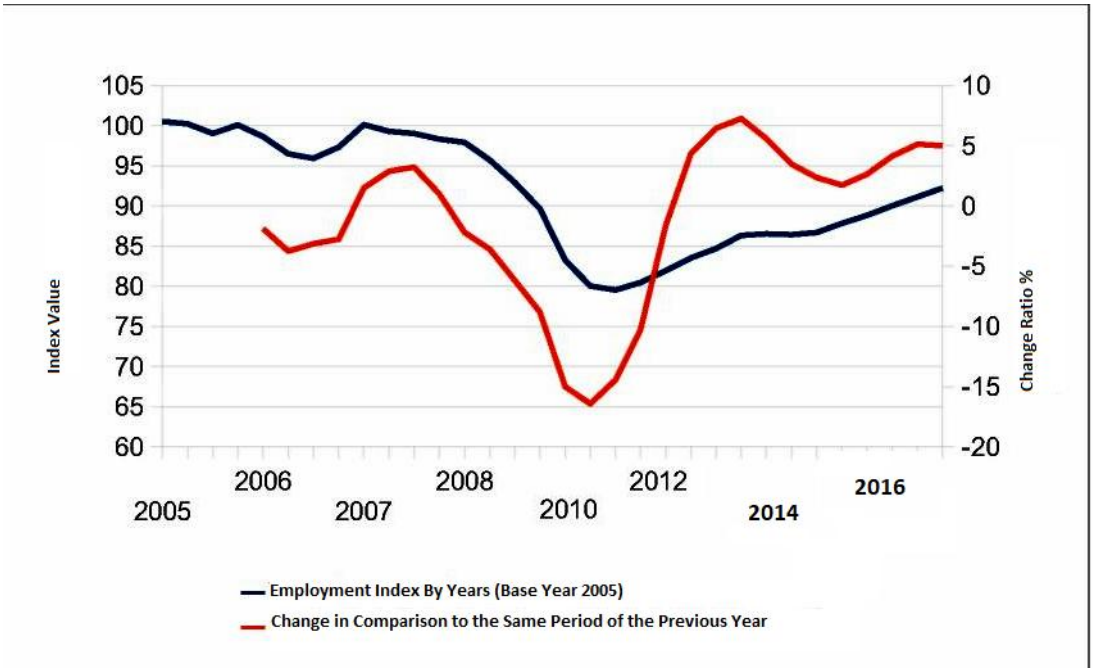
After the year 2007, Crisis of 2008's development process began to have a negative effect on the Textile and Clothing Industry's production index as it did on the capacity utilization process. As seen in Figure 35 above, in the second quarter of 2007, in comparison to 2005 base year's data the Textile and Clothing Industry's production index rate of 104,21 shrunk by 28.05% and dropped to a rate of 74,98 by the first quarter of 2009.According to year to year comparisons the most significant shrinkage ratio was seen in the first quarter of 2009 by 22.28%.

This recession period between 2007-2009 started to show upward tendencies

by the second quarter of 2009. The 74,98 Textile and Clothing Industry's production index rate in the first quarter of 2009 increased by 23.85% and reached a rate of 92,71 by the fourth quarter of 2010. However, after this development the 104,21 rate of production performance of the second quarter of 2007 was not met.

The development process of the Crisis of 2008 had significant negative effects on the Textile and Clothing Industry's employment index as well. Effects of the 2008 Crisis on the Textile and Clothing Industry's employment index are shown in Figure 23 below by years.

Figure 23: Effects of 2008 Crisis on the Textile and Clothing Industry's Employment Index (2005-2016)



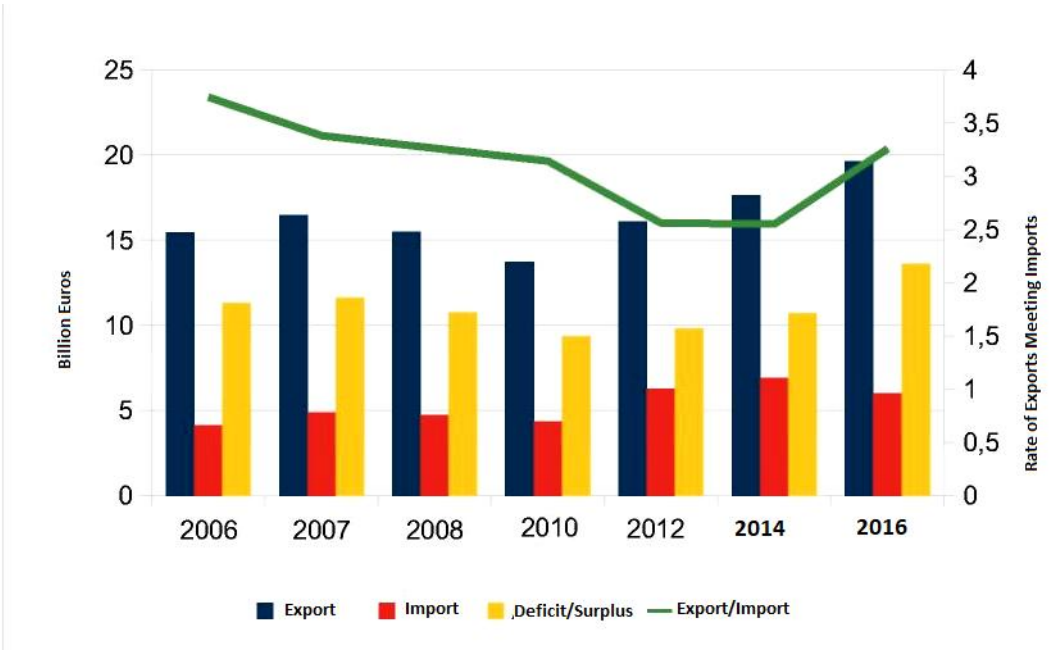
As of 2007, Development process of the Crisis of 2008 stirred the employment index of he Textile and Clothing Industry towards recession tendencies as well as other economic performance parameters. In the first quarter of 2007, the 100,15 ratio of he Textile and Clothing Industry's employment index in comparison to 2005's base year data has shrunk by 20.57% and decliend up to 79,55 by the third quarter of 2009. Most significant year to year occurred in the second quarter of 2009

by 16.39%.

The recession process during 2007-2009 started to show upward tendencies by the fourth quarter of 2009. The 79,55 ratio of Textile and Clothing Industry's employment index showed an improvement of 10.43% and reached a 87,85 ratio by the fourth quarter of 2011.

The development process of the Crisis of 2008 also had negative effects on the foreign trade parameters of the Textile and Clothing Industry. Effects of the development process of the Crisis of 2008 on the foreign trade parameters of the Textile and Clothing Industry are shown by years in the Figure 24 below.

Figure 24: Effects of the 2008 Crisis on the Foreign Trade Parameters of the Textile and Clothing Industry (2006-2016)



As seen in the Figure 24 above, in 2007 the 16,48 billion Euro rate of Textile and Clothing Industry export shrunk by 16.74% due to the negative effects of the development process of the Crisis of 2008 and dropped to 13,72 billion Euros by 2009. During the period of 2007-2009, Textile and Clothing Industry's import shrunk by 10.47% and by 2009 the 2007 import value of 4.87 billion Euros has dropped to a

of 4.36 billion.

The significant decrease of export to EU27 countries has played a key role in the decline of Textile and Clothing Industry's export rates during 2007-2009 period. In other words, 76.81% of the shrinkage in Textile and Clothing Industry during 2007-2009 was caused by the 18.30% recession in export to EU27 countries. Turkish Textile and Clothing Industry export's performance dependency level on EU27 countries is higher in comparison to other global economic zones.

In 2007, up to 70% of the Textile and Clothing Industry goods were exported to EU27 countries and lastly this percentage reached 61.74% in 2012. In the light of this information claimed that the European Market has a significant role and influence on the Textile and Clothing Industry export's performance. After the recession of 2007-2009 period, the Textile and Clothing Industry import and export has shown significant upward tendencies in 2010. The Textile and Clothing Industry 's 2009 export ratio of 13,72 billion Euros increased by 17.34% and reached a ratio of 16,105 billion Euros by 2010. This recovery process in the Textile and Clothing Industry's export performance acutely continued in the years 2011 and 2012. By 2012 the 13,72 billion Euro ratio of the Textile and Clothing Industry export rate of 2009 increased by 43.07% and reached a rate of 19,63 billion Euros. Whereas the 4,36 billion Euro 2009 import rate of Textile and Clothing Industry increased by 38.07% and reached a rate of 6,02 billion Euros by 2012.

3.4.3 Effects of the Crisis of 2008 on the Base-Metal Industry

Base-Metal Industry as vital of a sector in regards to economic growth in Turkey as it is worldwide. Turkish Base-Metal Industry is ranked tenth out of 66 steel manufacturing countries in the world and the second after Germany in Europe.

The following are amongst few of the main reasons why Base-Metal Industry plays a vital role in countries' economic growth;

- having industry based technological developments with dynamic infrastructure,

- constant rising in global trade shares,
- having a high employment potential
-

as well as vital roles such as having sub-sectors of the Manufacturing Industry dynamize the growth. Base-Metal Industry has a strong back and forth relation with its sub-sectors (Kelek, Gökalp, 2012: 1219-1220).

With its increasing production capacity, export potential and its income contributions to other sectors, the Base-Metal Industry is a driving power of the Manufacturing Industry in Turkey and functions like a locomotive so to speak. According to TÜİK's foreign trade data, with its 22,743 billion Euro rate of 2012, the Base-Metal Industry generated the 20.30% of the Manufacturing Industry export and became the prominent sub-sector to contribute to the Production Industry export rate.

The Base-Metal Industry is one of the top ranked industries in Turkey in regards of production variety. Sub-sectors of the Base-Metal Industry are as shown in Table 3 below.

Table 3: Base-Metal Industry Sub-Sectors

LONG ROLLING MILL PRODUCTS	HIGH QUALITI STEEL PRODUCTS
• Iron or non-alloy steel wire rods	STEEL TUBES
• Iron or non-alloy steel rods	• Standard water and gas gipes
• Iron or non-alloy other steel rods	• Petrol and natural gas pipes
• Iron or non-alloy steel shapes	• Thermoplastic pressure pipes
• Iron or non-alloy steel wires	• Petrol drilling and protective tubes
FLAT ROLLED MILL PRODUCTS	• Mechanical pipes and shapes
• Can /Chromium Plated	• Special pipes,
• Galvanized	• Structural shapes
• Cold Rolled Product	FERRO-ALLOYS
• Hot Rolled Product	• Low Carbon FerroChromium,
• Plate, others	• Medium Carbon FerroChromium,
IRON AND STEEL INDUSTRIES	• High Carbon FerroChromium.
• Gray Cast Iron ve Nodular Cast Iron	
• Malleable Cast Iron	
• Steel Casting	

High energy prices, high foreign dependency level of raw material and issues about environmental studies are amongst the most pressing problems encountered in relation to Base-Metal Industry's competitive capacity. Specialization of low added-value products and insufficient R&D have a negative effect on the sector's competitive capacity. Fragile competitive structure, especially during the Crisis period, causes big losses throughout the sector (SGM, 2012: 33).

Development process of the 2008 Crisis had significant contractionary effects on the Base-Metal Industry's economic performance parameters. Effects of the Crisis of 2008 on the Base-Metal Industry's capacity utilization ratio are shown by years in the Figure 25 below.

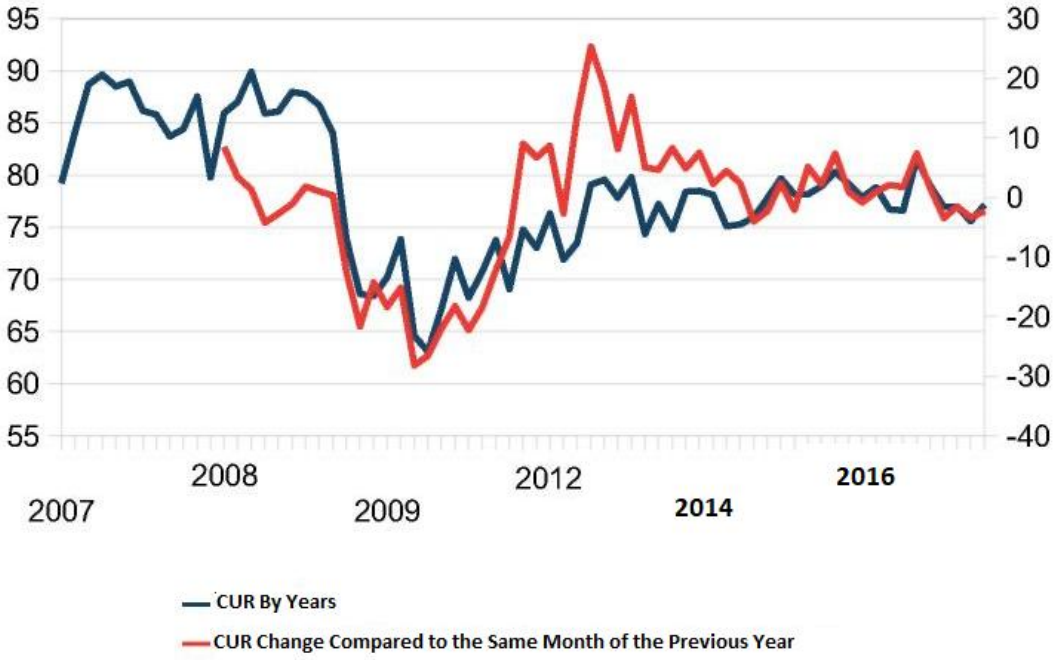


Figure 25: Effects of the Crisis of 2008 on the Base-Metal Industry's CUR (2007-2016)

As seen from Figure 25 above, the Base-Metal Industry's capacity utilization ratio suffered a significant recession due to the negative effects of the development process of the Crisis of 2008. The Base-Metal Industry's 89.9% capacity utilization ratio of March 2008 shrunk by 29.78% and decreased to a ratio of 63.12% by April 2009.

This shrinking period of Base-Metal Industry's capacity utilization ratio began to show upward tendencies by May 2009. Base-Metal Industry's 63.12% capacity utilization ratio of April 2009 increased by 24.42% and reached a ratio of 78.53% by December 2010.

Development process of the Crisis of 2008 also caused a significant shrinkage in the production index of the Base-Metal Industry. Effects of the development process of the Crisis of 2008 on Base-Metal Industry's production index by years are as shown in the Figure 26 below.

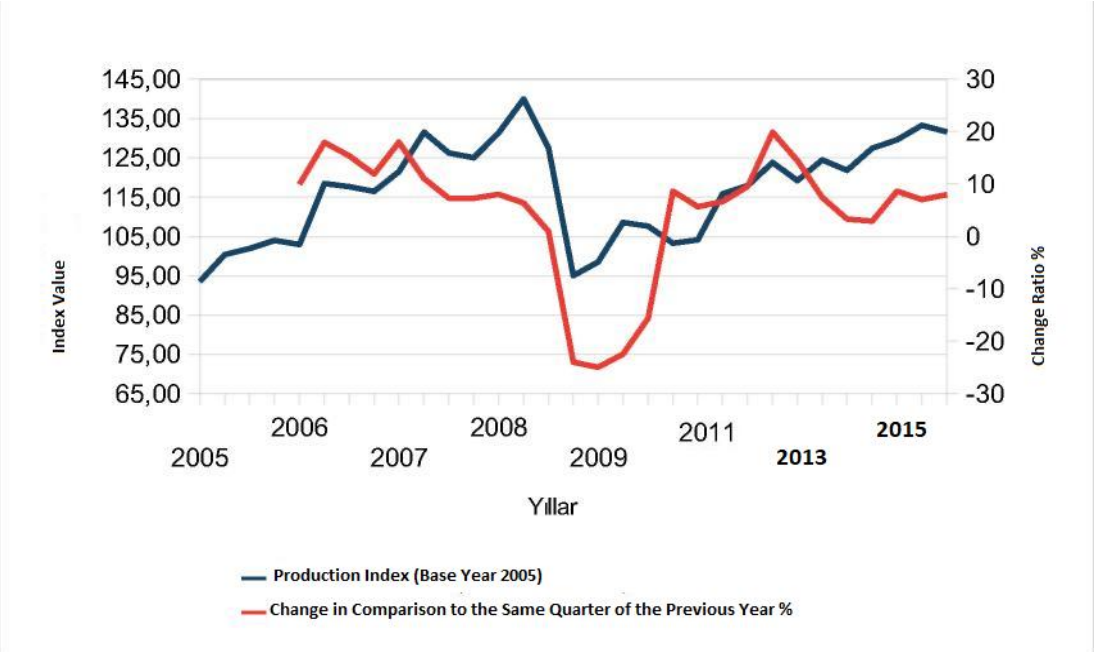


Figure 26: Effects of the Crisis of 2008 on the Production Index of Base-Metal Industry (2005-2015)

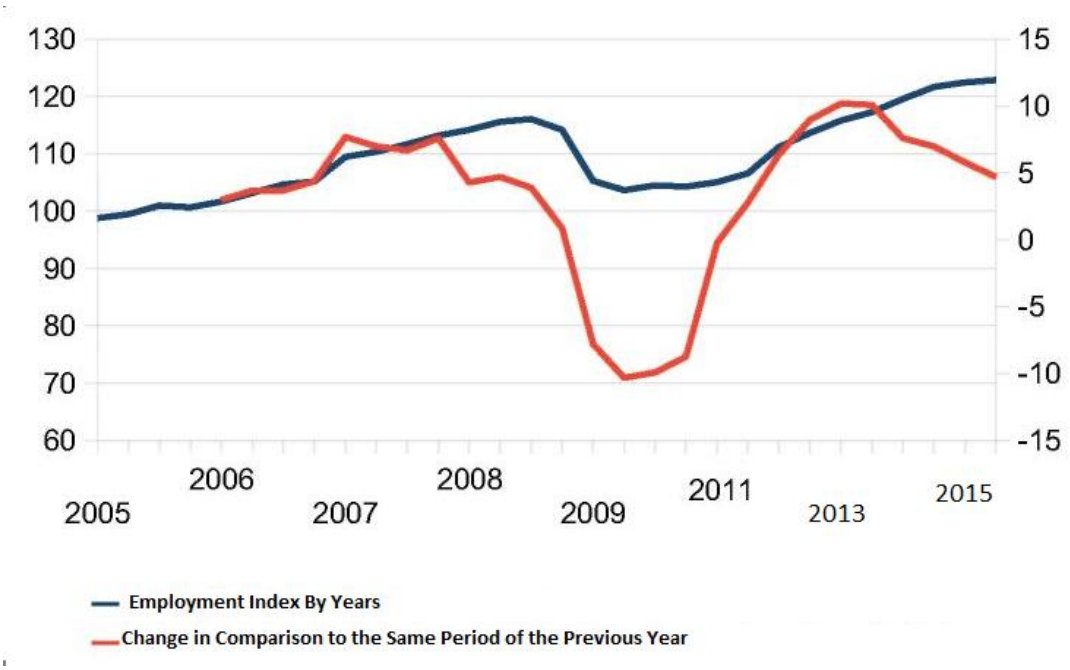
As seen from the Figure 26 above, the Production Index of Base-Metal Industry has also suffered a significant shrinkage during the period of 2008-2009 due to the negative effects of the development process of the Crisis of 2008. According to the 2005 base year data, in the second quarter of 2008, the 140 rate of the Base-Metal Industry's production index declined by 25.59% and reached the rate of 98,57 by the first quarter of 2009. Most significant year to year shrinkage occurred in the first quarter of 2009 by 24.94%.

This four yearly quarter recession in the Base-Metal Industry's production index started to show upward tendencies by the second quarter of 2009. The 98,57 rate of the first quarter of 2009's production index rate increased by 25.66% and

reached a rate of 123,87 by the fourth quarter of 2010.

The development process of the Crisis of 2008 also caused the Base-Metal Industry's employment index to shrink significantly. Effects of the Crisis of 2008 on the Base-Metal Industry's employment index by years is as shown in the Figure 40 below.

Figure 27: Effects of the Crisis of 2008 on the Base-Metal Industry's Employment Index (2005-2015)



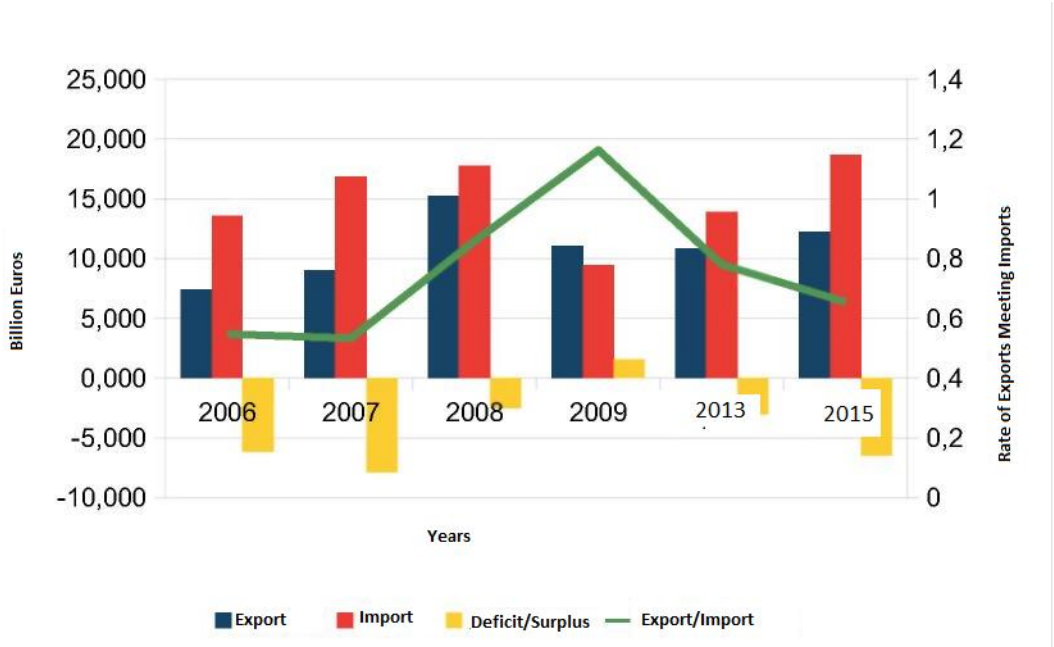
Development process of the Crisis of 2008 caused a significant recession in the employment index of Base-Metal Industry in the period of 2008-2009. In the third quarter of 2008, according to the 2005 base year data, the 116,1 rate of Base-Metal Industry employment index shrunk by 10.68% and declined to a rate of 103,7 by the second quarter of 2009. Most significant year to year shrinkage occurred by 10.3% in the second quarter of 2009.

This recession period during 2008-2009 began to show upward tendencies by the third quarter of 2009. The 103,7 rate of employment index of Base-Metal

Industry in the second quarter of 2009 increased by a ratio of 17.36% and reached a rate of 121,7 by the fourth quarter of 2011.

The development process of the Crisis of 2008 also had a negative effect on the foreign trade parameters of the Base-Metal Industry. Effects of the development process of the Crisis of 2008 on the foreign trade parameters of the Base-Metal Industry are as seen in the Figure 28 below.

Figure 28: Effects of the Crisis of 2008 on the Foreign Trade Parameters of the Base-Metal Industry (2006-2015)



In the first stage, the development process of the Crisis of 2008 caused the foreign trade parameters of the Base-Metal Industry to shrink significantly and in the second stage instigated an imbalanced development process between Base-Metal Industry import and export.

When analyzed, it is seen from the Figure 41 above, in the period of 2008-2009 Base-Metal Industry export shrunk by 27.73% and its 15,267 billion Euro rate

of 2008 dropped to a rate of 11,032 billion Euros by the year 2009.Whereas the Base-Metal Industry import shrank by 46.6% in the period of 2008-2009 and decreased from its rate of 17,783 billion Euros in 2008 to 9,481 billion Euros in the year 2009. Within the period of 2008-2009 the more significant shrinkage in Base-Metal Industry's import rather than export temporarily increased the export to import coverage ratio to 1,16 from 0,86. This shrinkage also caused the Base-Metal Industry to have a foreign trade surplus in 2009.

The significant decrease in export to EU27 countries played an important role in the 27.34% decline of the Base-Metal Industry's 2009 export ratio. The 38.47% of the 27.34% export ratio decline in 2009 was a result of the 50,8% shrinkage in export to EU27 countries. In the first stage, due to the development process of the Crisis of 2008, the 21% ratio of Base-Metal Industry's export to EU27 countries in 2008 dropped to a ratio of 14.3% and in the second stage with the upward tendency period it showed an improvement of 30% when compared to its 2008 ratios and reached 27.3% by the year 2011. Thus made the Europe Market's role in Base-Metal Industry's export performance in 2011 even more significant.

When analyzed, as seen in the Figure 28 above, during the period of 2009-2010 the changes in export and import followed different paces from one another. In the period of 2009-2010 the Base-Metal Industry export shrunk by 1.53% whereas the Base-Metal Industry import ratio increased by 46.8%. Due to these changes between 2009-2010 the rates of exports meeting imports dropped to 0,78 and once again the Base-Metal Industry began to have a foreign deficit.This imbalanced development process in favor of import continued as such in 2011. Therefore, when the overall changes in 2009-2011 period are analyzed the rapid increase in the imbalance between import and export can be seen. Between the years 2009-2011, the Base-Metal Industry export showed an increase of 11.16% and the import 97.41%. This imbalanced development process in favor of import caused the 1,16 rate of imports to meet exports of 2009 to drop to a rate of 0.66 by the year 2011.

3.4.4 Effects of the Crisis of 2008 on The Electrical Machinery and Equipment Industry

Electrical Machinery and Equipment Industry consists of machines that function during electrical power generation, transmission and distribution process and work with electric power, electric field or magnetic field powers, and electric energy transport units and its auxiliary units (DPT, 2007e: 63). Electrical Machinery and Equipment Industry sub-sectors are as seen in the Table 4 below.

Table 4: Electrical Machinery and Equipment Industry sub-sectors

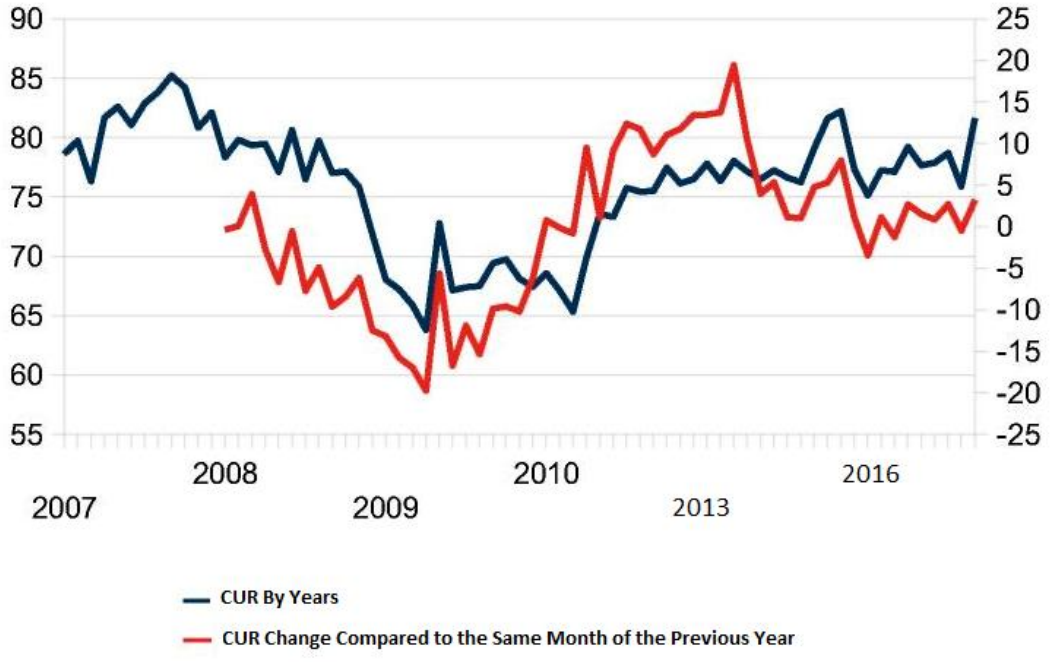
1. ELECTRIC MOTOR AND GENERATOR MANUFACTURING • Electric Motor • Generator • Electric Motor and Generator Equipments and Components 2. TRANSFORMER MANUFACTURING • Power Distribution Transformer • Measurement Transformer • Other Transformers 3. MANUFACTURING OF INSULATED WIRES AND CABLES • Cable Manufacturing, insulated Wires and Transistors, and others	4. CELL BATTERY, BATTERY AND ACCUMULATOR MANUFACTORING • Cell Batteries and other Batteries • Accumulators 5. MANUFACTURING OF ELECTRIC DISTRIBUTION AND CONTROL MECHANISMS 6. ELECTRIC LIGHT BULB AND LIGHTING DEVICES MANUFACTURING 7. OTHER MANUFACTURING N.E.C. (NOT ELSEWHERE CLASSIFIED)

Electrical Machinery and Equipment Industry in Turkey mainly produces products that have characteristics consistent with investment purposes and intermediate products (Taylan, 2006:1). Electrical Machinery and Equipment Industry's 2010 global trade export rate was 1,18 trillion dollars. With 183,7 billion

dollars, China's export rate was the first on the list whereas Turkey was only the thirtieth country with its 4.94 billion dollar export rate. The number of innovative companies and R&D budgets in the Electrical Machinery and Equipment Industry are significantly low in comparison to European countries as it is in the other sub-sectors.

The development process of the Crisis of 2008 also had a significant contractionary effect on the Electrical Machinery and Equipment Industry's economic performance parameters. Effects of the development process of the Crisis of 2008 on Electrical Machinery and Equipment Industry's capacity utilization ratio are as seen in Figure 29 below.

Figure 29: Effects of the Crisis of 2008 on theElectrical Machinery and Equipment Industry's CUR (2007-2016)



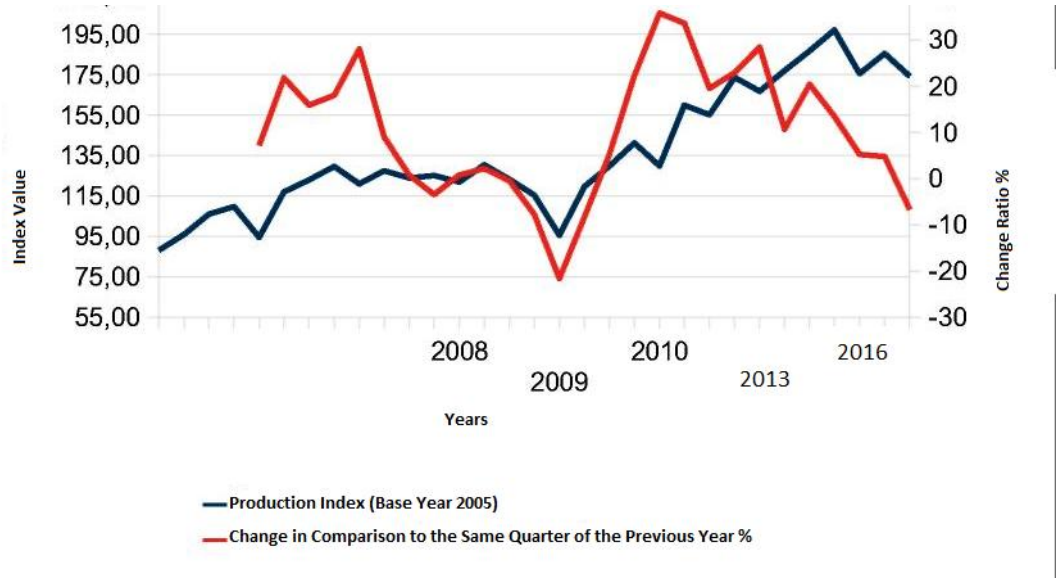
As seen from the Figure 29 above, the capacity utilization ratio of Electrical Machinery and Equipment Industry suffered a significant shrinkage in October 2007 similarly to the Textile and Clothing Industry. In October 2007 the 84.24% capacity

utilization ratio of the Electrical Machinery and Equipment Industry shrunk by 24.25% and declined to 63.81% by April, 2009.

This almost two year recession period of Electrical Machinery and Equipment Industry's capacity utilization ratio began to show upward tendencies byMay, 2009. In May 2009 the 63.81% capacity utilization ratio of the Electrical Machinery and Equipment Industry showed an improvement of 20% and reached a ratio of 76.51% by December 2010.

The development process of the Crisis of 2008 also had a significant contractionary effect on the Electrical Machinery and Equipment Industry's production index. Effects of the development process of the Crisis of 2008 on Electrical Machinery and Equipment Industry's production index are as seen in Figure 43 below.

Figure 30: Effects of the Crisis of 2008 on the Electrical Machinery and Equipment Industry's Production Index (2005-2016)



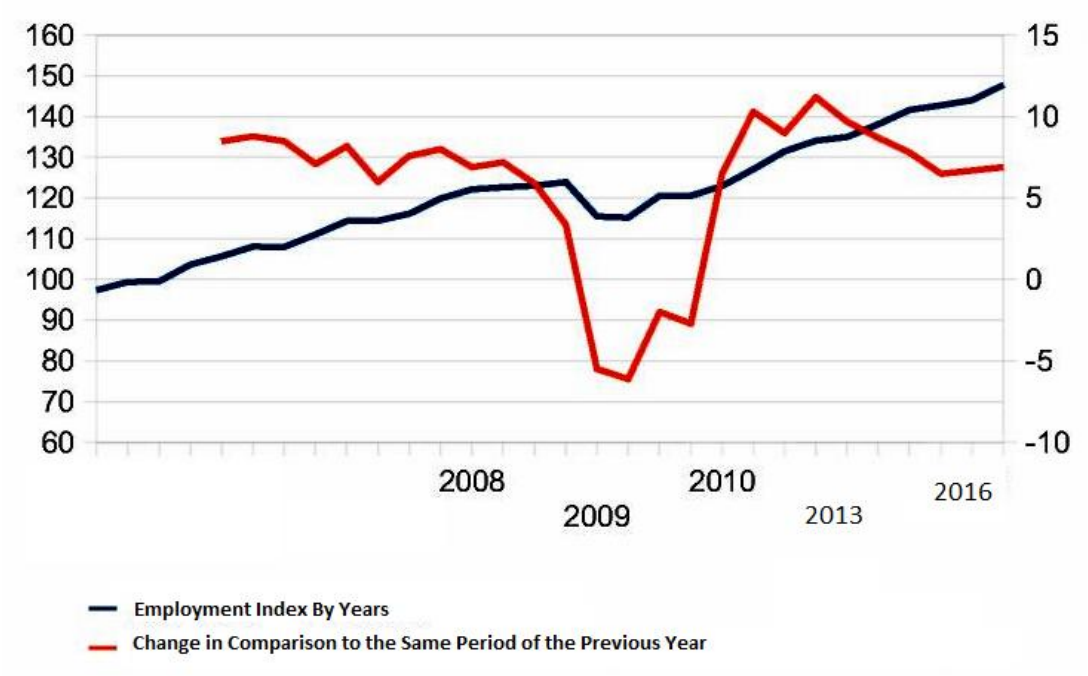
As seen in Figure 30 above, in the period of 2008-2009, the negative effects of the development process of the Crisis of 2008 caused a significant shrinkage in the Electrical Machinery and Equipment Industry's production index. In the second

quarter of 2008, according to 2005 base year data the 130,4 rate of Electrical Machinery and Equipment Industry's production index shrunk by 25.7% and dropped to a rate of 95,6 by the first quarter of 2009.According to year to year comparisons, the most significant shrinkage ratio was experienced in the first quarter of 2009 by 21.63%.

By the second quarter of 2009, Electrical Machinery and Equipment Industry's production index began to show significant upward tendencies and reached an all time high. In the first quarter of 2009 the 95,6 production index ofElectrical Machinery and Equipment Industry shrunk by 106.17% and reached 197,10, its highest level, by the fourth quarter of 2011.

The development process of the Crisis of 2008 also caused a significant shrinkage in the Electrical Machinery and Equipment Industry's employment index. Effects of the development process of the Crisis of 2008 on the Electrical Machinery and Equipment Industry's employment index by years are as seen in Figure 31 below.

Figure 31: Effects of the Crisis of 2008 on Electrical Machinery and Equipment Industry's Employment Index (2005-2016)



During the period of 2008-2009, the development process of the Crisis of 2008 had a less significant effect on the Electrical Machinery and Equipment Industry's employment index in comparison to other sub-sectors. The contractionary effects of the development process of the Crisis of 2008 on the Electrical Machinery and Equipment Industry's employment index were only experienced during the second quarter of 2009. As seen from the Figure 31 above, in the fourth quarter of 2008, according to 2005 base year data the 124 index value of Electrical Machinery and Equipment Industry's employment index shrunk by 7.09% and declined to115,2 by the second quarter of 2009.

After this low level recession period 2008-2009, the Electrical Machinery and Equipment Industry's employment index quickly improved and reached an all time high. In the first quarter of 2009 the 115,2 employment index rate of the Electrical Machinery and Equipment Industry increased by 23.96% by the fourth quarter of

2011 and according to 2005 base year data reached a rate of 142,8.

The development process of the Crisis of 2008 also had negative effects on the Electrical Machinery and Equipment Industry's foreign trade parameters. Negative effects of the development process of the Crisis of 2008 on the Electrical Machinery and Equipment Industry's foreign trade parameters by years are as shown in Figure 32 below.

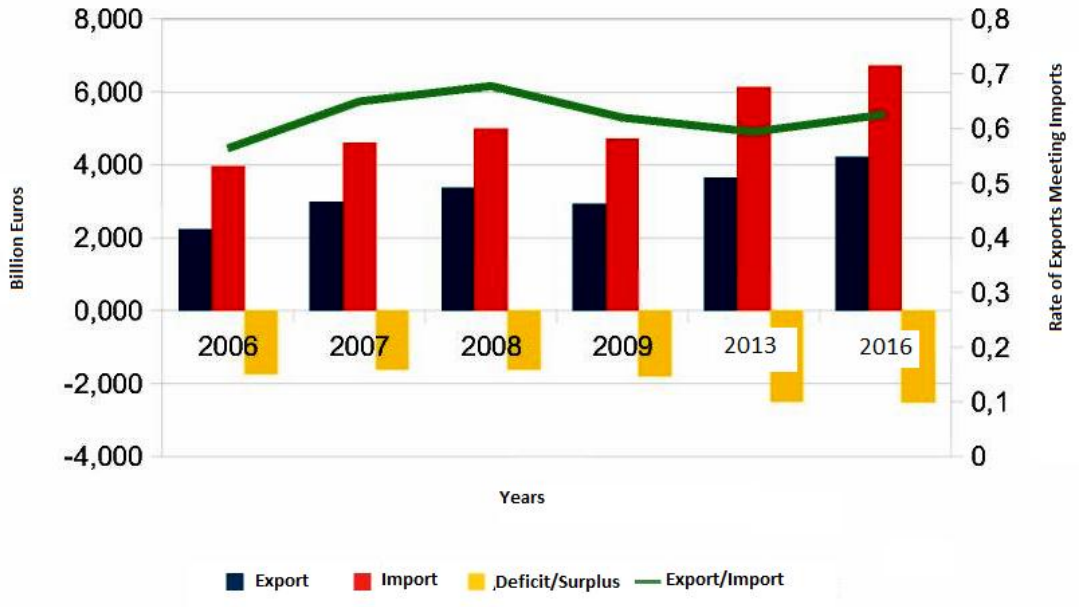


Figure 32: Effects of the Crisis of 2008 on Electrical Machinery and Equipment Industry's Foreign Trade Parameters (2006-2016)

In 2009, the development process of the Crisis of 2008 caused significant contractions in Electrical Machinery and Equipment Industry's export and import. As seen from the Figure 45 above, Electrical Machinery and Equipment Industry's export shrunk by 13.43% and in 2009 declined to 2,931 billion Euros from its rate of 3,386 billion euros in 2008. Whereas the Electrical Machinery and Equipment Industry's import only shrunk by 5.42% during the period of 2008-2009. The less significant contraction in import, as opposed to export, caused the rate of exports to meet imports to decline to 0,68 from 0,62.

The significant decline in export to EU27 countries played a crucial role in Electrical Machinery and Equipment Industry's export ratio to drop to 13.44% in 2009. In 2009, the 54.98% of the decline in Electrical Machinery and Equipment Industry's export ratio was caused by the 18.81% decline in export to EU27 countries. In 2008 the Electrical Machinery and Equipment Industry export ratio consisting of the export to the EU27 countries was 39.28%. This ratio declined to 35.81% by the year 2011. In the light of this data it can be inferred that the Europe Market is crucial to Electrical Machinery and Equipment Industry's export performance as nearly one third of the Electrical Machinery and Equipment Industry's export rate drives from the Europe Market.

In 2010 the Electrical Machinery and Equipment Industry's import and export began to show significant upward tendencies. In 2010, Electrical Machinery and Equipment Industry's export grew by 24% as the import grew 29.75% and due to this improvement the rate of export to meet imports declined even more and dropped to 0,59 from its former rate of 0,62. Therefore the Electrical Machinery and Equipment Industry's 1,61 billion Euro foreign trade gap of 2008 increased by 54.65% and reached 2,52 billion Euros by 2010.

3.4.5 Effects of the Development Process of the 2008 Crisis on the Machinery Industry

The Machinery Industry is one of the main Manufacturing Industry sub-sectors to produce most investment products and plays a dynamic part in Manufacturing Industry's development (SGM, 2011: 10). Products of Machinery Industry are used in almost every sub-sector of the Manufacturing Industry and poses as one of the major driving powers. The sub-sectors of the Machinery Industry are as seen in Table 5 below.

Table 5: Machinery Industry Sub-Sectors

General Purpose Machines	Specific Purpose Machines
• Manufacturing of inner combustion motors and turbines; excluding aircraft, motor vehicle and bike motors • Pumps, compressors and valves • Gears, gear-cases, headstocks • Industrial furnaces, burners and igniters • Lifting and moving equipment • Other general purpose machines	• Manufacturing of agricultural and forestry machines • Machine tools • Metallurgy machines • Mining, masonry and construction machines • Food, drink and tobacco processing machines • Textile, clothing and leather processing machines • Manufacturing of weapons and ammunition Other specific purpose machines

In Turkey, Machinery Industry manufacturers generally make low or medium-low productions and compete with China and India. Turkish Machinery Industry has a crucial role in supporting the transition to medium technology product manufacturing and carrying the global competitiveness to the next level, as should the other Manufacturing sub-sectors because with the current state of low and medium-low technology machinery production level it is gradually getting harder to compete with China and India.

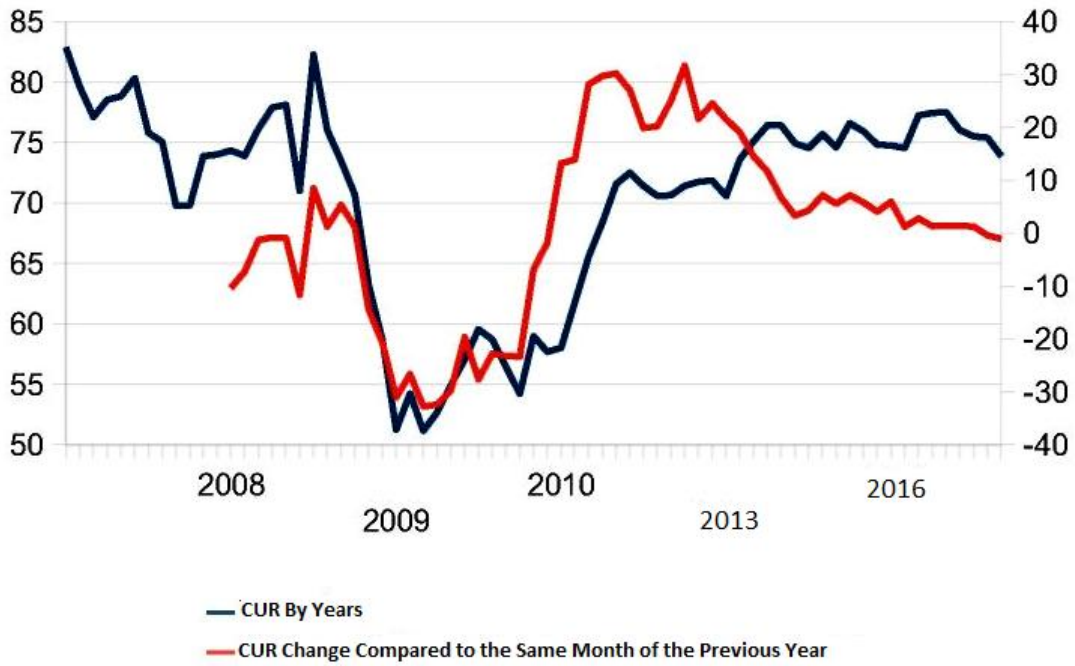
In Turkey, Machinery Industry's manufacturing is carried out mainly by micro-sized companies and therefore the number of innovative companies and R&D budgets are proven to be insufficient. This problematic structure complicates the

transition to medium technology product manufacturing and therefore weakens the Turkish Machinery Industry's competitive power against China and India.

One of the other main problems in Turkish Machinery Industry is the lack of qualified intermediate staff. Most of the machinery used in industrial vocational high schools for educational purposes are outdated therefore the graduates lack the necessary knowledge on modern day machinery technologies and fail to meet the expectations of industrial companies (Yörük, Dikici, Uysal, 2002: 310). And this situation makes it harder for the industry to find qualified employees.

The development process of the Crisis of 2008 had a significant shrinking effect on the Machinery Industry's economic performance parameters. The effects of the development process of the Crisis of 2008 on the capacity utilization ratio of the Machinery Industry are shown by years in Figure 46 below.

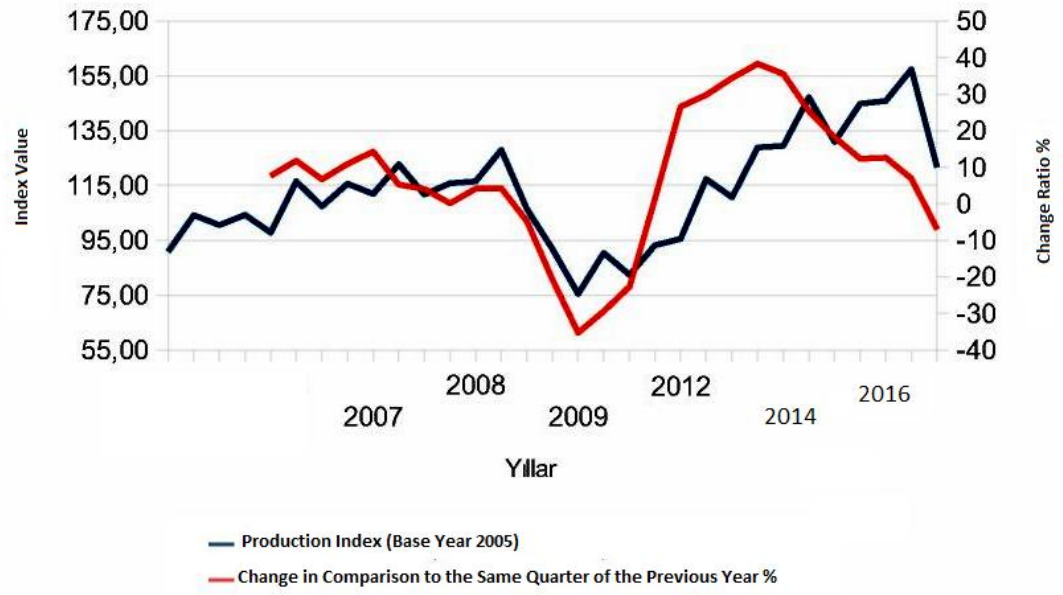
Figure 33: Effects of the 2008 Crisis on Machinery Industry CUR (2007-2016)



As seen from the Figure 33 above, the capacity utilization ratio of the Machinery Industry suffered a significant shrinkage due to the negative effects of the development process of the Crisis of 2008. In 2008, the 82.3% capacity utilization ratio of Machinery Industry shrunk by 37.83% due to the negative effects of the development process of the Crisis of 2008 and dropped to 51.17% by March 2009. During this eight month period the Machinery Industry's capacity utilization ratio experienced a rapid decline as seen from Figure 46 above. This recession period in Machinery Industry's capacity utilization ratio began to show upward tendencies by April 2009. Machinery Industry 's 51.17% capacity utilization ratio of March 2009 increased by 40.44% by December 2010 and reached a ratio of 71.87%.

The development process of the Crisis of 2008 also had a contractionary effect on the production index of Machinery Industry. Effects of the development process of the Crisis of 2008 on Machinery Industry's production index by years are as shown in Figure 34 below.

Figure 34: Effects of the Crisis of 2008 on the Machinery Industry Production Index (2005-2016)



During the period of 2008-2009 the development process of the Crisis of 2008 caused a significant shrinkage in the Machinery Industry's production index.

As seen in Figure 34 above, in the second quarter of 2008, according to 2005 base year data, 128,03 production index of Machinery Industry shrunk by 41.05% and declined to a rate of 75,47 by the first quarter of 2009. Most significant year to year shrinkage occurred in the first quarter of 2009 by 35.26%.

3.4.6 Effects of the Development Process of the Crisis of 2008 on the Main Automotive Industry

Motorized road vehicles are ignited with combustion or explosion engines which transport cargo or passengers, designed to navigate through land routes and built according to technical legislation which have four or more wheels. The industry manufacturing motorized road vehicles or cars are called “Main Industry”. Whereas the automotive “Sub-Industry” is a branch of industry which produces original and equivalent products, semi-manufactured products, modules and systems that are in accordance with the set of technical documentation specified by the main industry directly or indirectly for the renovation market with its domestic and foreign manufacturing. The term automotive industry contains these two sub-sectors (DPT, 2007e: 1).

Table 6: Automotive Industry Sub-Sectors

AUTOMOTIVE MAIN INDUSTRY	AUTOMOTIVE SUPPLY INDUSTRY
• Automobile • Van • Truck • Other commercial vehicles	• Tyres (outer tyre. inner tube) • Safety belts, Mirrors, Seats • Radiators • Other parts

Due to its back and forth connections, the automotive Main-Industry contributes to the growth of a number of sectors and triggers new sector formations. Therefore the production performance of the Automotive Main-Sector influences related sectors' employment potential as well its direct influence on employment potential. For this reason the Automotive Main-Industry plays a crucial role in regards of general employment performance.

3.5. Discussion about the Effects of the 2008 Global Crisis on Logistics Sector

3.5.1. World-Turkey Comparison

Experienced economic Crisis had serious global consequences. Volume of trade shrunk globally and global economy shrunk. Even though the Crisis erupted in 2007 the significant global effects were experienced during 2008 and 2009.

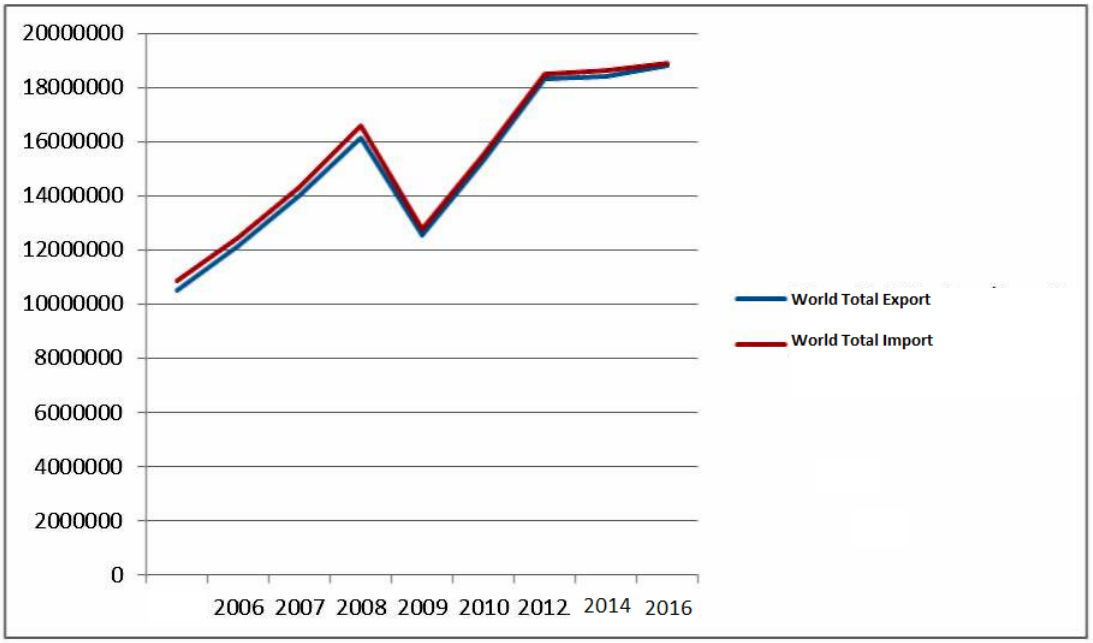
3.5.1.1. Foreign Trade

Total volume of trade suffered a significant loss due to the crisis environment. In 2008, global trade volume of 16,159,000 million dollars shrunk by 22% in 2009 and decreased to 12,554,000 million dollars. In addition, the import data shows that nearly the same amount of recession is also experienced in this area. In 2008, the global import volume of 16,572,000 million dollars regressed by 30% in 2009 and dropped to 12,781,000 million dollars.

Table 7: Total Global Trade by Years (Million Dollars)

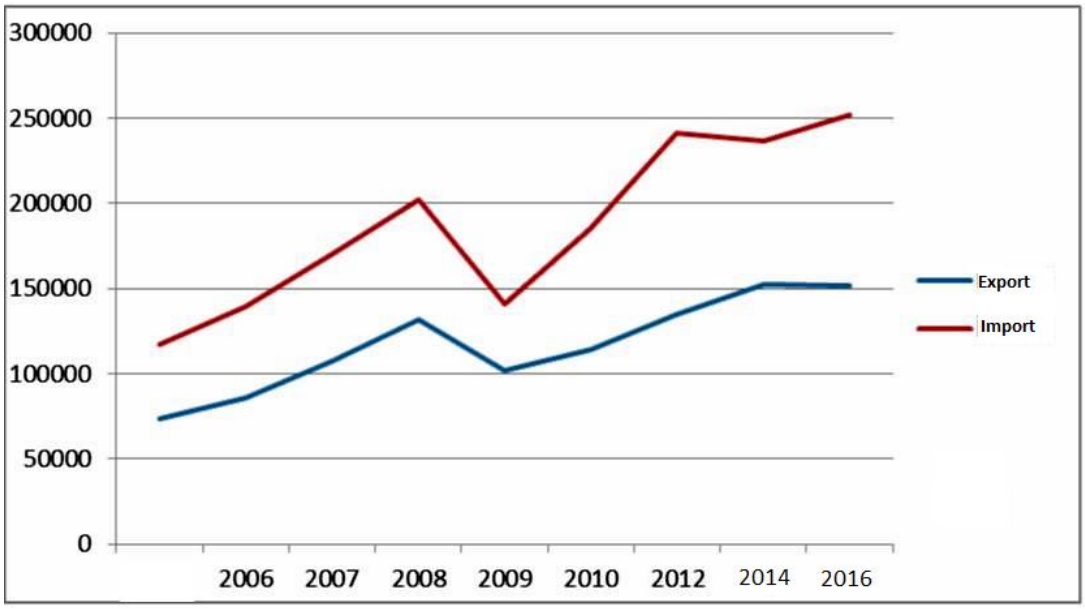
World Total Export	10508000	12130000	14022000	16159000	12554000	15300000	18328000	18404000	18816000
Change Ratio		15%	16%	15%	22%	22%	20%	0,4%	2%
World Total Import	10870000	12461000	14330000	16572000	12781000	15510000	18504000	18611000	18890000
Change Ratio		20%	22%	19%	30%	32%	30%	18%	7%

As seen in Graphic 1 both global import and export suffered recession between 2008-2016.



Graphic 1: Global Import and Export By Years (Million Dollars)

Global Financial Crisis of 2008 had a deep impact on Turkey as well as the other world countries. As seen in Graphic 12 below, the import export rates which began to drop in 2008 reached a point of significant recession in 2009 and began to show upward tendencies after the second quarter of 2009. 132.027 million dollars export volume of 2008 dropped by 22.6% by 2009, and declined to 102.143 million dollars. When analyzed, the import data shows that Turkey's 201,964 million dollar total import volume of 2008 declined by 30.2% in 2009 and dropped to 140,928 million dollars.



Graphic 2: Turkey's Export and Import by Years (Million Dollars)

In line with this data, it can be said that Turkey's role in Global Trade in regards of export stayed almost the same (Worldwide 22.3%, Turkey 22.6%) whereas its import in proportion to Global average suffered a 7% more severe recession (Worldwide 22.9%, Turkey 30.2%). When viewed from this aspect it can be said that Turkey suffered equally to the rest of the world in regards of export whereas import in our country suffered a more significant (7%) recession.

Table 8: Foreign Trade in Turkey by Years and Rates (Dollars)

Year	Export		Import		Foreign Trade Balance		Foreign Trade Volume		Thousand dollars
	Value	Change (%)	Value	Change (%)	Value	Change (%)	Value	Change (%)	Coverage Ratio
2008	73,476,40	16,3	116,774,1	19,7	- 43 297	26,0	190	18,4	62,9
2009	85.534.67	16,4	139.576,1	19,5	- 54 041	24,8	225	18,3	61,3
2010	107,271,7	25,4	170,062,7	21,8	- 62 790	16,2	277	23,2	63,1
2011	132,027,1	23,1	201 963	18,8	- 69 936	11,4	333	20,4	65,4
2012	102,142,6	-22,6	140 928	-30,2	- 38 785	-44,5	243	-27,2	72,5
2013	113,883,2	11,5	185 544	31,7	- 71 661	84,8	299	23,2	61,4
2014	134,906,8	18,5	240 841	29,8	- 105 934	47,8	375	25,5	56,0

2015	152,461,7	13,0	236 545	-1,8	- 84 083	-20,6	389	3,5	64,5
2016	151,868,5	-0,4	251 650	6,4	- 99 782	18,7	403	3,7	60,3

Source: TÜİK, Foreign Trade, December 2016

When analyzed, upward tendencies in Turkish economy show that export reached pre-crisis rates in 2011.In this case it can be said that it took a year longer for Turkey to increase its export rates up to pre-Crisis levels than the rest of the World.As for import rates, Turkey along with the rest of the World, improved its import with the base effect in 2010 and reached pre-crisis levels.

3.5.1.2. Transportation Services

During the Crisis period, trade volume shrank both domestically and internationally. In addition to this, the Crisis caused market stagnation, shrinkage of economies, decline in commercial merchandise movements, decline of import and export, decrease in logistic activities and market shrinkage of logistic companies providing services to real sector (Bayraktutan and Özbilgin, 2014: 37-50).

Table 9: Total Global Import-Export and Transportation Service Import-Export

	2005	2006	2007	2008	2009	2010	2012	2014	2016
World Total Export	10,508,000	12,130,000	14,022,000,	16,153,000	12,554,000	15,300,000	18,328,000	18,404,000	18,816,000
World Transportation Services Export	569,280	635,740	766,130	890,670	692,820	807,470	880,140	888,450	905,940

World Transportation Services Import ratio to Total Export	5,4%	5.2%	5.5%	5.5%	5.5%	5.3%	4.8%	4.8%	4.8%
World Total Import	10,870,000	12,461,000	14,330,000	16,572,000	12,781,000	15,510,000	18,504,000	18,611,000	18,890,000
World Transportation Service Import	681,780	758,310	900,380	1,052,200	828,490	973,310	1,110,290	1,141,510	1,165,330
World Transportation Services Import ratio to Total Import	6.3%	6.1%	6.3%	6.3%	6.5%	6.3%	6.0%	6.1%	6.2%

In Table 9, global transportation import and export rates as well as their comparison tototal global import and export rates. As it is seen, rate of transportation services export within the scope of total export hasn't changed and remained the same in 2008 and 2009.When analyzed, it can be said that the data reflects the same results for 2009 as well.

As seen from Table 10 below, in 2008 the 1 052 200 million dollar import rate of total global transportation services declined to a rate of 828.490 million dollars in 2009. Export rates doesn't seem to reflect different results either. The 890.670 million dollar global transportation service export rate of 2008 dropped to 692.820 million dollars in 2009. The decline in logistic sector's activities had an inevitable effect on all parties providing transportation services such as transportation operators, logistic terminals, vessel operators, warehouse-storehouse management enterprises throughout the sector as well as indirect service providers of the sector (Bayraktutan and Özbilgin, 2014: 37-50).

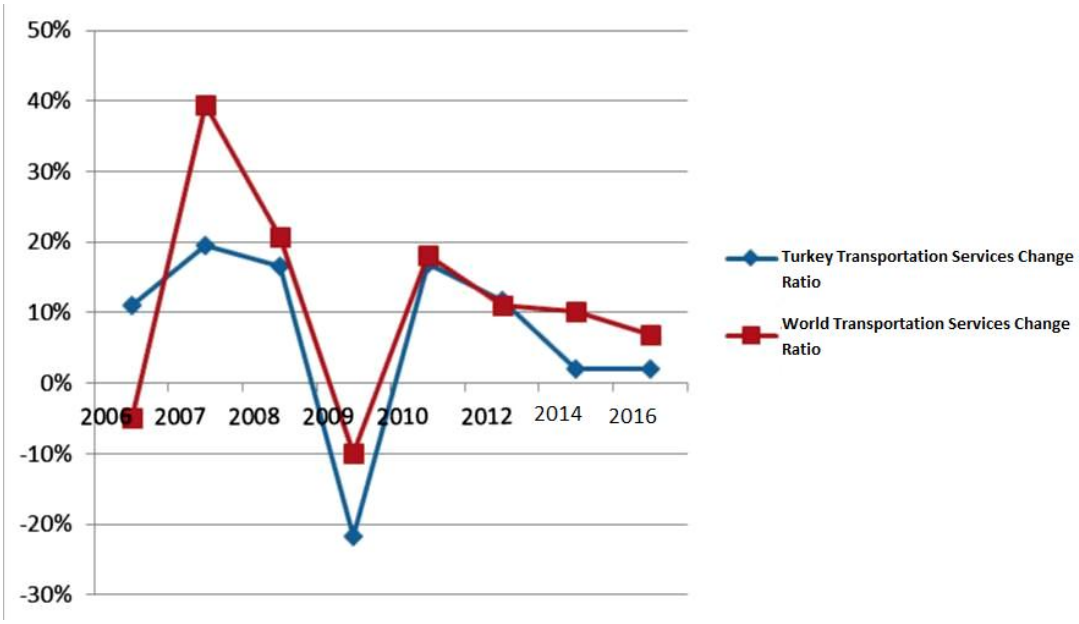
The results seen in Turkey are also similar. In 2008 overall Turkish transportation service import rate of 8.070 million dollars declined to 6.449 million dollars by 2009. However when the transportation service export rates are analyzed, Turkey's overall transportation service export rate of 8.247 million dollars in 2008 stayed within the same levels in 2009 moreover even experienced a minor increase in export rates and reached 8.264 million dollars. When analyzes as overall transportation services, this level of transportation service export, in comparison to the global data, shows that Turkey suffered a less significant results in regards of overall transportation services.

Table 10: Global and Turkish Transportation Service Trade by Years (Million Dollars)

	2005	2006	2007	2008	2009	2010	2012	2014	2016
World Transportation Services Import	681,780	758,310	900,380	1,052,200	828,490	973,310	1,110,290	1,141,510	1,165,330
Change Ratio		11%	19%	17%	21%	17%	14%	3%	2%
Transportation Services Import in Turkey	5,101	4,666	6,961	8,070	6,449	8,034	8,516	8,813	9,656
Change Ratio		9%	49%	16%	20%	25%	6%	3%	10%
Transportation Services Export in the World	569,280	635,740	766,130	890,670	692,820	807,470	880,140	888,450	905,940
Change Ratio		12%	21%	16%	22%	17%	9%	1%	2%
Transportation Services Export in Turkey	5,076	5,014	6,541	8,247	8,264	9,342	10,795	12,467	13,066

Change Ratio		1%	30%	26%	0.2%	13%	16%	15%	5%

When the recovery ratio is analyzed, even though the global transportation service import has increased by 17% in 2010 and came close to its pre-Crisis level, it was in 2011 when it truly reached and rose above the pre-crisis level. On the other hand Turkey displayed a better performance in comparison to the rest of the world by increasing its transportation service import by 25% in 2010. Whereas the global transportation service export rates reached pre-crisis levels in 2012. In this case, it is safe to say that Turkey has shown a much better performance than the rest of the world in transportation service export as it was not effected by the Crisis in this regard.



Graphic 3: Global and Turkish Transportation Services

As seen below and in Graphic 12, after the year 2007 a clear decline of transportation activities was experienced both globally and in Turkey. Although global transportation services were significantly affected by the economic crisis as it is also seen in the graphic, in 2007 negative effects of the Crisis began to be felt by

transportation services both globally and in Turkey and recession was felt during the period of 2007- 2009. However when the ratios are analyzed, it is seen that in comparison to the rest of the World Turkey has displayed a much better performance and felt the negative effects of the Crisis on a much more minor scale than the rest of the world. In Table 11, it is seen that in 2009 the world's total transportation services declined at a ratio of 21.7% whereas in Turkey this ratio stayed at 10%. This ratio shows that Turkey felt the negative effects of the Crisis in transportation services less significantly than the rest of the world.

Table 11: Turkish and Global Transportation Services (Million Dollars)

	2005	2006	2007	2008	2009	2010	2012	2014	2016
World Total Transportation Services	1,251,060	1,394,050	1,666,510	1,942,870	1,521,310	1,780,780	1,990,430	2,029,960	2,071,270
Change Ratio		11%	19.5%	16,6%	21.7%	17%	11.8%	2.0%	2.0%
Total Transportation Services in Turkey	10,177	9,680	13,502	16,317	14,695	17,376	19,311	21,280	22,722
Change Ratio		- 4.9%	39.5%	20.8%	9.9%	18.2%	11.1%	10.2%	6.8%

Source:http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language

3.6. European Union – Turkey Comparison

The financial crisis intensified in 2007 and caused a downshift in export to EU, one of Turkey's biggest export markets.

3.6.1. Foreign Trade

The economic crisis which erupted in 2007 in U.S.A rapidly took hold of the whole world and the crisis quickly became global. After U.S.A, the E.U countries were the ones to feel the negative effects of the economic crisis the most. As seen from Table 12 below, in 2009 the 5,954.870 million dollar export volume of the E.U dropped by 23% and declined to 4,613,535 million dollars in 2009. Even though in 2010 this ratio showed an improvement of 12% and reached 5,183,905 it was not until 2011 when it reached pre-Crisis export volume. The EU import rates show that in 2008 the 6,358,375 million dollar import volume declined to 4,809,190 million dollars in 2009 and it was not until 2011 when it reached pre-Crisis volume like it did with the export volume.

Table 12: Total Trade of U.E and Turkey by Years (Million Dollars)

	2005	2006	2007	2008	2009	2010	2012	2014	2016
EU Total Export	4082705	4606065	5366010	5954870	4613535	5183905	6092335	5813095	6076450
Change Ratio		13%	16%	11%	- 23%	12%	18%	5%	5%
Total Export in Turkey	73476	85535	107272	132027	102143	113883	134907	152462	151787
Change Ratio		16%	25%	23%	- 23%	11%	18%	13%	- 0,4%
EU Total Import	4249660	4870290	5655160	6358375	4809190	5421065	6334630	5961495	6004045
Change Ratio		15%	16%	12%	- 24%	13%	17%	- 6%	0,7%

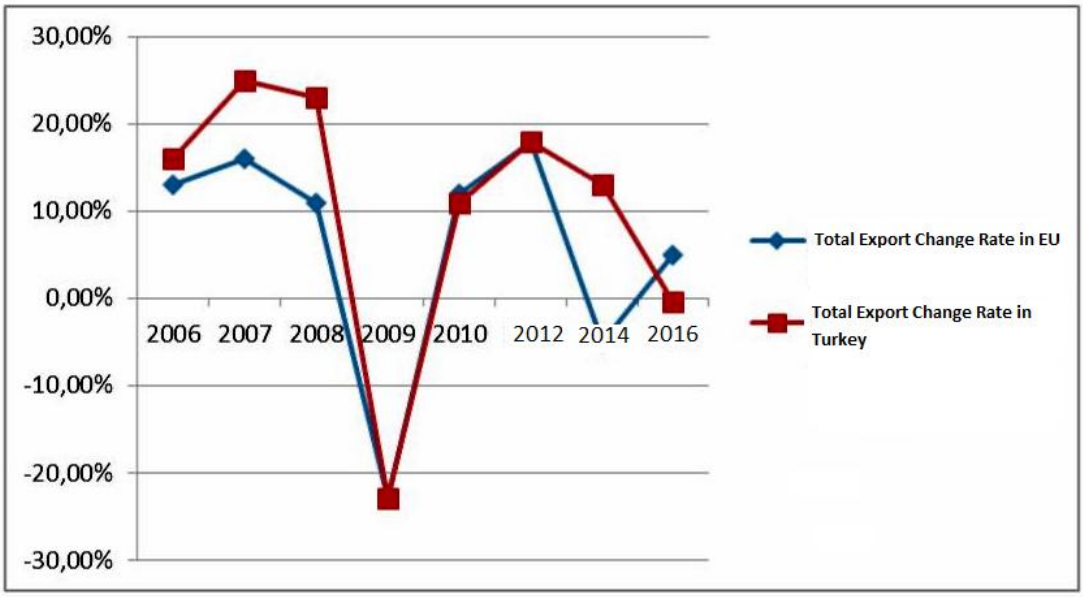
Total Import in Turkey	116774	139576	170063	201964	140928	185544	240842	236545	251650
Change Ratio		20%	22%	19%	- 30%	32%	30%	-2%	6%

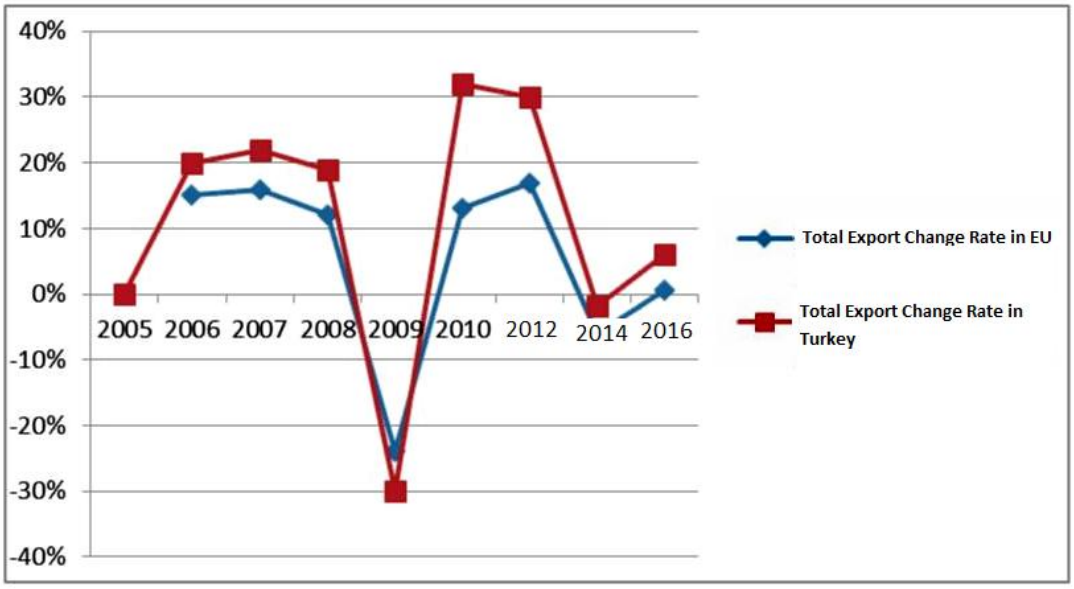
Source:http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E

When Turkey is compared with E.U countries it is seen that recession in regards of exports were felt at the same ratio (23%). Therefore it is safe to say that in regards of exports Turkey and E.U countries were effected by the economic crisis at the same ratio and suffered an equal loss of export volume. When the recovery process is analyzed, it is seen that for Turkey it was not until 2011 when the export volume reached its pre-crisis levels as it did in E.U countries. When the import aspect is analyzed, it is seen that even though in 2009 Turkey lost 7% more of its import volume than E.U countries with the base effect it nearly reached its pre-Crisis levels in 2010. Whereas after the 24% decline in 2009, it was not until 2011 when the E.U countries reached their pre-Crisis levels.

Graphic 4: Export in Turkey and E.U Countries

Graphic 5: Import Exchange Rates in Turkey and E.U Countries





As seen in Graphic 4, in 2009 E.U countries and Turkey suffered a shrinkage in export at the same ratio and reached the point of recovery during the same time period. When analyzed, Graphic 5 shows that during the Crisis period Turkey suffered a much less significant loss in import volume in comparison to E.U countries and reached the point of recovery in a more rapid timeline. Therefore it is

safe to say that during the economic crisis Turkey suffered more significant losses in import than E.U countries yet reached its pre-Crisis levels in a shorter period of time.

As seen in Table 13 below, the 410,885 million dollar total transportation service export volume of 2008 shrunk by 22% in 2009 and dropped to 322,139 million dollars. However when the import rates are analyzed it is seen that the 367,906 million dollar transportation service import volume of 2008 suffered a 22% loss, the same ratio as the export volume, and dropped to 288,348 million dollars.

Due to the fact that in 2008, the 8.070 million dollars of transportation service import in Turkey dropped to 6.449 million dollars in 2009 and Turkey's 2008 total transportation service import volume of 8.247 million dollars stayed at the same rate in 2009 it is seen that it even showed a minor upward tendency and increased to 8.264 million dollars. When compared to E.U countries Turkey has not felt the effects of the economic crisis in regards to transportation service exports whereas in regards of transportation service imports Turkey suffered almost at the same scale as said countries (E.U Countries 11%, Turkey 20%).

Table 13: Transportation Service Trade in E.U and Turkey by Years (Million Dollars)

	2005	2006	2007	2008	2009	2010	2012	2014	2016
Transportation Services Export in Eu	263202	294938	356359	410885	322139	354618	387446	374502	393504
Change Ratio		12%	21%	15%	-22%	10%	9%	-3%	5%

Transportation Services Export in Turkey	5076	5014	6541	8247	8264	9342	10795	12467	13066
Change Ratio		1%	30%	26%	0,2%	13%	16%	15%	5%
Transportation Services Import in EU	250114	277806	326187	367906	288348	318295	352407	337155	349381
Change Ratio		11%	17%	13%	-22%	10%	11%	-4%	4%
Transportation Services Import in Turkey	5101	4666	6961	8070	6449	8034	8516	8813	9656
Change Ratio		-9%	49%	16%	-20%	25%	6%	3%	10%

When recovery rates are analyzed, it is seen that E.U was not able to reach its 410,885 million dollar transportation service export rate of 2008 even until the year 2016. As for the transportation service import volume of E.U was 367,906 million dollars in 2008 and it was not until 2011 that it reached the same volume. As mentioned before, 8,247 million dollar total transportation service export volume of Turkey stayed stable in2009 and even showed minor upward tendencies and reached 8,264 million dollars. However the shrinkage in import was almost at an equal rate with E.U countries but in 2010 returned to its former volume due to base effect. In this case it can be said that, when compared to E.U countries, Turkey was not in the

least affected by the crisis in regards of transportation service exports whereas the E.U countries struggled to reach their pre-crisis levels; and even though their transportation service import volumes suffered equal losses Turkey recovered from the damages with a far better pace than E.U countries.

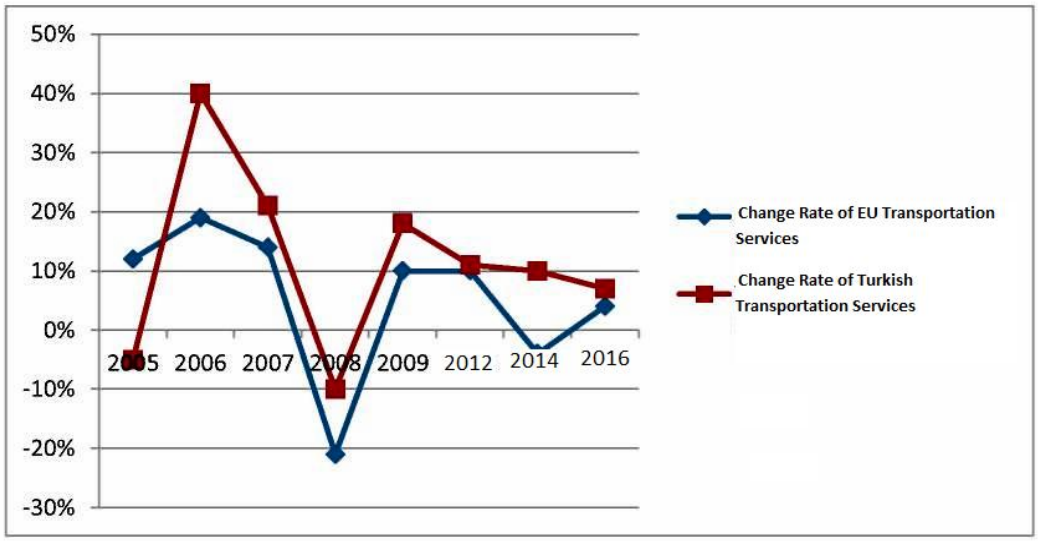
3.6.2. Transportation Services

Table 14: Transportation Services in E.U Countries and Turkey (Million Dollars)

	2005	2006	2007	2008	2009	2010	2012	2014	2016
Transportation Services Total in EU Countries	513316	572744	682546	778791	610487	672913	739853	711657	742885
Change Ratio		12%	19%	14%	-21%	10%	10%	-4%	4%
Transportation Services Total in Turkey	10177	9680	13502	16317	14713	17376	19311	21280	22722
Change Ratio		-5%	40%	21%	-10%	18%	11%	10%	7%

Source:http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E

Recession in total transportation service trades in Turkey and E.U countries is as seen in Graphic 4.6. When ratios are analyzed, it can be said that due to the fact that transportation service export in Turkey was not affected by the crisis the recession was not as severe as it was in the E.U countries.



Graphic 16: Transportation Services in E.U Countries and Turkey

CONCLUSION

The Crisis of 2008 is considered to be the most severe global crisis after the Great Depression of 1930s. This crisis affected all of the developed and developing countries' financial and real sectors in a negative way. Production parameters of global economy significantly deteriorated due to the shrinkage in global trade. The GSYİH rates of government debts reached high levels especially due to the substantial bailout packages in developed countries.

First signs of the development process of the Crisis of 2008 presented themselves in sub-prime mortgage real estate loan market. In 2007, mortgage real estate loan market fluctuations in the U.S.A first caused a credit crunch and this credit crunch put some American banks through difficult times and bankrupted others by turning into a liquidity crisis. In the next stage, crisis caused by the mortgage real estate loan market alongside with some monetary transmission mechanisms and especially with the bankruptcies expanded through global markets. As a result, the crisis which erupted in the U.S.A mortgage real estate loan market turned into a global crisis.

It is accepted that the crisis of 2008 was triggered by some risky applications in financial sector and substantial vulnerabilities. In the financial expansion period before the 2008 crisis, especially due to self-seeking and risky financial bubbles presented themselves in some financial product values. These financial bubbles significantly increased the vulnerability of the financial system. When they reached a certain level, these financial bubbles burst and caused financial instability due to significant financial vulnerabilities. Non-fulfilment of the subtreshhold mortgage responsibilities are considered to be the most significant cause to trigger financial instability.

The negative global effects of the crisis caused significant recessions in production performance parameters of Turkish Manufacturing Industry and its Sub-Sectors. The substantial decline of global demand caused a significant shrinkage in export performances of Turkish Manufacturing Industry and its Sub-Sectors. Automotive Main-Industry felt the negative effects of the crisis most significantly among Turkish Manufacturing Industry Sub-Sectors in regards of production

performance parameters. Due to the negative effects of the crisis capacity utilization ratio of the Automotive Main-Industry shrunk by 51.87% and production index by 62.21&, employment index by 22.74% and export performance by 29.37%. These severe shrinkages demonstrate that the Automotive Main-Industry has a significantly vulnerable structure against crises. Other sub sectors suffered similar shrinkages. By the year 2012 the 39.12% of the Turkish Manufacturing Industry export, the 69.73% of the Automotive Main-Industry export, 61.84% of the Textile and Clothing Industry export is to EU27 countries. The possibility of Europe Debt Crisis to intensify and reach a global scale like the Crisis of 2008, in regards of production performance parameters of the Turkish Manufacturing Industry and its Sub-Sectors and due to substantial export dependencies to Europe Market, is considered to be a fairly risky situation. Therefore, it is crucial that the Turkish Manufacturing Industry and its Sub-Sectors to be strengthened as a countermeasure for possible severe crises as the countries that feel the negative effects of the Europe Debt Crisis most severely are structurally problematic countries. With the development process of the crisis, equilibrium approaches of orthodox business theories and explanations for the reasons of the fluctuation periods were shaken to their cores and proven to be void. While explaining the development processes of crises, lack of emphasis on dynamics of the financial system, Hyman Minsky's financial instability hypothesis as one of the major lacking piece of orthodox business theories are the approaches that explain the development process of the Crisis of 2008 the best. First of all, development process of the financial vulnerabilities that caused the 2008 Crisis was successfully explained in Hyman Minsky's financial instability hypothesis. When the development process of the crisis is analyzed, it is seen that there is a significantly similar structure between sub-prime mortgage real estate loans, one of the main factors of the financial vulnerability and ponzi financing structure which Minsky has explained in his financial instability hypothesis.

In general, the crisis of 2008, within the frame of main paradigm, was caused by the substantial financial vulnerability that is caused by the unregulated growth of financial system. Significant increases in sub-prime mortgage real estate loans and loan-oriented investment tools are one of the most influential reasons for the severity

of the financial vulnerabilities that triggered the development process of the crisis.

Substantial bailout operations instigated by the government to save financial and real sectors to redeem the negative effects of the crisis of 2008 caused a significant increase of public debt. Extreme increase of debt levels caused substantial instabilities especially in some European countries with structural problems. Low levels of growth performance present itself as the most significant structural problem for government debts not to be collected. Facing the problem of failure to collect government debts, unemployment and significant decrease in growth performance, especially in countries like Greece and Spain, caused the problem of failure to collect government debt to spread through other countries. Efforts to prevent the expansion of the Europe Debt Crisis by execution of severe savings measures to problematic countries did not give the expected results. Unemployment levels reached an all time high, especially in Greece and Spain. Therefore it is safe to say that the uncertainty related to Europe Debt Crisis is still in effect. Negative effects of the development process of the 2008 Crisis caused a significant shrinkage in production performance parameters via various transmission mechanisms. Shrinkage in global demand in particular is considered to be the most significant transmission mechanism.

As a result, development processes of the 2008 Crisis and Europe Debt Crisis shows that crises threaten economic stabilization of all countries regardless of their development status. Structural problems in financial and real sectors need to be resolved in order to preserve economic stability in the event of a crisis. Policies towards financial and real sectors should primarily focus on the resolution of structural problems rather than short-term solutions.

REFERENCES

1. CALABRIA, Mark; "Did Deregulation Cause the Financial Crisis?", CATO Policy Report, July-August, 2009, (Erişim): http://www.cato.ora/policv-report/iulvauaust-2009/did-dereaulation-cause-financial-crisis 5 Kasım 2015
2. A. DUKE, Elizabeth; "Enforcement of financial consumer protection laws", Federal Reserv Bank, March 20, 2009, (Erişim):http://www. federalreserve. aov/ newsevents / testimonv/duke 20090 320a. htm 20 Kasım 2015
3. AÇIKGÖZ, Ömer, Bülent Özkan (2009), "1929 Dünya Ekonomik Buhranı ve Türkiye Ekonomisine Etkileri", Mevzuat Dergisi, Sayı:136, Nisan.
4. AFONSO, Antonio, SCHUKNECHT, Ludger, TANZI, Vito; "Public Sector Efficiency; An International Comparison", European Central Bank VVorking Papers Series, VVorking Paper, No: 242 July, 2003, (Erişim): 26.Aralık. 2015
5. ATALAY, Mehmet, TURHAN, Mustafa; "Küreselleşme, Gelişmekte Olan Ülkeler ve Türk İmalat Sanayii", Planlama Dergisi, DPT'nin Kuruluşunun 42-Yılı Özel Sayı , Ankara, 2002, s.s:77-110,
6. GORTON, Gary; "Ouestions And Answers About The Financial Crisis", NBER VVorking Paper, No: 15787, February, 2010, (Erişim): http://www.nber.ora/papers/w15787 7 Aralik 2015
7. MALONEY, Carolyn, E. SCHUMER, Charles ; "Loan Performance and Negative Home Equity in the Nonprime Mortgage Market", GAO-10-146R Nonprime Mortgages , December 16, 2009, (Erişim): http://www.aao.aov/products/GAO-10-146R 7 Aralık, 2015
8. BARNETT-HART, Anna Katherine; "The Story of the CDO Market Meltdown: An Empirical Analysis", Harvard College Cambridge, Massachusetts, March 19, 2009, (Erişim): http://www.hks.harvard.edu/m-rcba/students/dunlop/2009-CDOmeltdown.pdf 27 Kasım 2015
9. Bayraktutan, Yusuf, Şevket Tüylüoğlu ve Mehmet Özbilgin (2012). Lojistik Sektöründe Yoğunlaşma Analizi ve Lojistik Gelişmişlik Endeksi: Kocaeli Örneği, Uluslararası Alanya İşletme Fakültesi Dergisi, C:4, S:3, ss. 61-71.
10. BENMELECH, Efraim, DLUGOSZ, Jennifer; "The Credit Rating Crisis", NBER VVorking Paper, No: 15045, June, 2009, (Erişim):

http://www.nber.ora/papers/w15045 27 Kasım 2015

11. BOERİ, Tito, GUISO, Luigi; "Subprime crisis: Greenspan's Legacy", 23 August, 2007, (Erişim): http://www.voxeu.org/article/subprime-crisis-areenspan-s-leaacv 15 Kasım 2011
12. BOLOTNYY, Valentin; "The Government-Sponsored Enterprises and the Mortgage Crisis: The Role of the Affordable Housing Goals", Finance and Economics Discussion Series, Federal Reserve Bank, March 21, 2012, (Erişim): http://www.federalreserve.aov/pubs/feds/2012/201225/index.html 7 Kasım 2015
13. BORDO, Michael, JONUNG, Lars, MARKIEVVICZ, Agnieszka; "A fiscal union for the euro: Some lessons from history", 21 Sep, 2011, (Erişim): http://www. voxeu.ora/article /fiscal-union- euro-some-lessons-historv 7 Kasım 2015
14. Bulletin, No: 14, Autumn, 2011, (Erişim): http:// www. ecb. europa.eu /pub/pdf/other/ research bulletin14 en. pdf 15 Kasım 2015
15. CARBALLO-CRUZ, Francisco; "Causes and Consequences of the Spanish Economic Crisis: Why the Recovery is Taken so Long?", Panoeconomicus, Vol:3, 9 September, 2011, s.309-328
16. CECCHETTI, Stephen; "Financial crises are not going away", November 26, 2007a, (Erişim): http://www.voxeu.ora/article/subprime-series-part-1-financial-crises-are-not-aoina-awav21 Mayıs 2012
17. COVITZ,Daniel, LİANG, Nellie, SUAREZ, Gustavo; "The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper Market", Finance and Economics Discussion Series, No: 2009-36, Federal Reserve Bank, August 18, 2009, (Erişim): http://www.federalreserve.aov/pubs/feds/2009/200936/17 Kasım 2015
18. ÇEKEROL, Gülsen Serap (2013), Lojistik Yönetimi, (Ed.: Mehmet Necdet Timur), Anadolu Üniversitesi Yayını, No: 2823, No: 1781, 1. Baskı, Eskişehir.
19. BORDO, Michael, M. MEISSNER,Christopher; "Does lnequality Lead to A Financial Crisis?", NBER VVorking Paper, No: 17896, March, 2012, (Erişim): http://www.nber.ora/papers/w17896 13 Temmuz 2015
20. DEHESA, Guillermo(2011b); "A deadline for solving a deadly Eurozone sovereign debt crisis", 20 Oct, 2011,(Erişim): http://www. voxeu. org/ article/

deadline- solving- deadly-eurozone- sovereign- debt-crisis 21 Kasım 2015

21. EFING,Matthias, HAU, Harald; "Corrupted credit ratings: Standard & Poor's lavvsuit and the evidence", 18 June, 2013, (Erişim): http://www.voxeu.ora/article/corrupted-credit-ratinas-standard-poor-s-lawsuit-and-evidence 20 Kasım 2015

22. FBI; 2007 Mortgage Fraud Report, April, 2008a, (Erişim): http://www.fbi.aov/stats-services/publications/mortaaae- fraud-2007/mortaaae-fraud-2007 11 Mart 2015

23. FinCEN; The SAR Activity Review Trends Tips & Issues, Published under the auspices of the BSA Advisory Group, lssue:10, May, 2006, (Erişim): http://www.fincen.aov/news room/m/files/sar tti 10.pdf 15 Aralık 2015

24. GÜLENÇ İ. Figen ve Bihter Karagöz (2008), "E-Lojistik ve Türkiye'de E-Lojistik Uygulamaları", Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi (15) 1: 73-91.

25. GÜMÜŞ, Yusuf (2009), "Lojistik Faaliyetlerin Rekabet Stratejileri ve İşletme Kârı İle Olan İlişkisi", Dumlupınar Üniversitesi Uygulamalı Bilimler Yüksekokulu Muhasebe ve Finansman Dergisi, 41: 97-113.

26. HSU, Jason O, MOROZ, Max; "Shadow Banks and the Financial Crisis of 2007-2008", İn 'THE BANKING CRİSİS HANDBOOK, Chapter 3, Greg Gregoriou, ed., CRC Press, 2009. November 2, 2010, s.39-56, (Erişim): http://ssrn.com/abstract=1574970 22 Aralık 2015

27. J. MAYER, Christopher, PENÇE, Karen; "Subprime Mortgages: What, VVhere, And To Whom?", NBER VVorking Paper, No: 14083, June, 2008, (Erişim): http://www.nber.ora/papers/w14083 19 Kasım 2015

28. J. SHILLER, Robert; "Does Austerity Promote Economic Growth?", Jan. 18, 2012, (Erişim): http://www.proiect-svndicate.ora/commentarv/does-austeritv-promote-economic-growth- 16 Kasım 2012

29. K. TARULLO, Daniel; "Shadow Banking After the Financial Crisis", At the Federal Reserve Bank of San Francisco Conference on Challenges in Global Finance: The Role of Asia, San Francisco, California, June 12, 2012, (Erişim): http://www.federalreserve. aov/newsevents/speech/tarullo20120612a.htm18 Aralık 2015

30. KARAGÖZ, Bihter, İ. Figen Gülenç (2008), Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 2008/1, 77.

31. KAYA, Sait, Seçil Çevik (2009), "Türkiye'nin Lojistik Potansiyeli ve İzmir'in Lojistik Faaliyetleri Açısından Durum (SWOT) Analizi," KMU İİBF Dergisi, Yıl: 11, Sayı:17, Aralık.

32. KELEK, Fatih, GÖKALP, Burcu; "Demir-Çelik Sektörü Ve Ana Metal Sanayii Girdi Çıktı Analizi", International Iron & Steel Symposium, Karabük, Türkiye, 02-04 April, 2012, s.1213-1220,

33. KIRCHHOFF, Sue, KEEN, Judy; Minorities hit hard by rising costs of subprime loans, USA TODAY, April 25, 2007, (Erişim): http://www.usatodav. com/monev /economv/housina/2007-04-25- subprime-minorities-usat N.htm 26 Aralık 2012

34. KİBRİTÇİOĞLU, Aykut; "Avro Bölgesi Ülkelerindeki Güncel Borç Krizi", İktisat ve Toplum Dergisi, Sayı:10, 22 Ağustos, 2011, s.30-41,

35. LENZ, Rainer; "Crisis in the Eurozone", Friedrich-Ebert-Stiftung, International Dialogue, June, 2011, (Erişim): http://librarv.fes.de/pdf-files/id/ipa/08169.pdf 7 Aralık 2015

36. M. REINHART, Carmen, S. ROGOFF, Kenneth; "From Financial Crash To Debt Crisis",NBER VVorking Paper, No: 15795, March, 2010, (Erişim): http://www.nber. oro/papers/w15795 15 Kasım 2015

37. M. ZANDI, Mark; 'Financial Shock: A 360° Look at the Subprime Mortgage Implosion, and how to Avoid the Next Financial Crisis", FT Press, 2008,

38. MCCARTHY, Colm : "Ireland's second round of cuts: a comparison with the last time", Dealing with Debt, CentreForum, London, 2009, s.:41-54, (Erişim): http://centreforum.ora/assets/pubs/dealina-with-debt.pdf 6 Aralık 2015

39. MINESCU, Ana Maria ; "The Debt Crisis - Causes and Implications", Petroleum - Gas University of Ploiesti Bulletin, Economic Sciences Series, Vol:LXIII No:2/2011, s.95-104,

40. MONACELLİ, Tommaso; "An extensive but benign crisis?", 31 Aug, 2007, (Erişim): http://www.voxeu.ora/article/extensive-benian-crisis 11 Şubat 2012 Monitoring Spillovers and Contagion", European Central Bank Research

41. MURPHY, Austin; "An Analysis of the Financial Crisis of 2008: Causes and Solutions",4 November, 2008, (Erişim): http://papers.ssrn.com/sol3/ papers.cfm? abstract id=1295344 12 Haziran 2012

42. ONADO, Marco; "Subprime "crisis": Who pays and what needs fixing", 19 August, 2007, (Erişim): http://www.voxeu.org/article/subprime-crisis-who-pavs-and-what-needs-fixing 15 Kasım 2015

43. ÖNGÜT, Ç. Emrah; Türk Tekstil ve Hazır Giyim Sanayiinin Değişen Dünya, (Erişim): Rekabet Şartlarına Uyumu, DPT Uzmanlık Tezi, Ocak, 2007 http://ekutup.dpt.gov.tr/imalatsa/tekstil/ongutce/rekabet.pdf 5Aralık 2015

44. ÖNGÜT, Ç. Emrah; Türk Tekstil ve Hazır Giyim Sanayiinin Değişen Dünya, (Erişim): Rekabet Şartlarına Uyumu, DPT Uzmanlık Tezi, Ocak, 2007 http://ekutup.dpt.gov.tr/imalatsa/tekstil/ongutce/rekabet.pdf 4 Aralık 2015

45. PEREZ, Carlota; "The double bubble at the turn of the century: technological roots and structural implications", Cambridge Journal of Economics, Vol:33 no:4 2009, s.779-805,

46. POZSAR, Zoltan, ADRIAN, Tobias, ASHCRAFT, Adam, BOESKY, Hayley; "Shadow Banking", Federal Reserve Bank of New York Staff Reports, No: 458, July 2012, (Erişim): http://www.newvorkfed.oro/research/staff reports/sr458.pdf 16 Kasım 2015

47. RealtyTrac; National Real Estate Trends, March, 2010 , (Erişim): http://www.realtvtrac.com/trendcenter 10Aralık 2015

48. RUSHE, Dominic; "Italy's debt crisis: 10 reasons to be fearful", The Guardian, 9 November, 2015

49. S. DEMYANYK, Yuliya, VAN HEMERT, Otto; "Understanding the Subprime Mortgage Crisis", 5, 2008, (Erişim): http://papers.ssrn.com/sol3/papers.cfm? abstract id=1020396 30 Kasım 2015.

50. SGM; Türkiye Demir-Çelik Ve Demir Dışı Metaller Sektörü Strateji Belgesi Ve Eylem Planı 2012-2016, Ankara, 2012.

51. SGM; Türkiye Makine Sektörü Strateji Belgesi ve Eylem Planı 2011-2014, Ankara, 2011

52. SIMKOVIC, Michael; "Competition and Crisis in Mortgage Securitization", Indiana

Law Journal, Vol: 88, October 8, 2011, s.213-271 , (Erişim): http://papers.ssrn.com/sol3/papers.cfm7abstract id=1924831 7 Aralık 2015

53. SOROS, George; The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What İt Means, Perseus Books Group, PublicAffairs, IBN: 978-1-58648-684-4 (e-book),United State of America, 2008, (Erişim): http://books.aooale.com.tr/books?id=F aBKX4AnLUC&dq=soros. +2008+crisis&hl=tr&source=abs navlinks s 15 Kasım 2015

54. STIGLITZ, Joseph; "What Can Save the Euro?", Dec. 5, 2011, (Erişim): http://www.proiect-svndicate.ora/commentarv/what-can-save-the-euro- 6 Kasım 2015.

55. TREGENNA, Fiona; "The fat years: the structure and profitability of the US banking sector in the pre-crisis period", Camb. J. Econ., Vol:33 no:4 p.p:609-632 doi:10.1093/cje/bep025, 2009,

56. TUTAR, Erdinç, Filiz Tutar, Handan Yetişen, Türkiye'de Lojistik Sektörünün Gelişmişlik Düzeyinin Seçilmiş AB Ülkeleri (Romanya ve Macaristan) İle Karşılaştırmalı Bir Analizi. http://dergi.kmu.edu.tr/userfiles/file/aral%C4%B1k2009/190-216.pdf Erişim Tarihi, 17. Kasım, 2015.

57. UZAY, Nısfet; "Finansal Krizin Reel Sektör Üzerindeki Etkileri ve Kriz Sonrası Temel Göstergelerdeki Değişim: Kayseri Örneği", Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, Cilt 17 Sayı 2, 2012, s.121-143,

58. VİVES, Xavier; "Bagehot, central banking, and the financial crisis", 31 March, 2008.

59. WALLİSON, Peter J.; "Dissent from the Majority Report of the Financial Crisis lnquiry Commission", American Enterprise Institute for Public Policy Research, 2011

60. WHELAN, Robbie; "Mortgage Fraud Is Rising, With a Twist", Wall Strett Journal, August 23, 2010, (Erişim): http://online. wsi.com/ article/ SB10001424052748703 82430457 543538316 143 665^1001 25 Mayıs 2012

61. WYPLOSZ, Charles; "Subprime 'crisis': observations on the emerging debate", August 16 , 2007, (Erişim): http://www.voxeu.org/article/subprime-crisis-

observations-emeraina-debate 30 Mayıs 2012

62. YÖRÜK, Sinan, DİKİCİ, Abdullah , UYSAL, Ahmet; "Bilgi Toplumu Ve Türkiye'de Mesleki Eğitim", Fırat Üniversitesi Sosyal Bilimler Dergisi, Cilt: 12 Sayı:2, Elazığ, 2002, s.299-312,
63. YÜCEL, İsmail Hakkı; Türkiye'de Bilim Teknoloji Politikaları ve İktisadi Gelişmenin Yönü, DPT Yayın No: 2690, Sosyal Sektörler ve Koordinasyon Genel Müdürlüğü, Ankara, Haziran, 2006,