

T.C
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AVRUPA BİRLİĞİ ENSTİTÜSÜ
AVRUPA BİRLİĞİ İKTİSADI ANABİLİM DALI

**The IMPACT of the EUROZONE ECONOMIC CRISIS on TURKISH
FOREIGN TRADE**

DOKTORA TEZİ

BİLGEHAN BAYKAL

Istanbul, 2016

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Danışman: Doç. Dr. İmre Ersoy

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ONAY SAYFASI

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ÖZET

AVRO BÖLGESİ KRİZİNİN TÜRK DIŞ TİCARETİ ÜZERİNDEKİ ETKİSİ

Bu tezin amacı avro krizinin Türk dış ticareti üzerindeki etkisini incelemektir. Tezin konusu birkaç açıdan önemlidir. Avro Bölgesi krizi sadece avro bölge ülkelerini değil diğer Avrupa Birliği (AB) ülkelerini de şiddetli ve olumsuz etkilemektedir. İkinci olarak, Türkiye ve AB arasındaki ticarete 2004 yılından beri önemli bir düşüş yaşanmaktadır ve bu düşüş sadece ekonomi politikasını etkilemekle kalmayıp toplumsal etkilere de neden olmaktadır. Üçüncüsü, Türkiye'nin AB üyelik süreci uzun zamandır dondurulmuştur ve AB'nin geleceği Ortadoğu ülkeleri ve ABD, Çin ve Rusya gibi büyük ülkelerle yeni iş birliktelikleri ve politik ilişkiler açısından büyük önem taşımaktadır. Dördüncüsü, küresel krizden sonra Türk dış ticaretinde yapısal bir değişim yaşanmaktadır.

Tezin ilk 3 bölümü, Türk dış ticaretinin yapısal dönüşümü, Avro Bölgesi krizi ve Avro bölgesi krizinin Türk dış ticaretine olan etkisini, temel sebep ve faktörleri incelemektedir. Dördüncü bölümde Avro Bölgesi krizi ve Türk dış ticareti arasındaki ilişkiyi açıklamak için 15 avro bölge ülkesinin 1995-2011 yılları verileri üzerinde panel-veri analizi yapılmıştır. Ekonometrik çalışmanın sonuçları özetlenmiş ve tez ilk 3 bölümdeki analizleri de içeren bir sonuç ve politika önerisi ile sonlanmaktadır.

Çalışmanın ana bulgusu avro bölge ülkelerinin özel sektör borcu ile Türk dış ticaret dengesi arasında negatif bir ilişki olduğu yönündedir. Avro Bölgesinin vergi gelirleri ve işsizlik oranları ile Türk dış ticareti arasında pozitif bir ilişki olsa da, ilişkinin önem derecesi düşüktür. Bu tez ayrıca ekonometrik analiz sonuçlarını mevcut literatür ile karşılaştırarak, avro bölgesi ülkelerinin yanı sıra ABD ve bazı gelişmekte olan ülkelerle Türk dış ticaretinin gelişimi için bir politika önerisi sunmayı hedeflemektedir.

SUMMARY

The IMPACT of the EUROZONE ECONOMIC CRISIS on TURKISH FOREIGN TRADE

The aim of this dissertation is to search for the impact of the Eurozone Crisis on Turkish foreign trade. The research subject of the thesis is important from various aspects as the Eurozone crisis severely and negatively affected not only the Eurozone but also other EU states. Second, EU is the biggest foreign trade partner of Turkey and there is a significant decrease in the external trade of Turkey with EU since 2004. This change affects not only economic policy but also has social implications. Third, EU membership process of Turkey has been on hold for a long time. The future of the EU is vital for Turkey in terms of new alliances, political relationships with the Middle East, and big countries like USA, China, and Russia. Fourth, after the global crisis, there is a structural change in Turkey's foreign trade.

The dissertation consists of 3 main sections which analyze the structural analysis of Turkish foreign trade, the Eurozone crisis and how the Eurozone crisis affected Turkish foreign trade? To explain the relationship between the Eurozone Crisis and the Turkish trade panel data analysis is used for 15 states of the Eurozone in 1995-2011 interval in the fourth chapter. The results of the econometric analysis are summarized, and the study ends with a Conclusion part and a policy recommendation for Turkey based on the discussions in the first three chapters.

The main finding of the empirical study is that private sector debt of the Eurozone states has a negative relationship with Turkish trade balance. There is also a positive relationship between the tax revenue and the unemployment rate of the Eurozone states with the Turkish trade balance, but not at a very significant level. This dissertation also seeks to present a policy recommendation for Turkey based on the findings of the econometric analysis in comparison with the literature.

FOREWORD

Evolution of the subprime crisis in the USA to global crisis impacted the global economy and the trade. The Eurozone Crisis, which followed the global crisis, influenced Turkish foreign trade significantly. With this study, the aspects of the impact of the Eurozone crisis on Turkish trade is aimed to be interpreted. I want to thank my advisor Associate Professor. İmre Ersoy and also to my family who always supported me in my academic journey, and also hope this study will be beneficial for other scholars.

İstanbul, 2016 Bilgehan Baykal



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ABBREVIATIONS

AGS	Annual Growth Survey
AIG	American International Group
AMR	Alert Mechanism Report
BRIC	Brazil, Russia, India, and China
CBRT	The Central Bank of the Republic of Turkey
CCT	Common Customs Tariff
CET	Common External Tariff
CIS	Commonwealth Independent States
CDO	Collateralized Debt Obligation
CoE	European Council
CPI	Consumer Price Index
CU	Customs Union
ECB	European Central Bank
ECSC	European Coal & Steel Community
ECU	European Currency Unit
EDIS	European Deposit Insurance Scheme
EDP	Excessive Deficit Procedure
EEC	European Economic Community
EFSF	European Financial Stability Facility
EFSM	European Financial Stabilization Mechanism
EFTA	European Free Trade Association
EIB	European Investment Bank
EMH	Efficient-market Hypothesis
EMS	European Monetary System
ERM	Exchange Rate Mechanism
ESM	European Stability Mechanism
EU	European Union
EIP	Excessive Imbalance Procedure
Euratom	European Atomic Energy Community
FDI	Foreign Direct Investment
FED	Federal Reserve Bank
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GIIPS	Greece, Ireland, Italy, Portugal, Spain
IPI	Industrial Production Index
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification
IT	Information Technology
LFS	Labor Force Survey
M2	Money Supply

MIP	Macroeconomic Imbalance Procedure
NAMA	National Asset Management Agency (Ireland)
NPISH	Non-Profit Institutions Serving Households
OCA	Optimum Currency Area
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
PADRE	Politically Acceptable Debt Restructuring in the Eurozone
RCA	Revealed Comparative Advantage
RWA	Risk-Weighted Assets
SGP	Stability& Growth Pact
SITC	Standard International Trade Classification
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism
TA	Total Assets
TAREKS	Risk-Based Trade Control System in Foreign Trade
TBT	Technical barriers to trade
TIM	Turkish Exporters Assembly
TSE	Turkish Standards Institute
TSI	Trade Specialization Index
TTIP	Transatlantic Trade and Investment Partnership
TUIK	Turkish Statistics Institute
UNSD	United Nations Statistics Division
USA	The United States of America
USD	United States dollar
USDA	The United States Department of Agriculture
VAT	Value Added Tax
WB	World Bank
WEEE	Waste Electrical and Electronic Equipment
WITS	World Integrated Trade Solution
WTO	World Trade Organization

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INTRODUCTION

Since the first years of the Republic, Turkey's trade has been mainly dependent on western markets. Foreign trade diversified since 1980, and the volume has also increased. The Customs Union (CU) decision is an important milestone for Turkey in its relations not only with the European Union (EU) but also with the rest of the world economy. This is mainly because the CU removed not only quotas and tariffs in certain product groups between Turkey and Europe but also brought a Common External Tariff (CET) with the third parties. The CU Agreement between Turkey and the EU is based on the Ankara Agreement, which was signed in 1963.

Turkey joined CU by 1996. According to the agreement, Turkey accepted the framework of the CU, which obliged tariff reduction and the Common Customs Policy. In addition, compliance with the common policies of the Union like trade and competition policy were obliged. Another decision of the Association Council of 6 March 1995 was the article 2/95. According to this Decision, the Common Customs Tariff (CCT) would be ensured on a regular basis over a period of 5 years. However, the customs duties were kept high after the applicable date of 01.01.1996. Therefore, Turkey declared that import taxes from third countries rather than the EU would be higher than the CCT. The reduction in these tariffs scheduled to be completed in five years (Soğuk& Uyanusta, 2004).

After CU, significant changes happened both in Turkey and in EU. Acceptance of Maastricht, Amsterdam, Nice Treaties, implementation of the Stability and Growth Pact (SGP), acceptance of new member states to the Union are some of them. However, mostly based on political decisions, Turkey's full membership in the EU did not come true, and accession negotiations are not moving fast as of 2015. On the other hand, especially due to CU, there has been a structural change in Turkey's foreign trade structure.

The transformation of the Turkish foreign trade structure was affected by a couple of developments. Economic crises experienced in 1999 (Russian) and 2000-2001 twin crises in Turkey, accession of new members to EU and the Global Crisis after the subprime crisis in the USA were the main incidents. The subprime crisis was based on the collapse of the mortgage industry which eventually led a series of events that affected not only the financial institutions but also other industries as tourism and transportation. Additional impacts of the subprime crisis were felt seriously on employment and consumption in the USA as well as its implications for the Eurozone and the developing countries. One of the greatest affection of the subprime crisis on the global economy was its diffusion effect that led the occurrence of the global crisis.

In the first decade of the millennium, the world has faced the greatest economic crisis in the world history. Global crisis not only caused severe losses in GDP, productivity, unemployment but also led recession in the world economy whose impact was much bigger than the 1929 crisis. Global crisis affected the global trade in 3 ways;

First, there is a significant decline in global demand, which has been explained in the previous chapters. World GDP and trade has significantly declined by 2009, and this mainly sourced by the decline in demand in the developed countries.

Second, the contradiction in trade finance has put hurdles on global trade. According to BIS, trade finance supports one-third of world trade and letter of credit portion is half of it. The contradiction in trade finance and increasing demand for the letter of credit rather than other instruments hampers world trade.

Third, the increasing protectionism has created trade distortions between the developed world and the developing countries. During the crisis, governments did not apply only import-restricting measures, but also new discriminatory measures to protect national corporations against the competition of the third countries. Therefore, all these three factors coming together created a significant decline in world trade.

Trade collapse was one of the most significant results of the global crisis. In their article, Eichengreen and Rourke (2009) concluded that the impact of the global crisis is much heavier than 1929 crisis from either industrial production or trade volume perspectives. The decline is not limited to a geography and continent. Therefore, with the interaction between economies, the crisis spread in the Eurozone.

With the impact of this trade collapse combined with various factors, Eurozone crisis started to impact member states after the global crisis. Eurozone crisis has several root causes but different effects on member states. Especially, southern states like Greece, Portugal, Spain, and Italy were severely affected by the crisis.

The Eurozone crisis also affected Turkish foreign trade. The relationship between Turkish foreign trade and Eurozone crisis is both situational and structural. Crisis affected the Turkish economy in 3 channels;

- a) Financing problems,
- b) Portfolio investments,

c) Foreign trade,

Uygur (2010) explains that current account deficit of Turkey and dependence on capital inflows, strong export dependency to EU and the overvalued Turkish lira were the main affection points.

The aim of this dissertation is to assess the impact of the Eurozone Crisis on Turkish trade. To analyze the relationship between the Eurozone Crisis and the Turkish trade, panel data analysis is used for 15 states of the Eurozone in 1995-2011 interval. This paper also seeks to present a trade policy recommendation for Turkey based on the econometric analysis which will be compared with the literature.

The research subject of the thesis is important from various aspects. First of all, Eurozone crisis severely and negatively affected not only the Eurozone but also other EU states. Therefore, economic and social effects of the crisis bring uncertainty about the future of the union and structural change in Europe may have a significant impact on the world economy.

Second, EU is the biggest foreign trade partner of Turkey and there is a significant decrease in the external trade of Turkey with EU in the last decade. This change affects not only economic policy but also has social implications.

Third, EU membership process of Turkey has been on hold for a long time. The future of the EU is vital for Turkey in terms of new alliances, political relationships with the Middle East, and big countries like USA, China, and Russia.

Fourth, after the global crisis, there is a structural change in Turkey's foreign trade. Turkey is trying to find new markets and the experience learned from the Eurozone crisis may be a valuable asset in developing relations with other world countries.

The theoretical framework of the thesis will stand on three pillars;

1. Structural analysis of Turkish foreign trade; How is the world trade changing? What kind of a transformation has Turkey experienced since the CU? How is the structure of import and export changing in agricultural, industrial and mining products?
2. The crisis in the Eurozone will be examined. What are the indicators of the Eurozone crisis? How do these indicators differ according to member states?
3. How is the Eurozone crisis affecting Turkey's foreign trade? Eichengreen et al. (2009) explained that unlike the Great Depression (1929) countries were

affected diversely and also responded differently to the global crisis with different policies. What are the main reasons and factors in the affection?

This dissertation consists of 4 main sections. The study starts with an Introduction that defines the basic argument, the methodology and the sequence of the chapters.

In chapter 1, structural analysis of the Eurozone and Turkish foreign trade will be examined. How did the trade of the Eurozone countries and Turkey change in the 1996-2012 era? What is the relationship of this trade with the globalization, new economic partnerships, and free trade agreements (FTA)? What kind of a transformation has Turkey has experienced since the CU? How is the structure of import and export changing in agricultural, industrial and mining products?

In chapter 2, the crisis in the Eurozone will be examined. What are the indicators of the Eurozone crisis? How do these indicators differ according to member states? Due to the differences in population, trade structure, fiscal policies states were differently affected by the crisis. The budget deficit, government debt stock, Gross Domestic Production¹ (GDP) growth, tax revenue and unemployment ratios and private sector debt are important areas to be exploited.

Chapter 3 aims to reveal the relationship between the Eurozone economic crisis and Turkish foreign trade with an econometric analysis. Econometric models will be applied, and the interpretation of the results will be used to support the theoretical approach in the study.

In the last chapter, the results of the econometric analysis will be interpreted. In our study, Turkey's foreign trade will be examined in a panel data study that is based on the data between 1995 and 2011 for 15 Eurozone countries.

The study ends with a Conclusion part and a policy recommendation for Turkey based on the discussions in the first three chapters.

¹ In a total production approach which is one of the alternative GDP measurement methods, GDP is accepted as sum of value added and measured by estimating value added of all firms. The total production approach shows the contributions of various production branches in an economy to GDP, by this way also show the structure of production activity areas. (Ünsal, 2004, p: 43-44)

1 Trade Theory and Transformation of Global Trade

With the liberalization process in 1980, Turkish Foreign trade has gone under a significant change. There is a substantial change from import substitute economic model to an export-led model. As a consequence of this change, there is significant growth in the trade volume which bears an important contribution to the economy in terms of production, welfare, employment and so forth. However, due to the reforms in the Turkish economic governance and the patterns of trade starting in the early 1980s, the increasing dependency of exports of finished goods to the imports of the raw and semi-raw materials brought the risks of itself. This dependency is also sourced by the shift from agricultural products to electronic and machinery products in trade composition. Such a remarkable transformation was supported by the CU decision which not only changed Turkish foreign trade structure but also produced a radical shift in the overall economic system.

To make a precise analysis of this transformation and explain the developments in the world economy, the impingement of the global crisis in world trade and the impact of liberalization after 1980 on Turkish foreign trade will be examined.

This chapter will begin with an introduction of theories on trade from the classic economists like Ricardo and will continue through Heckscher and Ohlin. In the following section, the transformation of world trade will be discussed. Change in GDP of nations, trade volumes, and the growth rates will be compared and reviewed solely. The third section of this chapter concentrates on the transformation of Turkish foreign trade with a peculiar emphasis on CU and its impacts on the Turkish economy and international business deal, in particular. The transformation will be approached both in terms of market change and also the changes in the goods traded.

1.1 Trade Theory

To be able to make a precise analysis of the foreign trade of a country, there are certain areas to be addressed. First of all, it is important to analyze how the trade balance and the trade volume of a state change from year to year. Second, the change in the composition of international trade and its trade partners should be exploited. After these two areas, the comparative advantage of a country and the factors that affect the import and export are the subjects of trade theories. Finally, external shocks like FTAs, trade creation, and divergence effects are the significant pillars which are examined in trade theory context. To bring a

comprehensive approach to these issues and bring out a meaningful analysis, the basics of trade theories must be revealed.

Till Adam Smith and the other classical thinkers, foreign trade was perceived on the basis of increasing gold stock by mercantilists. Due to this reason, promotion of export and limitation of import was accepted. Mercantilists defended state intervention to regulate foreign trade with the assumption that world gold stock is fixed.

The international trade theory started with mercantilism that asserts the idea of stocking valuable mines. To achieve this objective, the state should intervene the economy in order to create a trade surplus. Protectionism, customs tariffs, and quotas should be applied effectively. Another important area incited in mercantilism was increasing fertility with an objective to increase labor supply to decrease the minimum wage.

It will not be wrong to say that the discovery of new continents and routes were due to the impact of mercantilism during 1500-1800 years as marine trade, and transportation were promoted to increase gold and silver stock.

With the industrial revolution and the rise in goods production, states needed to obtain new markets with a specialization in certain products. Specialization brings cost efficiency and focusing certain product groups works to the benefit of the nations. As a consequence, focusing and producing goods in optimum price level enables states to buy products that they do not concentrate and produce. Therefore, the second important trade theory came out with Adam Smith's book "Wealth of the Nations" in 1776. This theory was named as "Absolute Advantages" theory and depicted that one country should be specialized in the production of the goods which it can produce cheaper and should export it. In case, the production of a good is expensive, that good, or material should be imported. According to Smith, international trade is a system in which all countries specialize and get the benefit of international trade. "International trade in Smith theory is not a zero-sum-game, both the individual countries and the world-as-whole benefit."(Schumacher, p: 17, 2012)

The absolute advantage theory has a significant place in economic literature as it is the predecessor of comparative advantage theory. However, it lacks answers to important topics of international trade. First of all the perspective of Smith is bilateral and does not interfere with multilateral trade issues. Second, the only production factor the theory takes into consideration is labor and other factors like capital, technology, and human capital are not included.

Ricardo objected Adam Smith with the “Comparative Advantage Theory” that refers to countries that must specialize in products in which they have a comparative advantage and should buy other products via foreign trade. According to Ricardo, if the production of a good is more efficient for a country, specialization must be on that product to increase profits and to follow the same path will bring the benefit of all states.

The major difference Ricardo brings on Smith’s absolute advantage theory is that he emphasizes that for a country rather than producing cheaper, maximizing the degree of benefits is more important. Ricardo extends his theory to the specialization of states in industrial and agricultural products and gaining mutual benefits as trading with each other.

The comparative advantage theory has been the dominant argument used in international trade nearly two centuries however it carries deficiencies as;

- It is restrictive as it is based on 2 countries and 2 commodities,
- It is based on full employment which is far from the reality,
- It ignores transportation costs,
- Demand is ignored,
- It is static and does not take the changes in time into account. (Akroni, 2011)

After Ricardo’s theory, in 1930’s, Heckscher-Ohlin model which is also named as a Factor Endowment model explains the deficiencies in Ricardo’s model. The comparative advantage model does not explain the root causes which bring up the differences in labor efficiency. According to factor endowment model, there are two production factors, capital and labor and whichever country has a comparative advantage in one these factors focuses on products in which these elements are used more. Therefore, countries with cheap labor will focus and specialize in labor-intensive products. The factor endowment theory assumes that factor distribution and intensity of countries are different and also their technology levels are assumed equivalent whereas demand in both countries for comparable products are the same.

Heckscher-Ohlin model was vastly used in the international trade literature. However, its failure to explain trade patterns between countries led the development of new trade theories. Raymon Vernon in 1966 developed International Product Cycle theory. The new approach to this theory is that Vernon asserts that some countries specialize in existing goods and some countries specialize in new products. The critical point of the theory is about the cycle of the product, when it is a new product and when it becomes a marketable product. Vernon also suggests that the components and labor related to a product may differ in time geographically.

The most used example of this theory is the personal computers that are invented in the USA and now mostly produced in Asia. This approach is quite important to explain the trade patterns between developed and developing countries.

The last two theories are the new trade theory and new economic geography theory. New Trade Theory asserts that the factor endowment theory cannot explain the trade between countries who have similarity in terms of factors. This inability refers to the explanation of intra-industry trade in which both countries import and export the raw, semi-raw and finished goods in the same product group. New economic geography theory developed by Paul Krugman (1991) argues the distinction between core-periphery and brings the distance factor and the economic geography to the factors of production discussion. “In order to realize scale economies while minimizing transport costs, manufacturing firms tend to locate in the region with larger demand, but the location of demand itself depends on the distribution of manufacturing.”(Krugman, 1991, p: 483)

As a summary, trade theories since mercantilism intended to explain the root causes and the patterns of trade between countries. In the further section, globalization impact will be discussed to exploit the transformation of world trade in the millennial age.

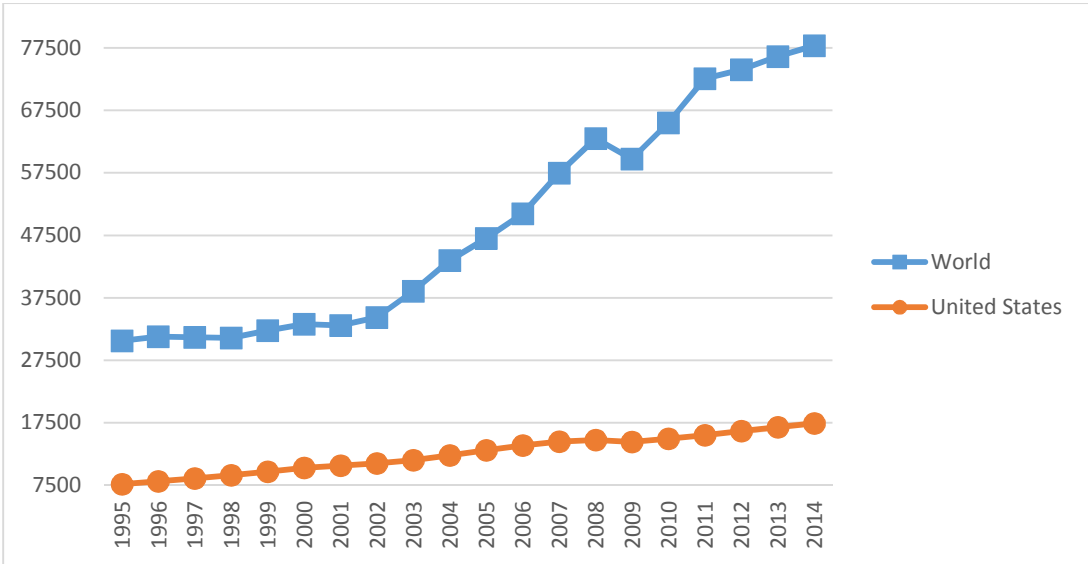
1.2 Transformation of the Global Trade

Liberalization of the world trade starts after the Second World War. After Great Depression, which began in 1929, countries have struggled to maintain their economy stable. Protectionist measures were enforced by the states to protect the national economies. Bretton-Woods conference in 1944 sought to find solutions to the deteriorating economies. Bretton Woods Conference stimulated a system consisting of several agreements and conventions to govern the world trade. The first things to be acted in this international financial scheme were establishing an international financial order and regulate it. Bretton-Woods conference aimed to institute a new economic system that consists of introductions, conventions, and processes. First time in the history, institutions like the World Bank (WB) and International Monetary Fund (IMF) were established. One other important aim of the Bretton Woods conference was liberalizing international trade. By 1947, 23 countries signed the General Agreement on Tariffs and Trade (GATT) whose purpose was “substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis” in Switzerland. (GATT Preamble, 1947, p: 1)

GATT acted as a framework for the governance of world trade due to the reality that attempts to set up an International Trade Organization never realized. Because of the disagreements among the members, it was never approved by U.S Congress. However, with the successful completion of the 8th round of negotiations under GATT in Uruguay in 1994, the WTO was established as the replacement of GATT. After 1995, these efforts continued mainly in multilateral negotiations and conferences between developed and developing countries to resolve conflicts and problems named as Singapore issues. Singapore issues are government procurement, trade facilitation, investment, and competition. All the negotiations are in progress under the Doha Development Agenda. Among these negotiations are topics as non-agricultural tariffs, trade and environment, anti-dumping and subsidies, investment, competition policy, trade facilitation, transparency in government procurement and intellectual property.

In this environment, world GDP has reached 75 trillion United States dollars (USD) from 31 trillion USD from 1995 to 2012 whereas the growth of US GDP was from 7,5 to 16 trillion USD as shown in Figure 1. The gain in productivity, the increment of the woman labor participation rate, and the usage of natural resources more efficiently resulted in this expansion of GDP.

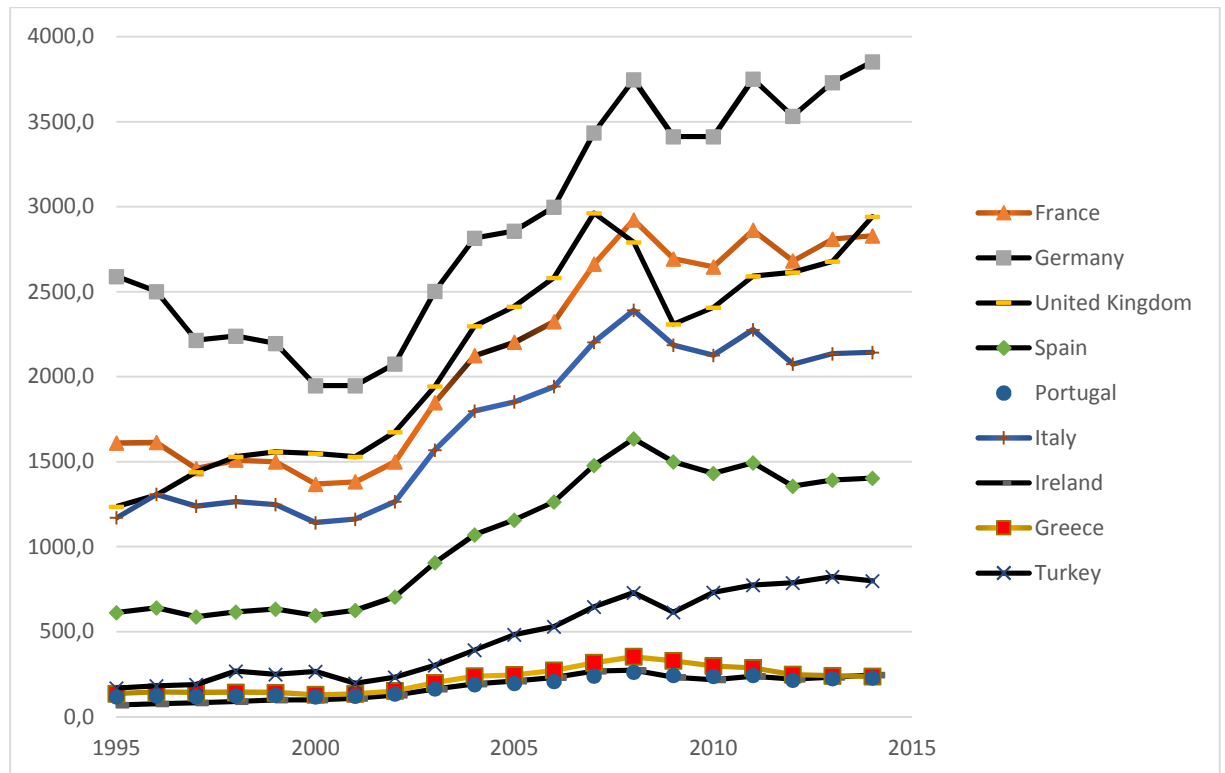
Figure 1: The USA and World GDP (billion USD) (1995-2014)



Source: Worldbank, 2015

When we look at some states in EU, we see that the growth pace in Portugal and Greece kept significantly low during 1995 to 2012 whereas the GDP of the UK caught and surpassed France by 1997 as designated in Figure 2.

Figure 2: GDP of Selected Countries (2005 Constant-billion USD) (1995-2014)



Source: Worldbank, 2015

The increase in the world trade with the liberalization after 1980 is a factor which contributes to the GDP growth. “In the last 30 years, world merchandise and commercial services trade have increased by about 7 % per annum on average, reaching a peak of USD 18 trillion and USD 4 trillion respectively in 2011.”(WTO, 2013, p: 45) This increase was mainly for the benefit of the developing countries. “Between 1980 and 2011, developing economies raised their share in world exports from 34 per cent to 47 per cent and their share in global imports from 29 per cent to 42 per cent” (WTO, 2013, p: 45). International trade patterns have turned over 17.145 trillion merchandise exports and 17.52 trillion merchandise imports by 2012 whereas these numbers were 4.68 trillion in merchandise exports and 4.74 trillion in merchandise imports by 1995 (WITS - United Nations Statistics Division (UNSD) Comtrade Database, 2014). Total exports fell from 15.6 trillion USD to 12.1 trillion USD from 2008 to 2009, and the fall in the exports shows the real impact of the global crisis, which showed up in 2008. (WITS - United Nations Statistics Division (UNSD) Comtrade Database, 2014)

The comparison of GDP and trade volume increase shows that international business deal has risen much quicker than the national economies. In that situation is a brace of reasons for that: First of all the prices of transportation and communication decreased dramatically due

to the revolution in the new generation technologies. Second, the increase in commercial services was another important contributor to the growth of merchandise trade. Trade in commercial services grew even faster, at roughly 8 percent per year on average, amounting to some USD 4 trillion in 2011 (WTO, 2013).

Liberalization of trade also facilitated the increase in regional and FTAs, elimination of trade barriers and the decrease in tariffs. However, there is an increasing tendency in protectionism with the impact of the global crisis. Another aspect of the change in the international trade is the change in the players, the countries. Some developing countries, like Brazil, Russia, India and China (BRIC) increased their share in the international trade enormously. The competitive labor cost, government incentives and the high population of these countries helped them to fortify their place in world trade.

Table 1 shows the change in the order of first 15 exporters between 1995 and 2014. China became the leading exporter by 2014 with 13, 21 % share whereas it was not in the first 15 list in 1995. Korea Republic's move from 11th place to 6th is also significant and is a good indicator of the transformation of the world trade from west to Far east. Russian Federation's 10th place in 2014 is also worth examination as it was not in the first 15 exporters list in 1995. (Ministry of Economy, 2014)

Table 1: First 15 Exporters (1995-2014)

	1995	Export Share (%)	2014	Export Share (%)	
1	United States	12,32	China	13,21	↑
2	Germany	9,87	United States	8,39	↓
3	Japan	8,95	Germany	7,92	↓
4	France	5,54	Japan	3,85	↓
5	United Kingdom	4,66	France	3,33	↓
6	China	4,65	Korea, Rep.	3,2	↑
7	Italy	4,31	Netherlands	2,99	↑
8	Canada	4,08	Canada	2,85	—
9	Netherlands	3,47	Italy	2,8	↓
10	Belgium-Luxembourg	2,94	Russian Federation	2,75	↑
11	Korea, Rep.	2,23	United Kingdom	2,7	↓
12	Switzerland	1,85	Mexico	2,44	↑
13	Spain	1,82	Belgium	2,1	↓
14	Mexico	1,65	Switzerland	1,83	↓
15	Malaysia	1,64	Saudi Arabia	1,79	↑

Source, WITS, 2015

1.3 Transformation of Turkish Trade

After the declaration of the Turkish Republic, private accumulation was a major necessity to grow and capitalize the economy. However, Turkey experienced two major turmoils which are 1929 economic turmoil and Second World War. With the electoral glory of the Democrat Party, Turkey started the transition to a liberal economy. Significant steps were taken to industrialization based on an import substitute model between 1950 and 1980. Trade has been an important inhibitor for the Turkish economy after the 80's.

With the 24th January 1980 decisions, Turkey changed its economic vision entirely, and this move was not a preference. As Reagan in USA and Thatcher in the UK started hard-liberal policies, Turkey was obliged to align its economy with these policies as its economy was strictly tied to the western world.

Between 1980 and 1995, Turkey started following a liberal route in line with the western world. Change in the banking regime, privatization of state entities, arrangements in labor wages were pioneers and the starters of an export-based economy. The total trade volume consisted nearly of 50% of the GDP by 1985.

The CU decision was one of the most significant milestones of the Turkish economy. It did not only change the total trade volume of the country but also transformed Turkish economy on the regulations and measures set by the EU. Impacts of CU should be examined from various perspectives and for different time periods. Social and political implications of CU should also be examined separately.

The last critical period is after 2000's as further steps were taken in the regulations in the banking industry, following a balanced relationship with the EU, and putting an important emphasize was placed in the Middle East.

1.3.1 Customs Union

Viner (1950) explained the most important impact of the CU from trade flow perspective as trade creation and trade diversion. Trade creation refers to switching to trade from more expensive to less expensive producers. Lipsey (1957) extended Viner's argument for trade creation and diversion effects as they cannot be interpreted as good or bad. According to Lipsey, the welfare effect of a CU should be discussed with its impact on the location and as a consequence, the utility of the world consumption.

Balassa brought a different angle to the discussion. He saw European integration as a liberal action. "... Economic integration in Europe serves to avoid discrimination caused by trade-and-payments restrictions and increased state intervention, and it is designed to mitigate cyclical fluctuations and to increase the growth of national income."(Balassa, 1961, p: 177)

Organization for Economic Co-operation and Development (OECD) describes CU as an arrangement among countries in which the parties do two things: (1) agree to allow free trade in products within the CU and (2) agree to a CET with respect to imports from the rest of the world. International Court of Justice at The Hague expands the OECD definition: "Customs Union is an economic integration model in which (1) each of the corresponding countries apply a single tariff to non-member states, (2) all custom duties among member countries are abolished and (3) revenues from custom duties to non-member states are shared among member states."(OECD, 2014)

The main difference between CU's and FTAs is that in the CU, there is a common customs policy and in the FTAs each member state continues its tariff regime. Additionally, in FTAs by applying different tariff regimes, trade diversion may be created. "Any restrictions or protective barriers to free movement of goods are removed from countries who implement CU. Member parties can not apply tax subsidies to each. In addition, quantity restrictions or quota type prohibitive restrictions cannot be applied" (Uyar, 2000, p: 7).

Ankara Agreement between Turkey and EU, which was based on CU, was signed in 1963 and was put in action by 1964. One of the most commonly seen economic unification models is a CU and FTAs. CU is an agreement between two or more (usually neighboring) countries to remove trade barriers, and reduce or eliminate customs duties. This definition is extended as; "A CU is usually defined as a form of trade agreement under which certain countries preferentially grant tariff-free market access to each other's imports and agree to apply a common set of external tariffs to import from the rest of the world. In a CU, four sets of issues have to be settled between the parties: coverage of the CU, determination of the CCT, a collection of CCT revenue, and allocation of CCT revenue." (Togan, 2011, p: 5)

According to Ankara Agreement, CU would go to live in 3 phases. The first stage was the preparation phase, which would take five years. During this period, Turkey would strengthen its economy. Therefore, living standards of the Turkish people would rise. The preparation phase, which was planned to last for five years started in 1.12.1964 and took seven years. The Additional Protocol was signed on 23.11.1970. The Second article of this protocol

constituted the free movement of goods. By the 1st of September in 1971, Temporary Agreement entered into force which enabled the removal of customs duties and quantitative restrictions by the EU, which were applied to the industrial products imported from Turkey excluding textile.

The additional protocol, which bases on the CU principle of the Ankara agreement consists of 64 articles. According to this protocol, free movement of goods would be subject to some procedures, orders, and durations. Free movement of people, services and capital, transportation, competition, tax regulation and convergence of rules would also be based on Additional Protocol. An additional protocol is an implementation as well as an addendum to Ankara agreement.

The additional protocol was a temporary agreement which was assumed as a transition to full membership. According to this protocol, parties would commit not to apply and increase custom taxes in export and import. EU countries committed to removing customs taxes and equivalent taxes for Turkey originated imports, according to the additional protocol. On the other hand, Turkey committed that it would remove its customs to the Union in 12 years, but this duration would be 22 years for the product list that parties would agree upon. Removal of customs would be finalized by 01.01.1985 following 12 years of the transition period.

The implementation of the common export regime had started on 01.07.1968 by the European Economic Community (EEC) to third parties. Turkey would accommodate its regulation to EEC CCT level in a particular time and steps. This accommodation is pointed out in the 17 and 18th articles of the Additional Protocol.

Turkey's import substitution strategy continued in this conjuncture. In 1978, Turkey applied EEC to postpone its obligations for five years and also additional financial aid. EEC did not affirm financial aid but approved the request of postponing the obligations. By 24 January (1980) decisions, Turkey tried to develop its relations with the EEC by opening its economy and going into integration with the international economy. Turkey EEC relation suspended for a while due to the Coup d'état in 1980. During this period, textile products were among the most popular export group, and there have been several anti-dumping cases on textile products. Due to this fact, Turkey also got some precautions towards the EEC in economic terms. This situation continued until 1986. Annual tariff reductions on behalf of EEC could start by 1988.

According to Akman and Yaman, integration of Turkey with international markets increased as liberalization process speeded up. As a consequence, the share of Turkey in world trade also increased. “Turkey’s share in world goods export was 0.15% to 2.9 billion USD in 1980 and reached 0.38% to 13 billion USD in 1990. As of 2005, 0.70%, which is nearly two times 1990 rates has been caught with 73.4 billion USD export.”(Akman& Yaman, 2008, p: 103).

Liberalization process had different pillars especially in the removal of tariffs and quantitative restrictions. As a consequence of 24 January 1980 decisions, after the first elections in 1983 after the military coup, 1984 was an important year in Turkey for trade liberalization. Özler& Yılmaz (2007) defined the import regime based on the classification of commodities as ‘prohibited’ list, ‘imports subject to permission’ list, and ‘liberalized’ list.

“With the changes announced in 1984 around 60% of 1983 imports were no longer subject to restrictions or approvals by authorities. The number of commodities in the ‘prohibited’ list, which was around 500 in 1984, was reduced to almost zero by 1985. The commodities in the ‘subject to permission’ list, which accounted for 46% of manufactured imports in 1984, was reduced to 22% in 1986 and 6% in 1988.”(Özler& Yılmaz, 2007, p: 3).

Based on the Article 237 of the Treaty of Rome, the Article 98 of the European Coal and Steel Community Treaty, and the Article 205 of the Treaty of the European Atomic Energy Community, Turkey has applied for full membership of the EEC on 14 April 1987. European Council (CoE) examined this application for two and a half years. On 18.12.1989, the Commission presented its report in a negative way to the EU Council of Ministers.

According to the Council, it was more important for the community to complete its market integration, progress in terms of economic and monetary union had precedence rather than accepting new members. According to the EEC countries, there were violations of human rights and democracy in Turkey. Although issues with Greece and Cyprus conflict were primary obstacles community countries ignored this issue for fear of political forces immunity.

COE also emphasized the importance of a cooperation program which should aim the integration between EU and Turkey and CU should be completed by 1995 (Ministry of EU Affairs, Turkey, 2015).

On 5 February 1990, the Commission adopted a negative opinion, and no significant development happened on Turkey's application for full membership till 1992. Then, in January 1992, a work program was signed in Ankara between Turkey and the EU. This program was

put into effect on 9 November 1992, with the meeting of the Association Council and concluded with the completion of the CU by 1995. Due to this progress, Turkey began implementing its import regime by 1994 by decreasing discount realization rates to 90% in the 12-year list, 80% in 22 years list. Turkey also decreased 80% off 12 years list and 70% in 22 years list in the common export regime.

EU left the decision about the completion of the CU to its inner approval process. According to Article 238 of Maastricht Agreement, European Parliament's opinion, should be taken. European Parliament not only suspended the 53 million European currency unit (ECU) which would be released in 1997² but also did not give the 3.5 million EU special financial aid.

The CU, which was provisioned as a phase for full membership according to Ankara Agreement, could be completed by 1995 with the participation of Turkey and 15 members of the EU. The CU agreement entered into force in 1.1.1996 after 33 years. Turkey signed an additional protocol to declare it extends CU for the new 13 members of the union, however, also associated this signature with a declaration which states that this additional protocol does not include Cyprus. EU, who started the membership negotiations officially with Turkey at 03.10.2005, remarked the full implementation of CU during the membership negotiations with the Progress Report in October 2004.(EC, 2015).

European Parliament approved Council Decision of Turkey- EU Association No. 1/95. Turkey entered the Final Period on 31 December 1995 by completing "Transition Period" which lasted 22 years. By 01.01.1996 process of the CU, was finished for the agreed list which includes industrial products and some manufactured agricultural products.

With the CU, Turkey opened its customs in the member states of the Union for manufacturing commodities and some processed agricultural products and not primary goods and services. Another important aspect of the CU was the adoption of then CCT against third-country imports by January 1, 1996, and all of the preferential agreements the EU had concluded with third countries by the year 2001. In the case of particular products specified in Article 19/2 of the Additional Protocol, Turkey would impose higher tariff rates than those in the CET for another five years.

² This was the part of the 375 million ECU of financial aid which would be provided in 5 years.

With the creation of the CU, a framework between Turkey and EU has been set for a variety of activities. Among these activities were, the regulatory framework of production, antitrust policy, state aid, subsidies to enterprises, competition policy, and industrial and intellectual property rights. Turkey would have to conform to EU standards in all of these spheres. Establishment of a Joint Committee between Turkey and EU, harmonization of the commercial policy of Turkey and transfer of financial aid to Turkey, were other important decisions taken by the CU decision. (Yılmaz, 2008)

The Turkish economy has been deeply affected by the CU agreement. Some impact showed up clearly due to the regress in customs duties, change in the structure of imports and exports, etc. There were also other influential factors, especially in policies. "... harmonization of Turkey's competition policy legislation to that of the EU, the adoption of the Community's commercial policy towards third countries (including textile quotas and the FTAs with all the EUs preferential partners), and of the EU Acquits regarding the standardization of industrial products."(Yılmaz& Taymaz, 2007, p: 131)

1.3.2 Impact of CU on Turkey

With the CU, some developments took place in areas of customs tax revenue, competition policy, trade facilitation, technical regulations, trade defense instruments and modernization of customs that will be examined separately.

a) Tax Revenue

CU had an important impact on Turkey in terms of tax revenue sourced by customs and import duties. "Perhaps the most immediate effect of the CU was the tariff revenue loss for the government. There was a decline in import tax revenues as Turkey lowered tariffs on imports from the EU."(Yılmaz, 2010, p: 4)

Import tariff revenues increased to 15.61% by 1984 and fell to 8.86% by 1985 as it may be seen in Table 2. There is a gradual decrease from 1985 to 1996, the date when the CU becomes effective. The gradual fall continues till 2002, and it becomes stable from 2002 to 2012 era.

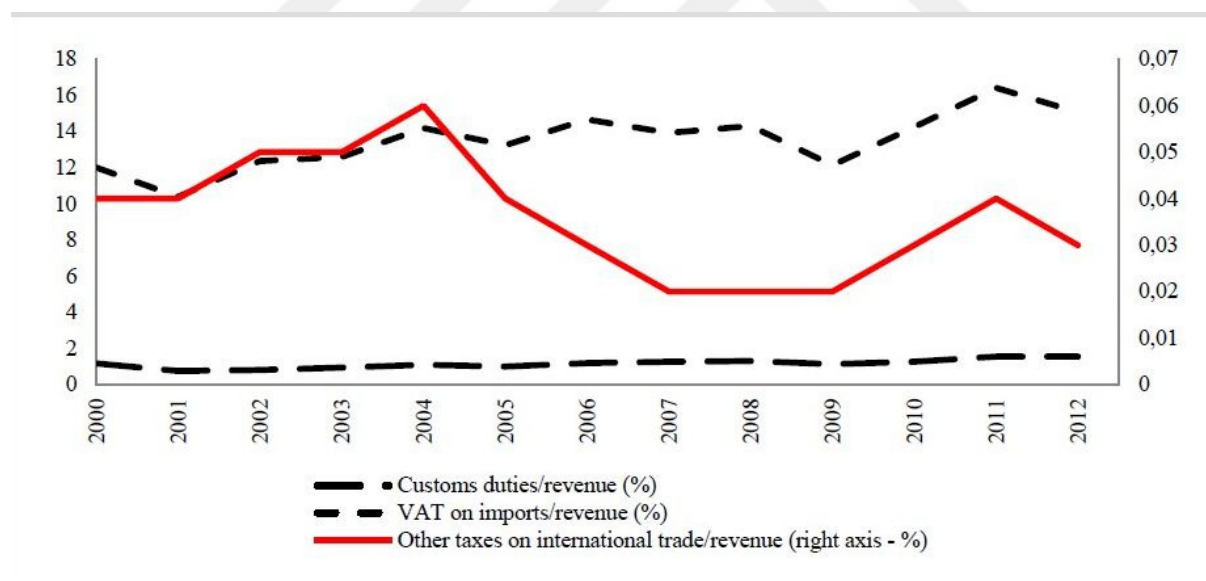
Table 2: Customs and Import Duties of Turkey (%) (1980-2012)

Year	%Tax Revenue in Total Taxation	Year	%Tax Revenue in Total Taxation	Year	%Tax Revenue in Total Taxation	Year	%Tax Revenue in Total Taxation	Year	%Tax Revenue in Total Taxation	Year	%Tax Revenue in Total Taxation
1980	9,66	1986	0,07	1992	4,47	1998	1,75	2004	1,38	2010	1,57
1981	9,14	1987	7,40	1993	4,72	1999	1,51	2005	1,29	2011	1,87
1982	10,55	1988	6,71	1994	3,69	2000	1,37	2006	1,47	2012	1,89
1983	12,73	1989	6,28	1995	3,94	2001	0,92	2007	1,56		
1984	15,61	1990	5,92	1996	2,35	2002	0,99	2008	1,63		
1985	8,86	1991	4,84	1997	2,15	2003	1,08	2009	1,44		

Source: OECD Stats, 2014

A recent study by Worldbank (2014) shows that portion of the customs duties in total revenue keeps stable while portion of other taxes on international trade in total revenue is declining between 2000 and 2012. It is also seen in Figure 3 that VAT on imports/revenue in Turkey is significantly increasing due to the increasing imports (Worldbank, 2014).

Figure 3: Trade Related Taxes of Turkey (2000-2012)



Source: Worldbank adapted from OECD Tax Database and Turkey Ministry of Finance, 2014

b) Competition Policy

The purpose of EU Competition Policy and related acquits is to establish an internal market in that economic actors operating in member states compete in equal conditions. Through competition policy, the EU puts into restrictive rules on unlawful limitations of competition to enable effective functioning of a market economy.

Competition policy is the 8th chapter of the membership negotiations between Turkey and EU and also one of the most important headlines for the development of the Turkish economy. Screening Report on this chapter has been approved by the Council of the EU with Benchmarks. The acquires under Competition Policy (Chapter 8) defines the obligations arising from the CU between the EU and Turkey presently in force and consists of 3 major headlines;

- Field of anti-trust
- Field of state-aid
- Term of liberalization

The CU agreement made two significant impacts on Turkey. The competition law and the competition authority. The Law on Protection of Competition entered into force on 13 December 1994 and was designed to prevent agreements, decisions and practices that have, as their purpose or effect: “The prevention, restriction or distortion of competition in the markets for goods or services within Turkey; The abuse of dominance by undertakings dominant in a relevant market; and concentrations creating or strengthening a dominant position and significantly lessening the competition in the whole territory of Turkey or a part because of that.” (Gürkaynak& Yıldırım, 2013)

Competition Authority is established in 1997 by adopting the Act No.4054. “The main duty of the Competition Authority is to prevent any threats to the competitive process in the markets for goods and services through the use of the powers granted by law.”(Turkish Competition Authority, 2013). Screening process on competition policy started with the meeting on 8-9 November 2005, and the bilateral screening meeting was held on 1-2nd December 2005. “The competition acquires covers both anti-trust and state aid control policies. It includes rules and procedures to fight anti-competitive behavior by companies (restrictive agreements between undertakings and abuse of dominant position), to scrutinize mergers between undertakings, and to prevent governments from granting state aid which distort competition in the internal market” (European Commission (EC), 2005, p: 2)

In 2013 Progress Report, EC summarized the improvements of the Competition Authority in its effectiveness in imposing fines on the banking sector, adopting new guidelines including horizontal cooperation agreements and the assessment of mergers and its administrative capacity to uphold a satisfactory level of administrative and operational independence (EC, 2013)

“Banking mergers and acquisitions resulting in a combined sectoral market share below 20% remain outside the scope of the Competition Act. Turkey is still expected to align with the acquis on horizontal co-operation agreements, de minimis rules, as well as public undertakings and undertakings enjoying exclusive and special rights. Alignment in the field of antitrust and merger control is advanced.” EC, 2013, p: 30)

"As regards state aid, the entry into force of the legislation implementing the State Aid Law was postponed for a second time. The State Aid Authority still needs to establish a formal state aid inventory. It is also expected to enact an action plan for aligning all state aid schemes, including the 2012 incentives package, with the acquis.”(EC, 2013, p: 30)

Significant reforms have been achieved in the competition policy area. However, there are still some problems in the settlement of competition frame. “Turkey has introduced major reforms. But it has faced difficulties in fulfilling the requirements of the CU in particular when trying to eliminate the technical barriers to trade (TBT)s in trade with the EU, adopting and implementing EU’s competition policy provisions on state aid, and ensuring adequate and effective protection of intellectual property rights” (Togan, 2011, p: 37).

c) Trade Facilitation

According to the decision, Turkey would implement tariff reductions and the common export regime of the Union and also would comply with EU trade and competition policies. Another decision 2/95 was also taken which stated the duration for compliance as five years. As of 01.01.1996, all customs duties and import quotas would be eliminated for most manufactured products. With this agreement, Turkey accepts to adopt the EU’s CETs on imports from third countries and economies which mean that all the goods imported from third countries may move freely within the EU and Turkey.

In terms of reciprocal trade, EU's removal of the trade barriers in 1971 did not lead a trade creation impact. Removal of quotas was an important step. However, trade protection measures such as anti-dumping, have not been eliminated between the EU and Turkey till 2008. Turkey has been a member of WTO since 1995 and adopted the framework of the WTO not only in anti-dumping but also in intellectual property, safeguards, and countervailing measures. However, Turkey implemented its anti-dumping measures, especially for textile products till 2008. “In terms of export incentives, Turkey eliminated subventions like direct payments, low-interest rate credits, and privileges by the end of 1994 due to the decisions made at WTO meeting in Uruguay and also due to the CU agreement and began to implement a different

incentive mechanism. After 1995, incentives which prevail are export incentives, inward and outward processing regime, tax, resume and fee exemptions for foreign currency saver services and activities and value added tax (VAT) exemption for exports.” (Kozanoğlu& Tekçe, 2003, p: 1)

The current support tools are as follows; “

- 1) R&D Support,
- 2) Incentive for developing international competitiveness,
- 3) Employment Support,
- 4) Market Research and Incentive for Market Entrance,
- 5) Support for international kind in-country expertise fairs,
- 6) Support for joining foreign fairs,
- 7) Support of environmental costs,
- 8) Support of the foreign unit. Brand and advertisement activities,
- 9) Branding of Turkish products out of Turkey, establishing a Turkish product image and support of TURQUALITY®,
- 10) Support for design,
- 11) State aids, to the foreign activities of technical consultancy companies,
- 12) Export refund aid in agricultural products,” (Atayeter& Erol, 2011, p: 4-16)

“The CU agreement with the EU did not have much impact on Turkish exports in the first five years. The compounded annual growth rate of exports between 1996 and 2001 was 6.2 percent compared to 14.3 percent growth rate between 1980 and 1995. The EU had already removed tariffs on Turkish goods before the CU.”(Yılmaz, 2010, p: 6)

The positive impact of the CU on Turkish exports was realized with a long delay, only after the 2001 crisis. “The depreciation of the Turkish Lira and the contraction in domestic demand that followed the economic crisis of February 2001 forced domestic producers to search for export markets. As the CU had already forced many sectors to become more productive, it

was not very difficult to find export markets to supplement the collapsed domestic demand during the following 2001 economic crisis. Export revenues increased 12.6 percent in 2001.” (Yılmaz, 2010, p: 6)

d) Technical regulations

As far as the tariffs and quotas are eliminated between Turkey and EU, technical barriers became more important for the trade between EU states and Turkey. Turkey has committed to aligning itself with the EU rules with the Single Market framework. This adoption not only increased the bilateral trade but also led Turkey to become more competitive as Turkey got the benefit of a structure which brings a discipline from production to packaging. With the alignment, Turkey redefined the objectives of the Turkish Standards Institute (TSE) and also linked it to the international bodies that increased the effectiveness of testing and certification services.

e) Modernization of Customs

With the CU, Turkey renewed its customs, automated the paper-based structure and increased the quality of services and also shortened the duration of customs clearance. This transformation started with the signature of a loan agreement with the WB for the Customs Modernization Project in 1995. Starting with this project Turkey’s customs declaration is now aligned with the Single Administrative Document used for customs clearance in the EU.

The second important step in the compliance was with the “Risk-Based Trade Control System (TAREKS)” which is about the electronic control of goods for safety and quality purposes. It is implemented on a sector basis and compliant with the Restriction of Hazardous Substances (RoHS) directives which entered into force in June 2009. The Turkish version of the Waste Electrical and Electronic Equipment (WEEE) Directive was published in the Turkish Official Journal on 22 May 2012 and implemented starting from January 2013. Due to these efforts Turkey is almost fully compliant with the “Customs Provisions” chapter of Decision 1/95. There is still room for improvement, especially on the physical inspection and security in customs gates like Kapıkule, and both parties are in cooperation to heal joint customs controls.

1.3.3 Portfolio Transformation

It is distinctly understood that there is a significant increase in Turkish foreign trade from 2000 to 2012. A fundamental analysis of international business components shows an

important increment in 3 major areas which are agricultural, industrial and mining products. Structural change will be analyzed in separate headlines.

According to the trade figures, trade structure of Turkey has changed significantly. As indicated in Table 3, in 1996, the total export of Turkey was some 23 billion USD, and it was close to 158 billion USD in 2014. Food and live animals exports reached 15 billion USD from 3,6 billion USD between 1996-2014 era. Chemicals and related products reached 10 times exports value from 1996 to 2014. Another significant change was in the manufactured goods as the exports value exceeded 42 billion USD while it was 6,5 billion USD in 1996. Same increase was also in machinery and transport equipment and miscellaneous manufactured articles headline where a total of these 2 items reached 72 billion USD from 10 billion USD in 1996-2014 period.

Table 3: Turkish Export Structure Analysis in SITC Rev.3 (million USD) (1996-2014)

Exports by SITC, Rev.3	1996	2000	2004	2008	2012	2014
Food and live animals	3559,30	2890,69	5044,32	9155,02	12685,64	15156,99
Beverages and tobacco	742,46	528,91	590,94	890,69	1097,58	1390,45
Crude materials, inedible, except fuels	832,80	789,56	1461,49	3320,78	4492,15	4916,44
Mineral fuels, lubricants, and related materials	275,49	329,09	1429,14	7531,53	7707,79	6110,79
Animal and vegetable oils, fats and waxes	231,72	100,28	205,45	570,27	1060,54	1007,86
Chemicals and related products, n.e.s.	998,79	1242,85	2566,15	6121,81	8913,49	10098,82
Manufactured goods classified chiefly by material	6549,98	8224,47	18633,00	40595,31	41262,23	42292,37
Machineries and transport equipments	3012,17	5740,47	18275,35	39147,40	37431,69	42748,89
Miscellaneous manufactured articles	7021,59	7927,46	14762,63	20794,91	24317,64	30126,27
Commodities and transactions not classified elsewhere in the SITC	0,18	1,11	198,69	3899,48	13492,98	3768,01
Total	23224,46	27774,91	63167,15	132027,20	152461,74	157616,88

Source: TUIK, 2014

On the imports side, 1996 value nearly multiplied by 6 and reached 242 billion USD in 2014. Food and live animals imports value was 1,7 billion USD in 1996 and reach to 7 billion USD in 2014. Increase in mineral fuels, lubricants, and related materials was also significant and reached to 17 billion USD in 2014 from 3,6 billion USD in 1996. An important increase was in the manufactured goods classified chiefly by material, machinery and transport equipment and miscellaneous manufactured articles which summed up to 120 billion USD from 26 billion USD from 1996 to 2014 as indicated in Table 4.

Table 4: Turkish Import Structure Analysis in SITC Rev.3 (million USD) (1996-2014)

Imports by SITC, Rev.3	1996	2000	2004	2008	2012	2014
Food and live animals	1775,67	1159,16	1817,61	5024,16	6340,40	6970,11
Beverages and tobacco	296,08	365,30	270,02	456,27	638,58	792,09
Crude materials, inedible, except fuels	3635,68	3304,14	6969,91	16199,45	18630,14	16974,90
Mineral fuels, lubricants, and related materials	5913,98	9529,25	14407,06	48280,96	60115,79	54889,01
Animal and vegetable oils, fats and waxes	508,75	375,41	531,91	1702,29	1943,07	2186,99
Chemicals and related products, n.e.s.	5776,56	7414,71	14211,41	25541,69	29685,71	33211,21
Manufactured goods classified chiefly by material	7408,86	8465,05	16523,01	36294,98	36040,25	38447,34
Machineries and transport equipments	15806,01	20508,60	33704,29	51594,79	61605,75	65808,98
Miscellaneous manufactured articles	2504,87	3336,20	5354,34	11486,32	13153,32	15497,92
Commodities and transactions not classified elsewhere in the SITC	0,17	45,00	3750,21	5382,67	8392,12	7398,45
Total	43626,64	54502,82	97539,77	201963,57	236545,14	242177,00

Source: TUIK, 2014

Table 5 and Table 6 shows the change in trade patterns in product groups. The decline in food and live animal exports occurred only from 1996 to 2000. In summary, there is a 325.8% increase in food and live animals exported from 1996 to 2014. The most notable increase was between 2004 and 2008 which was 81.49%. On the import side, growth from 1996 to 2014 was close to 293%. The most promising period for beverages& tobacco exports was between 2004 and 2008 with an increase of 50.72%. When exports between 1996 and 2014 are taken into account, beverages and tobacco export is the least improved export category with only 87, 3% increase. “The dynamic effect of sectoral composition changes limited import prices significantly, whereas it did not create a substantial impact on export prices. The dynamic effect occurred, particularly due to the share falls off main metal industries and crude oil and natural gas which experienced a high level of price increases. “(Aldan& Üngör, 2011, p: 8)

Table 5: Turkish Exports Trend (1996-2014)

YoY Change in Exports (%)	1996-2000	2000-2004	2004-2008	2008-2012	2012-2014	1996-2014
Food and live animals	-18,8	74,5	81,5	38,6	19,5	325,8
Beverages and tobacco	-28,8	11,7	50,7	23,2	26,7	87,3
Crude materials, inedible, except fuels	-5,2	85,1	127,2	35,3	9,4	490,4
Mineral fuels, lubricants, and related materials	19,5	334,3	427,0	2,3	-20,7	2118,2
Animal and vegetable oils, fats and waxes	-56,7	104,9	177,6	86,0	-5,0	334,9
Chemicals and related products, n.e.s.	24,4	106,5	138,6	45,6	13,3	911,1
Manufactured goods classified chiefly by material	25,6	126,6	117,9	1,6	2,5	545,7
Machineries and transport equipments	90,6	218,4	114,2	-4,4	14,2	1319,2
Miscellaneous manufactured articles	12,9	86,2	40,9	16,9	23,9	329,1
Commodities and transactions not classified elsewhere in the SITC	529,5	17775,7	1862,6	246,0	-72,1	2133927,3
Total	19,6	127,4	109,0	15,5	3,4	578,7

Source, TUIK, 2015

There was a significant decline in the 2000-2004 era with 26.08% in imports of beverages& tobacco products. Crude materials, inedible, except fuels (code 2) export multiplied it by 5 in 18 years. Primary growth occurred between 2004 and 2008. On the other side, group of Mineral Fuels, lubricants and related materials (code 3) is the most improved of all sectors in 16 years as exports of this item grew 22 times from 1996 to 2014. Import in this product group also increased rapidly by 828% between 1996 and 2014. Despite the 4.38% shrinkage between 2008 and 2012, machinery and transport equipment export multiplied by 13 in 18 years where miscellaneous manufactured articles item is the one with the least growth rate from 1996 to 2014. Import of code 6 (manufactured goods classified chiefly by material) grew by 119.66% between 2004 and 2008 although it was stable between 2008 and 2012. The same trend is also observed on the export side with an 117.87% increase between 2004 and 2008 and only 1.64% between 2008 and 2012.

Table 6: Turkish Imports Trend (1996-2014)

YoY Change in Imports (%)	1996-2000	2000-2004	2004-2008	2008-2012	2012-2014	1996-2014
Food and live animals	-34,7	56,8	176,4	26,2	9,9	292,5
Beverages and tobacco	23,4	-26,1	69,0	40,0	24,0	167,5
Crude materials, inedible, except fuels	-9,1	110,9	132,4	15,0	-8,9	366,9
Mineral fuels, lubricants, and related materials	61,1	51,2	235,1	24,5	-8,7	828,1
Animal and vegetable oils, fats and waxes	-26,2	41,7	220,0	14,1	12,6	329,9
Chemicals and related products, n.e.s.	28,4	91,7	79,7	16,2	11,9	474,9
Manufactured goods classified chiefly by material	14,3	95,2	119,7	-0,7	6,7	418,9
Machineries and transport equipments	29,8	64,3	53,1	19,4	6,8	316,4
Miscellaneous manufactured articles	33,2	60,5	114,5	14,5	17,8	518,7
Commodities and transactions not classified elsewhere in the SITC	27027,6	8232,9	43,5	55,9	-11,8	4459484,7
Total	24,9	79,0	107,1	17,1	2,4	455,1

Source, TUIK, 2015

Taymaz et al., (2008) analyzed Turkish manufacturing sector and explained the determinants of Turkish Manufacturing industry. In their analysis, which included 1983-2001 era, it is seen that some industries showed better performance in terms of productivity and played a significant role in growth and export increase.

“In 1983-2001 era, most important technological changes were at manufacture of electrical industrial machinery and apparatus (International Standard Industrial Classification (-ISIC 3831), manufacture of electrical appliances and housewares (ISIC 3833), manufacture of radio, television and communication equipment and apparatus (ISIC 3832), tanneries and leather finishing (ISIC 3231), sawmills, planning and other wood mills (ISIC 3311), manufacture of plastic products not elsewhere classified (ISIC 3560) and manufacture of electrical apparatus and supplies not elsewhere classified (ISIC 3839). Manufacture of products of leather and leather substitutes, except footwear and wearing apparel (ISIC 3233), printing, publishing (ISIC 3421), manufacture of furniture and fixtures, except primarily of metal (ISIC 3320) and manufacture of footwear, except vulcanized or molded rubber or plastic footwear (ISIC 3240) were the industry categories which regressed the most.”(Taymaz et al., 2008, p: 62).Diversification of products and countries in foreign trade has a positive effect of eliminating external shocks on the overall economy. “...as the fact that economic crisis affects EU, and North America states deeper is taken into consideration, the breakdown of the regional composition of export, strengths the idea that Turkish economy is less affected by the shocks from foreign trade channel. Moving beyond, the change in the regional composition of export carry the potential to increase exports.”(Aldan& Aydın, 2012, p: 11, 12)

1.3.4 Market Transformation

We have already talked about the liberalization move which took off in 1980. This movement was followed by the CU decision in 1995, and a significant change took place in Turkey's foreign trade due to this transformation. This transformation was likewise supported by globalization, changing geopolitical balances and extensive utilization of young technologies. The transformation happened both in market and product portfolio basis.

The growth in trade volume and also the trade surplus with the near and middle east countries also reflected in the construction of Turkey's trade. Granting to Table 7 and Table 8 it is distinctly understood that the EU's share of Turkey's exports declined significantly in 2012 to %39. Exports to EU increased to %43,5 by 2014. Turkey compensated some of the losses it experienced with EU mostly with the near and Middle Eastern countries. The growth of these countries' shares started with 2008 and reached a peak in 2012 with %27,8. The share of the exports with North African countries also increased from 2006 to 2014 and nearly doubled by reaching % 6,2.

Table 7: Turkish Export Scheme (2006-2014)

Country Group Share (%)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	100	100	100	100	100	100	100	100	100
A-European Union (EU 28)	56,3	56,6	48,3	46,2	46,5	46,4	39,0	41,5	43,5
B-Free Zones in Turkey	3,5	2,7	2,3	1,9	1,8	1,9	1,5	1,6	1,4
C-Other countries	40,2	40,6	49,5	51,8	51,7	51,7	59,5	56,9	55,1
1-Other European Countries	9,1	9,8	11,6	10,9	9,8	9,4	9,3	9,4	9,6
2-North African Countries	3,6	3,8	4,4	7,3	6,2	5,0	6,2	6,6	6,2
3-Other African Countries	1,7	1,8	2,4	2,7	2,0	2,7	2,6	2,7	2,5
4-North American Countries	6,4	4,2	3,6	3,5	3,7	4,0	4,4	4,3	4,6
5-Central America and Caraips	0,6	0,5	0,6	0,6	0,5	0,5	0,5	0,7	0,6
6-South American Countries	0,4	0,5	0,7	0,7	1,1	1,4	1,4	1,4	1,2
7-Near and Middle Eastern	13,2	14,1	19,3	18,8	20,5	20,7	27,8	23,4	22,4
8-Other Asian Countries	4,6	4,9	5,4	6,6	7,5	7,6	6,9	7,9	7,4
9-Australia and New Zealand	0,4	0,3	0,3	0,4	0,4	0,4	0,3	0,4	0,4
10-Other Countries	0,2	0,8	1,1	0,5	0,1	0,1	0,1	0,1	0,1

Source: TUIK, 2014

On the imports side, the share of EU declined significantly from 2006 to 2014 as it decreased to %36,7. The share of other Asian countries increased to 23,2 from 18,6 between 2000 and 2014 which may be a result of the economic crisis in the EU.

Table 8: Turkish Import Scheme (2006-2014)

Country Group Share (%)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	100	100	100	100	100	100	100	100	100
A-European Union (EU 28)	42,6	40,3	36,9	40,2	39,0	38,0	37,1	36,7	36,7
B-Free Zones in Turkey	0,7	0,7	0,7	0,7	0,5	0,4	0,4	0,5	0,5
C-Other countries	56,7	59,0	62,4	59,1	60,5	61,6	62,5	62,8	62,8
1-Other European Countries	18,4	20,1	21,8	18,3	16,2	14,8	15,7	16,4	15,0
2-North African Countries	1,2	1,3	1,8	1,6	1,7	1,4	1,4	1,4	1,4
3-Other African Countries	1,6	1,7	1,0	1,2	0,9	1,4	1,1	1,0	1,0
4-North American Countries	5,0	5,3	6,6	6,8	7,1	7,2	6,4	5,5	5,7
5-Central America and Caraips	0,2	0,3	0,3	0,3	0,3	0,4	0,5	0,5	0,5
6-South American Countries	1,5	1,6	1,6	1,6	1,6	1,9	1,7	1,5	1,6
7-Near and Middle Eastern	6,2	6,0	6,5	5,1	7,0	8,5	9,1	8,8	8,5
8-Other Asian Countries	18,4	19,8	18,6	20,4	21,7	22,1	21,0	21,7	23,2
9-Australia and New Zealand	0,3	0,4	0,4	0,5	0,3	0,3	0,4	0,5	0,3
10-Other Countries	4,0	2,6	3,7	3,4	3,6	3,6	5,3	5,3	5,6

Source: TUIK, 2014

The trade surplus achieved by the trade with the near and middle east countries is a result of the strategy planned and carried out by the ministry of economy. One of the actions in Turkey's Export Strategy for 2023 is implementing sectoral and country based diversification strategy in export composition. The primary aim of this strategy is to achieve 500 billion USD of export volume in 2023-the centenary anniversary of the Turkish Republic- with an average of 12% growth in exports (Ministry of Economy, Turkey, 2014). Second, it is a necessity to diversify the countries and products that are exported as a consequence of the change in the world economy and trade. The crisis in the EU is an example that verifies this strategy, and it is also in line with the new economic geography theory of Krugman which puts a specific focus on distance concept between the trading countries. Thus, increasing the trade relations with regions like the Middle East and the Commonwealth of Independent States (CIS)³ countries becomes crucial. Based on this strategy, Ministry of Economy has prepared plans for 2010-2011, 2012-2013 and 2014-2015 and besides 17 target countries also 27 privileged countries are also targeted and considered strategic. Excerpt of the countries is executed based on the accompanying framework shown in Table 9.

³ Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Uzbekistan are the CIS states.

Table 9: Target Countries for Exports for Selected Years

2010-2011	2012-2013	2014-2015
<i>USA</i>	<i>USA</i>	<i>USA</i>
<i>China</i>	<i>China</i>	<i>China</i>
<i>Russia</i>	<i>Russia</i>	<i>Russia</i>
<i>India</i>	<i>India</i>	<i>India</i>
<i>Brazil</i>	<i>Brazil</i>	<i>Brazil</i>
<i>Poland</i>	<i>Poland</i>	<i>Poland</i>
<i>Nigeria</i>	<i>Nigeria</i>	<i>Nigeria</i>
<i>Iran</i>	<i>Iran</i>	<i>Iran</i>
<i>Saudi Arabia</i>	<i>Saudi Arabia</i>	<i>Saudi Arabia</i>
<i>Libya</i>	<i>Libya</i>	<i>Libya</i>
Algeria	Indonesia	Algeria
Qatar	Kazakhstan	Kazakhstan
Canada	Ukraine	Ukraine
Jordan	Japan	Japan
Egypt	Iraq	Iraq
	Egypt	Romania
	South Africa	South Korea

Source: Turkey Ministry of Economy, 2014

For the Middle East target countries, Turkey's strategy was to start bilateral commercial and economic relations and complete Bilateral Investment Promotion and Protection and Double Taxation Prevention Agreements. In the multilateral base, Turkey's negotiation with the Gulf Cooperation Council is still ongoing.

To decrease the trade deficit with EU and also to diversify Turkey's trade partners, a comprehensive strategy by the Ministry of Economy has been implemented and became successful in the near and middle east countries. This strategy has also been owned by the government and also backed by the ministry of foreign affairs in the Middle East region which led trade relations to improve in this region. Nevertheless, the same success could not be turned over to the other neighborhoods and countries.

In 1995 to 2012 period Turkey signed 16⁴ whereas EU signed 27 FTAs⁵ 14 of whom were in common. Turkey signed FTAs with Georgia and Mauritius, unlike the EU. As an essential rule of CU, Turkey should apply the same principles in its export policy in alignment with the EU to the countries which signed FTAs with EU. The asymmetry creates trade diversion as commodities or services can arrive Turkey without tax as a result of the CU. However, Turkey cannot benefit the same rights till it signs a FTA with the third country. Akman approaches the adverse effect from two perspectives; “First, the FTA strategy of the EU has serious ‘commercial repercussions’ to affect Turkish interests. Second, the FTA process brings a noticeable challenge on the functioning of the CU and an impairment of relations with the EU if coupled with politically stagnant.”(Akman, 2010, p: 24)

FTAs not only create trade diversion and commercial risks for Turkey but also they form a systemic risk for multilateralism. As the number of FTAs increases, they present an alternative to a wider agreement alternative presented by DOHA round. “What is beyond doubt is that these smaller preferential deals have affected the political economy of the WTO, sucking energy away from a wider multilateral agreement like the Doha Round. The political temptation to seek trade concessions bilaterally is easy to understand, but politicians who choose this over the harder but more fundamental exercise of negotiating a multilateral agreement are putting at risk the very principle and framework of multilateral non-discrimination, on which the future of the trading system ultimately rests”(High-Level Trade Experts Group, 2011, p: 7).

Therefore, FTAs of EU with third countries may create big trade diversion risks for Turkey. “Turkey is using and will deploy all its diplomatic resources to escape any major risks that could be caused by the EU’s South Korea, Canada, Mexico, and Japan FTAs. This situation changes the balances and brings non-economic matters to the discussion table, which can create shifts in the international relations arena.”(Akdağ, 2013, p: 2)

⁴ The FTA’S Turkey signed were with Albania (2008), Bosnia and Herzegovina (2003), Chile (2011), Egypt (2007), Former Yugoslav Republic of Macedonia(2000), Georgia (2008), Israel (1997), Jordan (2011), Republic of Korea (2013), Mauritius (2013), Montenegro (2010), Morocco (2006), Palestinian Authority (2005), Serbia (2010), Syria (2007), Tunisia (2005) (WTO, 2015).

⁵ The FTA’s EU signed were with Albania (2007(G)/2009(S)), Algeria (2006), Andorra (1998), Bosnia and Herzegovina (2008), Cameroon (2009), CARIFORUM States EPA (2008), Central America (2013), Chile (2004(G)/2005(S)), Colombia and Peru (2013), Côte d’Ivoire (2008), Eastern and Southern Africa States Interim EPA (2012), Egypt (2004), Faroe Islands (1997), Former Yugoslav Republic of Macedonia (2001(G)/2009(S)), Israel (2000), Jordan (2002), Republic of Korea (2011), Lebanon (2003), Mexico (2000(G)/2002(S)), Montenegro (2008(G)/2010(S)), Morocco (2000), Palestinian Authority (1997), Papua New Guinea / Fiji(2012), San Marino (2012), Serbia (2012), South Africa (2012), Tunisia (2012) (WTO, 2015).

The most significant risk is with the FTA possibility between EU and the USA. In the “Final Report” prepared by the High-Level Working Group between the EU and the USA, it is recommended to make a comprehensive agreement that settles the trade and investment relations between the two economies. “As of 13 February 2013, parties have decided to start negotiations for the establishment of “Transatlantic Trade and Investment Partnership (TTIP).” (Akman, 2013, p: 1)

US Chamber of Commerce supported a study to gauge the potential benefits of eliminating tariffs between the USA and the EU in 2010. “While European and U.S. tariffs are often low, the sheer volume of transatlantic commerce is so large that one-third of all tariffs on USA exports to the world is paid to the EU. The study found that eliminating transatlantic tariffs would boost USA-EU trade by more than 120 billion USD within five years. It would also generate GDP gains of 180 billion USD — a budget-neutral boost to the USA and EU economies” (US Chamber of Commerce, 2010, p: 1). This agreement is assumed to consist not only of the elimination of tariffs but also includes services, investment and trade regulation.

To remove the trade diversion risk and also to initiate increasing trade volume with US and EU, Turkish government presented this issue in 2013 summer. With this visit, the White House made a declaration as “The United States proposed TTIP with the EU could have an impact on Turkey, given its CU with the EU. With that in mind, the United States and Turkey decided today to establish a bilateral High Level Committee, led by the Ministry of Economy of Turkey and the Office of the U.S. Trade Representative, associated with the Framework for Strategic Economic and Commercial Cooperation, with the ultimate objective of continuing to deepen our economic relations and liberalize trade” (The Whitehouse, 2013, p: 1).

Felbermayer (2013) prepared two scenarios to calculate the macroeconomic effects of TTIP. The first scenario is the tariff elimination scenario in which the import tariffs between US and EU disappear. The second scenario is the deep liberalization in which other factors on top of tariffs are included. Some of these elements are sorted out under non-tariff trade barriers that include protectionist trade policy measures, import quotas, administrative and regulatory hurdles, etc. Second important factor is the trade policy that may be connected to domestic policy measures to change trade costs. Last but not the least, natural barriers due to geographic distance, lack of a common language, etc. should be considered. The tariff elimination scenario has an impact on developing countries. “The main losers from eliminating tariffs are the developing countries. They experience dramatic losses in market share from intensified competition in the EU or US markets. Alternative markets with similar market potential are

geographically far apart. Overall, it shows what was to be feared: If tariffs between the USA and EU fall, the relative barriers to market entry faced by developing countries become on average higher”(Felbermayer, 2013, p: 28).

The potential effects of TTIP on the Turkish economy may be examined in two possible scenarios; joining the agreement and staying out of the arrangement. “... In case, Turkey joins the free trade arrangement between the EU and the USA, 4.6% GDP increase (Calculated based on the 4% maximum gain in joining FTA and 0.6% maximum loss in staying out of the FTA scenarios) according to the scenario Turkey stays out of the arrangement. Additionally, the study shows that Turkey’s joining does not only bring benefit to Turkey but also increases the GDP figures for EU and USA compared to the scenario in which Turkey stays out of the agreement.” (Güneş et al., 2013, p: 10)

The rising issue around FTAs of EU with third countries and TTIP solely has turned out a vicious circle for Turkey, which should be broken, in any case, however, alternatives are limited. Renegotiation of CU is an option but carries significant risks. “Turkey could also ditch the CU and aim to sign an FTA with the EU instead. Nevertheless, this option may threaten the membership negotiation framework by opening new negotiations over matters that have already been negotiated. Moreover, it may be interpreted as Ankara pulling the plug on membership talks. This would cause serious implications, not least with respect to foreign investment in Turkey as markets may lose confidence, as well as on wider EU-Turkey relations, with Ankara being a central collaborator in many different sectors including energy security, foreign policy, and migration. Thus, this option harms interests on both sides.”(Yeşilyurt& Paul, 2013)

Under these circumstances, Turkey tries to get involved in the TTIP agreement to prevent its potential trade losses. Apart of the exploits of the Turkish government, Turkish business people, and the related associations also focus on this subject and make lobbying both in the USA and EU. “Initially, this course of action was suggested by Turkish officials and business people, and they actively lobbied various EU governments as well as the EC in this vein. The Turkish side even tried to mobilize U.S. government support to get Turkey involved in TTIP, but it was to no avail. These lobbying efforts were ultimately rejected because Turkey is not a member of the EU. The most that the Turkish side could receive were assurances that they would regularly be informed about relevant developments in TTIP negotiations. This, of course, is not a terribly promising concession given the reality that the EU has signed FTAs with third countries in the past without much consideration for Turkey’s concerns and interests.”(Kirişçi, 2013, p: 17)

2 Economic Crisis and Implications

There have been several economic crises in the world economy in the 20th century. The basic commonalities may be counted as significant asset losses, sharp declines in GDP or liquidity bottlenecks. The consequences of a crisis may be a recession or depression. It can well be stated that, during the crisis, economic activities tend to drop and the value of the economic assets decline.

The measure of such an incident and the criteria, whether the situation may be evaluated as an economic crisis depends on the loss of the markets, a decline in GDP, change in employment and similar measures that can represent the structural harm to the overall economy. In the 20th century, several crises occurred starting with the “Panic of 1901” in the USA. The most important crisis of the 20th century was the Wall Street Crash of 1929 which was followed by the Great Depression during 1929 and 1939. After the Great Depression, the Organization of Petroleum Exporting Countries (OPEC) oil price shock in 1973 was the second most important event as it led to a series of changes in the world economy.

Major crises after the OPEC crisis were the Black Monday in 1987, the Asian financial crisis in 1997 and the Russian financial crisis in 1998. The last important crisis of the century was the Argentine economic crisis between 1998 and 2002 which led to serious social problems in the country and also in South America. In 2001, the biggest economic crisis of the Turkish Republic happened in which GDP fell 196 billion USD in 2001 from 266.5 billion USD in 2000 in current USD (WB, 2014). GDP per capita decreased from 4220 USD to 3058 USD between 2000 and 2001 in current USD.(WB, 2014) It can also be said that the EU had a recession for a short period in 2002 as a consequence of the introduction of the euro in 1999 and its stabilization period.

2008 global crisis is one of the most significant crises in the economic history with 0,6 % decrease in world real GDP and 10,6% in world trade volume.(IMF, 2013) Following the global crisis, the Eurozone crisis impacted not only the member states, but also its trade partners, and the global economy severely which will be explained briefly in Chapter 3.

2.1 Crisis Theory

One of the most important contributions to the economic crisis theory has been made by Karl Marx. Marx explained the reasons of economic crisis with three facts; full employment, the profit squeeze, the tendency of profit rates to fall and overproduction.

After Marx, crisis concept has been discussed broadly. There are three generations of crisis models. First-generation crisis models which started with Krugman (1979)'s work have mostly been used to explain the Latin American crises. This model emphasizes the importance of macroeconomic factors and focuses on the relationship of the balance-of-payment crisis and instability of macroeconomic policies. According to Krugman, reserve forfeit of a country may transform to a balance-of-payments crisis as investors maximize their benefits by speculative attacks on the currency. Government's behavior in this situation determines the nature of the first-generation crisis model. "When the government's willingness to use reserves to defend the exchange rate is uncertain, there can be a series of crises in which capital flows out of the country, then returns, before the issue is finally resolved." (Krugman, p: 324, 1979)

Second-generation crisis studies started with Obstfeld in 1984. Obstfeld asserted that balance-of-payment crises may not only be sourced by macroeconomic decisions but may also be caused by self-fulfilling events. "..., given certain expectations about policy, balance-of-payments crises can also be purely self—fulfilling events. In such cases, even a permanently viable regime may break down, and the economy will possess multiple equilibria corresponding to different subjective assessments of the probability of collapse" (Obstfeld, 1984, p: 1). This model was widely used to explain the European currency crisis in 1992. The most significant difference between the first and second-generation models is that second-generation models not only tie the crises to macroeconomic instability (i.e.: the budget deficit) but self-fulfilling events within the country.

Third-generation models were mostly used to explain the Asian crisis in 1997 which has similarities with the subprime crisis. The Asian crisis differed from the previous crises significantly as indicators were different as there was no budget deficit, no instability in fiscal and monetary policies, etc. The real problem was in the banking system structure which led to a series of events to shake the real sector. Chang & Velasco (1998) asserted that a fixed exchange rate system will collapse whether the Central Bank does nothing (It leads bankruptcies and economic disruption) or intervenes the market (it provides domestic credit to ailing banks).

Besides the crisis models above, with the subprime crisis, an old discussion has revived on the functioning of markets. The efficient-market hypothesis (EMH)⁶ suggests that the prices

⁶ EMH asserts that financial markets are "informationally efficient". EMH has 3 variants as weak-form efficiency, semi-strong-form efficiency and strong-form efficiency which differently explain how markets work. In the weak form efficiency, prices incorporate information about past prices, whereas semi- strong model contains all publicly available information and strong form includes all including insider information.

in the financial markets comprise based on the publicly available information on the market which impact the investment decisions on all traded assets like stocks, bonds or property.

The theory is based on rational expectations and the change in the information leads the players in financial markets to change their behavior according to the new information whose reflection on the prices lead the market change.

A strong objection to the EMH was from Minsky, with his Financial Instability Hypothesis. Minsky defines his hypothesis as an interpretation of the substance of Keynes's "General Theory". Minsky (1992) thinks that the structure of an economy is not only defined and determined by the classical factors like capital and labor but also by financial relations. "The financial instability hypothesis, therefore, is a theory of the impact of debt on system behavior and also incorporates the manner in which debt is validated." (Minsky, 1992, p: 6) According to the hypothesis, economies do not tend to be stable, and the biggest reason economies go in crisis is the debt in the non-government sector. He identifies three types of borrowers that contribute to the accumulation of this debt; hedge borrowers, speculative borrowers, and Ponzi borrowers⁷.

To conclude Minsky argues that a crisis does not only occur from exogenous shocks but also sourced by the internal interventions which are due to the nature of the capitalist economy that consists of business shocks sourced indigenously.

When the relationship between the crisis and trade is investigated, there are two significant issues. First is the trade collapse during the crisis times. In particular, the subprime crisis is accepted to create a significant harm to the global economy and global trade in particular. Baldwin (2009) asserts that the trade collapse triggered by the subprime crisis is much deeper than the Great Depression in 2009.

Second, the impact of the crisis on trade and gross national production (GNP) is not the same. McKinnon (2009) explains the relationship between trade and GNP as; "Trade tends to grow faster than GNP because it reflects the growth of GNP as well as reduced trade barriers at any level of GNP. During the downturn, there is no evidence that trade protectionism has yet grown to dramatic levels though no complacency is justified about what could happen if we do

⁷ The difference between hedge finance and speculative borrowers is although they both meet their payment commitments, speculative borrowers use a variety of instruments to "roll over" their liabilities like refinancing debt in various ways. Households are typical examples of hedge financing, whereas banks and some governments are good examples of speculative borrowers. The third kind, the Ponzi units are the risky ones as their cash flow is not sufficient to finance their debts. As far as these units tend to sell their assets to refinance their commitments, the total value and the equity of the asset is risked eventually. (Minsky, 1992)

not confront the protectionist pressures that are building up. However, an important new contributory factor on the downside is that we have not just a Main Street crisis but also a Wall Street crisis, and the drying up of financial credit has further harmed trade.”

In summary, there are different models to explain economic crisis phenomena, and it is not wrong to say that these models evolve over time as different structures of crises occur.

2.2 Global Crisis

In this section, the start of the subprime crisis and its evolution to a global crisis will be discussed briefly.

2.2.1 Start of the Subprime Crisis& Root Causes

Amadeo (2015) defined subprime mortgage as a housing loan which is granted to borrowers with impaired credit history. It is accepted that the subprime crisis became global by 15 September 2008 with the bankruptcy of Lehmann Brothers. However, there were important signals of the crisis in the USA starting in the second half of the first decade of the millennium due to the interest rate policy applied by the FED.

On 27 February of 2007, Freddie Mac announced that it would no longer buy the riskiest subprime mortgages and mortgage-related securities. (Freddie Mac Press Release, 2007). On April 2, 2007, New Century Financial Corporation, which was one of the leading subprime mortgage lenders, filed for Chapter 11⁸ bankruptcy protection (CNN Money, 2007). On June 7, 2007, Bear Stearns informed investors that it halted redemptions in High-Grade Structured Credit Strategies Enhanced Leverage Fund (Reuters, 2007).

American Home Mortgage filed for Chapter 11 on August 6, 2007, and UBS announced 690 million USD losses in its third quarter on 30 September 2007 (TMC News, 2007).

Economic problems worsened in 2008. On February 2008, George Bush signed the Economic Stimulus Act, which is also named as Public Law 110-185. In March, the Federal Reserve Board approved the acquisition of Bear Stearns by J.P. Morgan Chase forming a new company named Maiden Lane. In July 2008, the Federal Reserve Board gave permission to the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) for further lending which eventually would end in the bankruptcy.

⁸ Chapter 11 is the chapter of the Bankruptcy Code providing (generally) for reorganization, usually involving a Corporation or partnership. (US Courts, 2014)

Chapter 11 announcement of Lehmann Brothers in September 2008 is accepted as the official start of the global crisis.

There are different theories and approaches about the reasons for the subprime crisis. An explanation from Federal Reserve Bank of Dallas was as; “The subprime mortgage crisis of 2007–10 stemmed from an earlier expansion of mortgage credit, including to borrowers who previously would have had difficulty getting mortgages, which both contributed to and was facilitated by rapidly rising home prices.” (Duca, 2013)

A different perspective was that the subprime crisis sourced off the short-term profit search of the private sector. Denning (2011) stated that more than 84 percent of the sub-prime mortgages in 2006 were issued by private lending 83% of which was presented to low- and moderate-income borrowers who eventually led to the subprime crisis.

Another explanation of the subprime crisis may be counted as the income inequality which made a peak of 2007 in the USA. Top %1 earning group in the population owned approximately more than 2 million USD whereas the overall average was under 500.000 USD (Congressional Budget Office, 2010).

A strong argument is based on the thinking that all root causes lie beneath one of the most dramatic events in the history, 9/11. After ten years of 9/11, Stiglitz thinks that the burden of Afghanistan and Iraq distracted US economy. “Direct government spending on those wars so far amounts to roughly 2 trillion USD – 17.000 USD for every US household – with bills yet to be received increasing this amount by more than 50%.” (Stiglitz, 2011).

Stiglitz& Bilmes (2010) also pointed out the burden brought by the Iraq war is a consequence of 9/11 effects. They explained that U.S. debt increased from 6.4 trillion USD in March 2003 to 10 trillion USD in 2008 (before the financial crisis); at least a quarter of that increase is directly attributable to the war.⁹

Second, specific industries as travel, tourism, and insurance were heavily affected due to both the decreasing number of passengers but also due to the increased security and safety checks that increased the financial burden. Georgette Jasen (2011) reported that the airlines lost 7 billion USD in 2001 and till 2010, the cumulative loss of passenger carriers was 63 billion

⁹ 9/11 financial impact was felt seriously on the economy. According to the study by the Milken Institute, severe implications were on GDP, employment. By 2002, total losses in jobs were 1,6 million and real GDP declined 175 billion USD (approximately 1% by the first quarter of 2002) (Milken Institute, 2002)

USD. The total loss in 10 years was about 600 billion USD. The insurance sector in the USA went into a significant loss in the 9/11 event. Total insurance claims related to 9/11 are estimated about 35.9 billion USD as of May 2007. (Hartwig, 2006)

Third, the intervention of the USA in Afghanistan and Iraq caused the crude oil prices rise significantly. “Before September 11th Oil prices hovered in an OPEC price range of 22-28 USD a barrel. By July 2008, oil prices hit a peak of 147 USD.”(GCC Economics, 2011) This effect put an extra financial burden on the USA, which was one of the biggest oil importers in the world.

Fourth, the defense expenditures of the USA increased exponentially. As shown in Table 10, according to the study made by the National Priorities Project, total expenditure of the USA on defense and homeland security by May 2011 is 7.2 trillion USD since 9/11 excluding homeland security. Increase in the Pentagon Base Budget increased 235,6 billion in nominal value and the “ real”(inflation-adjusted) increase was % 43 (National Priorities Project, 2011).

Table 10: Expenditure of the USA on Defense and Homeland Security

	2012 (Billion USD)	2001 (Billion USD)	2011 (Billion USD)	% Increase (Inflation-adjusted)
<i>Pentagon Base Budget</i>	5600	290.5	526.1	43%
<i>Nuclear Weapons</i>	230.3	12.4	19.0	21%
<i>Iraq and Afghan Wars</i>	1360			
<i>Homeland Security</i>	635.9	16.0	69.1	301%

Source: National Priorities Project, 2011

To revive the economy, several incentives were presented with the economy and lending was promoted. The money created by banks against the cash in their hands reached a speculative end. According to Positive Money, while money created as notes and coins were 55.6 billion pounds in 2010, the electronically created money by the banks was 2213 billion pounds which doubled in 7 years. (Positive Money, 2014)

According to Poloz (2008) who is the ninth and the current Governor of the Bank of Canada, the sub-prime crisis has a direct connection to 9/11 as it triggered a "live for the moment" boom in the USA. Consumer spending and borrowing led a major upswing in real estate prices, again which created a balloon of consumer debt, including extending the credit

into the sub-prime space. Poloz also stated that this expansion of leverage was not only for the U.S. housing market but also risk calculation in investments were not prioritized anymore all over the markets.

Federal Reserve Bank (FED) was one of the principal actors and to some extent may be one of the victims of the subprime crisis. After 9/11, as explained above, with all the financial, military and social implications of the event, FED had the tendency to decrease interest rates in a stronger fashion to revive the USA economy. FED decreased the interest rates from 6.5% to 1.7% in 2001 and kept around 1% in 2003. This dramatic decrease helped the cause, and there was a serious revival of the US economy. The credit expansion led to massive house procurement by individuals and also a boom in mortgage credits. Between 2003 and 2006, there was a significant rise till mid-2006 and another decline trend stands from this date till December 2008 where the FED interest rate touched 0,25 % level and was stable after this date.

FED policies were not the only causes of the housing bubble. The tendency of the financial institutions to create, develop and sell derivative financial products and the tendency of the households to invest in this kind of credits were also the facilitators of the speculative credit balloon. In July 2005, housing sector made a peak, and the number of the existing and new houses sold was 7.14 million and 1.39 million respectively (Wall Street Journal, 2014). Residential fixed investment reached 6.18%, and housing services climbed to 12.75% of the GDP, which ended with a total of 18.93 of USA GDP (Nearly one-fifth) in the third quarter of 2005.(Valadez, 2010).

As a second step, mortgage credits which were fed with the excess liquidity routed to the housing sector were sold to investment banks. These banks transformed these credits to Collateralized Debt Obligations (CDO)¹⁰ or Mortgage Backed Securities (MBS) after being insured by corporations like American International Group (AIG). Due to the rising amount of houses sold, the increasing portion of CDO's in the total financial system, FED issued some statements regarding the risks of the derivatives market. However, it was too late, and the excess liquidity had transformed into toxic financial products. Securities Industry and Financial Markets Association (SIFMA, 2007), identified the total size of CDO market in the USA as 330 billion USD in 2006. As the demand for the housing sector in the USA began to decline in

¹⁰ A collateralised debt obligation, CDO, is a tradeable derivative whose income payments and principal repayments are dependent on a pool of different financial instruments which themselves are loans and are due to pay interest and ultimately be repaid. CDOs are called collateralised because the promised repayment of the loans are the collateral that gives the CDOs value. (Financial Times-lexicon, 2015)

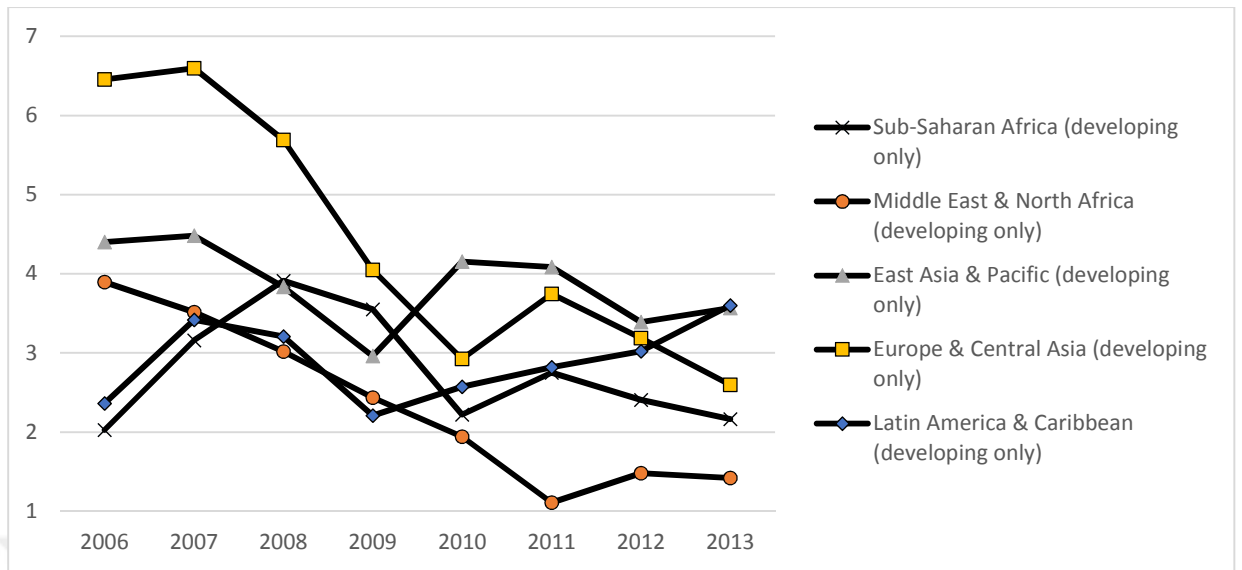
the fourth quarter of 2005, the overrated assets and the financial derivatives tied to the assets collapsed. All series of these events may also be named as the housing bubble which ended with the bankruptcy of Lehmann Brothers. As a result of the credit bubble, Lehman Brother Inc. Investment Bank filed for bankruptcy on 15 September 2008, and public attention was caught that a serious crisis was upcoming. This situation was described as the biggest financial crisis after the 1929 crisis. “The most powerful economic crisis after the 1929 crisis remains on the agenda with its phases. 2008 crisis, which started with the bankruptcy of Lehman Brothers, the fourth-largest U.S. investment bank in September 2008, spread around the world and evolved into a fiscal and real sector crisis globally.” (Doğan, 2011, p: 1)

Although the reason for the 2008 crisis was the bubble of the real estate market, it is described as a credit crisis which is sourced by the loan transactions which were in an amazing circulation. Displacement of loans with the usage of derivative financial products carried the risk of mortgage credits to the whole economy. All banks became guarantor in these transactions on behalf of each other, and Lehman Brothers were faced with the phenomenon of bankruptcy. Declaration from the FED and the government that they would be unable to rescue Lehmann caused important losses in banks, and the bubble exploded. “Emerging economies are now so closely integrated with advanced economies that financial stress transmits rapidly and forcefully, with financial linkages a key channel of transmission...”(Danninger& Balakrishnan& Elkdog, 2009).

2.2.2 Evolution of Subprime Crisis to Global Crisis

Subprime crisis not only affected the USA but also placed an enormous burden on both the developed countries like Eurozone and also the developing countries. Developing countries were severely impacted from various perspectives. First of all, most of these countries are either under structural reforms or under massive investment programs that require foreign direct investment and also portfolio investments. Due to the problems in the financial sector in the developed world, the bankruptcy of major financial institutions, and the heavy burden of the deleveraging process, there is a significant decline in net inflows to developing countries as shown in Figure 4.

Figure 4: Net Inflows to Developing Countries (% of GDP) (2006-2013)



Source: Worldbank, 2015

Second, due to the demand fall in the developed countries, export revenues of the developing countries fell dramatically. As shown in Figure 5, share exports of goods and services in GDP increased slightly in the developing countries of Europe and Central Asia while it decreased significantly in East Asia& Pacific and Sub-Saharan countries.

Figure 5: Exports of Goods and Services in Developing Countries (Region Aggregated)

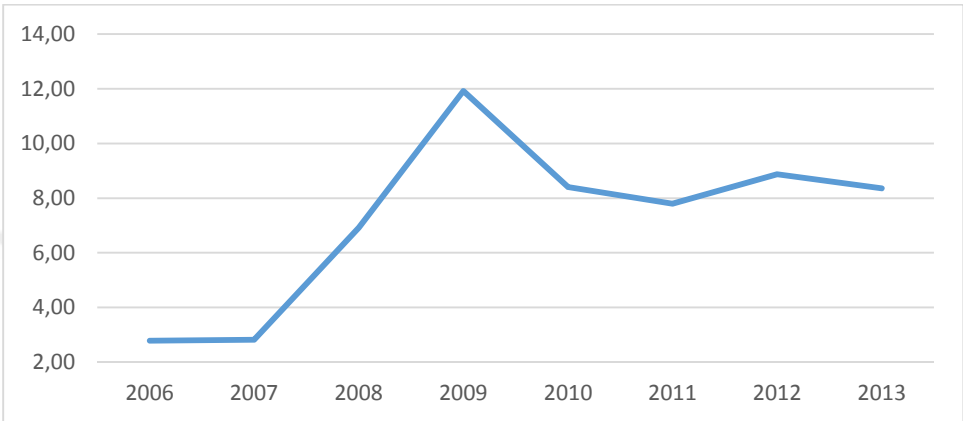


Source: Worldbank, 2015

The shrinkage of the trade finance channels also impacted the developing countries negatively. This effect was also triggered by the problematic banking system in the developed

countries as a consequence of the toxic financial products based on a mortgage system. Iceland is a good example of this effect. Iceland government started a liberalization program in 1991 which led to privatization, an increase in assets of banks and a bubble in the housing market. As a consequence, the debt to equity ratio of financial corporations reaches a significantly high level of 12% by 2009 as it is shown in Figure 6.

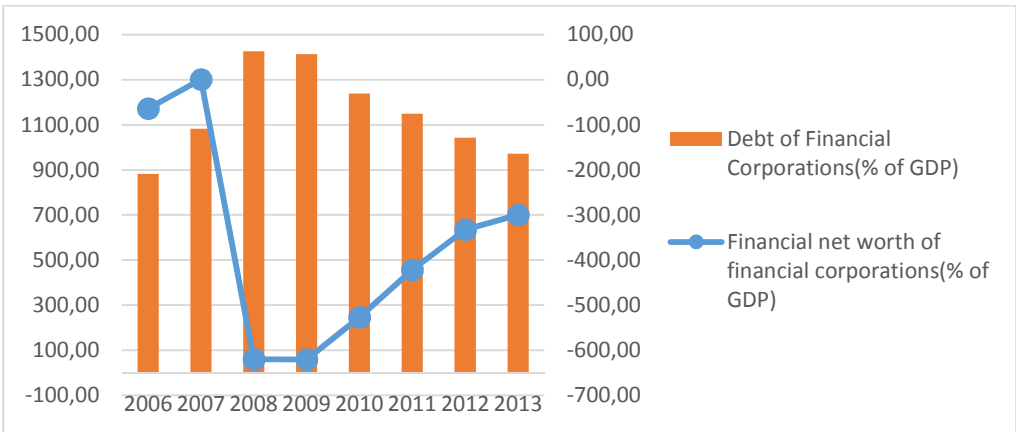
Figure 6: Debt to Equity Ratio of Financial Corporations in Iceland (2006-20013)



Source: OECD, 2015

In Iceland, just after the fall of Lehmann Brothers in September 2008, by October 9, 2008, Kaupthing, Glitnir and Landesbanki collapsed, and the financial meltdown eventually led to an agreement with IMF on October 24, 2008. It can be seen in Figure 7 that by 2008, the debt of financial corporations reach 1500 % level whereas, their net loss reaches 600 % of GDP.

Figure 7: Net worth vs. Debt of Financial Corporations in Iceland (2006-2013)



Source: OECD, 2015

As a result, it is evident that the evolution of the subprime crisis to the global crisis had implications both on developed world and the developing economies. The global crisis with all its impacts on the global economy increased the systemic risk¹¹ which is a significant concept in the diffusion of the crisis in countries and geographies.

2.3 Eurozone Crisis

In this section, an introduction to the Eurozone will be made, and the root causes and the developments of the Eurozone Crisis will be explained briefly.

2.3.1 Eurozone

Since 1970's, it has been a target for EEC states to use a single currency. It can be said that the Eurozone idea was born with the Werner Report, which asserted a three-staged plan for a monetary union in 10 years. Werner Report that aimed the achievement of currency conversion, free movement of capital and a single currency was published in October 1970. However, it could not be realized due to the collapse of the Bretton Woods system. After the collapse of the Bretton Woods, six member states established a mechanism named "Snake in the Tunnel" by 1972. This mechanism aimed to contract the exchange-rate fluctuations against USD by a band system of $\pm 2.25\%$ with a fluctuation margin of 4.5% for European currencies against USD. Snake in the Tunnel was not successful mainly due to the oil shock in 1973 as the tunnel collapsed, and the snake turned to a zone based on the Deutsche Mark.

The second attempt for a monetary union was the European Monetary System (EMS) by 1979 by all member states that aimed adjustable exchange rates based on a new currency named ECU¹². ECU was a composition of the EMS currencies with different weights. Currency fluctuations would be commanded by a mechanism named as Exchange Rate Mechanism (ERM). Monetary policy to stabilize exchange rates would be executed by the European Monetary Cooperation Fund (EMCF) which was succeeded by the European Monetary Institute, which later turned into a part of the European Central Bank (ECB).

¹¹ Systemic risk refers to the risk or probability of breakdowns in an entire system, as opposed to breakdowns in individual parts or components, and is evidenced by co-movements (correlation) among most or all the parts. Thus, systemic risk in banking is evidenced by high correlation and clustering of bank failures in a single country, in a number of countries, or throughout the world.(Kaufman &Scott, 2003, p: 371,372)

¹² Between 1979 and 1984 ECU consisted of 9 currencies which are Belgian Francs, German Marks, Danish Kroner, French Francs, British Pounds, Irish Pounds, Italian Lira, Luxembourg Francs and Dutch Guilders. In 1984, Greek drachmas was added to the existing currencies and in 1989, Spanish peseta and Portuguese escudos were added till 1999.

Steps taken in EMS were the concrete cases of the prey of the single currency. On that point are certain ideas on why ERM, which was the core element of EMS, failed. Based on the fact that, both British rate in ERM and also the inflation were high, George Soros owned fund Quantum started massive selling of pound. Due to the fact that it was no longer possible to keep British pound above the limit in ERM, on 16 September 1992, Black Wednesday happened. Among the results of the Black Wednesday were massive trade losses, high inflation and budget deficits in countries like UK and Italy as they left ERM in 1992.

German unification in 1990 is one of the strongest reasons scholars argue as a significant cause of the failure of ERM. Another assertion is the inability of ERM to resist outer shocks and the problem of controlling capital flows with the narrow band. "Since the new ERM was inherently susceptible to shocks, fundamental changes may well be needed to avert exchange rate crises in the EMS. Problems in EMS resulted because capital controls were eliminated before EMS countries were willing to surrender the autonomy of national monetary policies, as is required to maintain fixed exchange rates with full mobility of capital across national boundaries" (Higgins, 1993, p: 37).

Despite the failure of EMS, the insistence on a single currency continued between the European states. In 1989, Jacques Delors, who was the President of the EC, presented the report consisting of a 3 phased plan towards Economic and Monetary Union. According to this scheme, the internal market would be achieved in the first phase and restrictions on financial integration would be removed. In the second stage, central bank cooperation would be strengthened, and economic convergence among the states would be sustained. As a third and last step, exchange rates would be fixed, and the transition to the euro with the establishment of the ECB would be achieved.

Basing on the Delors Report, the European Council approved the Treaty on EU in Maastricht in 1991. With Maastricht Treaty, a common currency was targeted. The decision on establishing an economic and monetary union was made by the CoE Assembly in Maastricht in December 1991 and has turned into an institutional structure with the Maastricht Treaty in 1992. Report of the Technical Committee, which was prepared, for this reason, was approved in 15-16 1995 Madrid Summit and put in force. The name of the Euro was also decided at this meeting. (Turan, 2011, p: 47). Maastricht Treaty brought the "Convergence Criteria"¹³ for

¹³ (1)Price stability-Consumer price inflation rate should not exceed 1,5% the rate of the three best performing Member States.
(2)Sound public finances-Government deficit should not exceed 3% of GDP.

applying the euro as the currency, which is an obligation for a country to meet to join the union. A country could join the union only if it meets the five convergence criteria.

At 17 June 1997, in Amsterdam, member states decided to implement the guidelines for the SGP to encourage member states to apply fiscal policies for EMU. EC (2015) defines SGP as a set of rules which aims fiscal stability.

SGP basically consists of the “Preventive Arm” and the “Corrective Arm”. EC (2015) states that while Preventive Arm aims to ensure fiscal discipline by setting parameters for fiscal planning during normal economic times, Corrective arm adopts policy responses to correct excessive deficits by the implementation of Excessive Deficit Procedure (EDP). EDP operationalizes the 2 of the 5 convergence criteria which are the sound public finances (Government deficit should not exceed 3% of GDP) and the sustainable public finances (Government debt should not exceed 60% of GDP).

After Maastricht Treaty, in 1998, 11 member states¹⁴, two of whom only met the convergence criteria of the euro became members of the Eurozone. Greece qualified for the membership in 2000 and was admitted on 1 January 2001. Between 2007 and 2011 Cyprus, Estonia, Malta, Slovakia and Slovenia became a member of the Eurozone. Latvia was accepted in the Eurozone by 2014 and Lithuania by 2015.

2.3.2 Start and the Evolution of the Eurozone Crisis

As the discussions about the future of the union were going on, EU faced an economic crisis which was both a consequence of the interaction with the USA economy and also sourced from its structural problems. Due to the bankruptcy of Lehmann Brothers and the problems of Fannie Mae and Freddie Mac, European banks that had invested heavily in the American mortgage market were heavily affected. It is obvious that there was an interaction between the subprime crisis and the Eurozone crisis from various aspects. Moreover, it can be said that the subprime crisis also accelerated the Eurozone crisis.

The first comparison area between the subprime crisis and the Eurozone crisis may be the domestic credit in the financial sector. As it is seen in Figure 8, the portion of the domestic

(3) Sustainable public finances-Government debt should not exceed 60% of GDP.

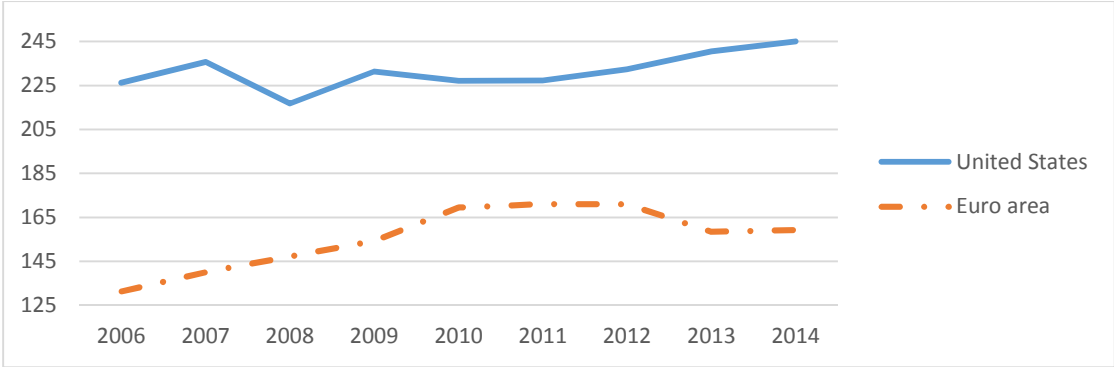
(4) Durability of convergence- Long term interest rate should not exceed 2% the rate of the three best performing Member States.

(5) Exchange rate stability-Participation in ERM II for at least 2 years without severe tensions is a must.

¹⁴ These states are Austria, Belgium, Germany, France, Finland, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain.

credit provided by the financial sector in the USA was much higher than it was in the Eurozone. The increase in the domestic credit by banks pushed the real estate prices up and led the asset bubble that caused default and crisis.

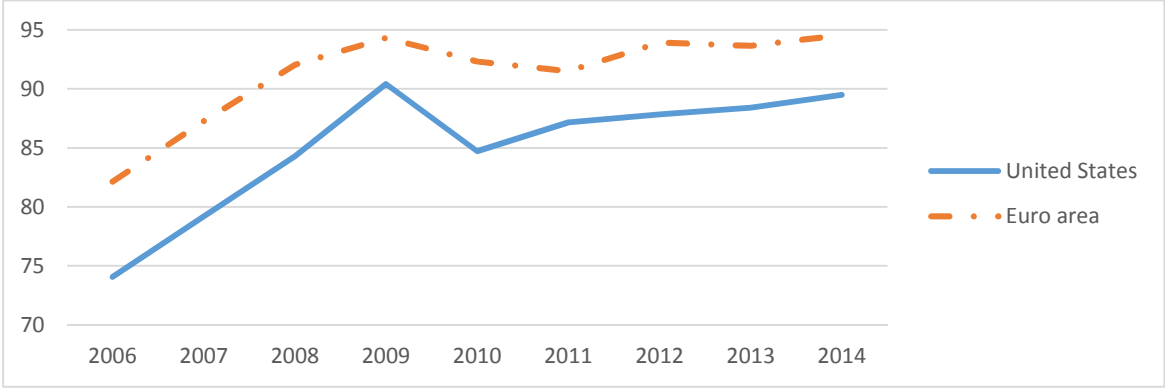
Figure 8: Domestic Credit by Financial Sector¹⁵ (% of GDP) in the USA and the Eurozone



Source: Worldbank, 2015

However, this was not the only reason for the crisis. Figure 9 shows the M2¹⁶ and quasi-money figures. In the USA, a portion of M2 in GDP was much lower compared to the Eurozone in the 2006-2014 era.

Figure 9: Money Supply (M2) as % of GDP in the USA and the Eurozone (2006-2014)



Source: Worldbank, 2015

¹⁵ “Domestic credit provided by the financial sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. The financial sector includes monetary authorities and deposit money banks, as well as other financial corporations where data are available (including corporations that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other financial corporations are finance and leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies.”(WDI, 2015)

¹⁶ M2 is the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government.

As far as the banks increased liquidity in the economy, households and corporate sector increased its lending in the USA. However, as a result of the fact that a significant portion of the money supply was through real estate which went under the default risk, banks in the USA took precautions and stopped lending that caused a real rush through USD. This rush severely impacted some banks and financial institutions in the EU which provided an important portion of their liquidity from the USA negatively as Northern Rock in the UK i.e. Basically this situation may be summarized as the USD demand of the European Banks as a consequence of their over hedged¹⁷ positions, because of the asset value declines. The USD demand from the corporate sector in international trade was the second important reason for the interaction between the USA and the Eurozone. As it is clearly seen in Figure 10, there is a sharp drop in the value of the euro against USD between July-November 2008. Considering the collapse of Lehmann Brothers in September 2008, it is meaningful to maintain a connection between the decline in Euro/USD parity and the sub-prime crisis.

Figure 10: Euro/USD Rate (01.07.2008-01.12.2008)



Source: ECB, 2015

As a result, it is evident that there was an interaction between two economies and two separate series of events. The financial credit expansion, increasing usage of derivative financial products and the boom in the real estate industry in the USA evolved to the global crisis, and the liquidity dependency of the European banks and the finance need in international trade led

¹⁷ Over-hedging refers to a position which has been hedged so much that there is no (or very little) opportunity for profit (Wall Street Oasis, 2015)

the Eurozone crisis. Second, the global crisis with all its impacts on the global economy increased the systemic risk¹⁸ which is a significant concept in the diffusion of the crisis in countries and geographies.

The results of this affection were seen in 2012 as several banks in the Eurozone were recapitalized in 2012 through European Stability Mechanism (ESM). USA exported not only its debt but also the mortgage loans that were embedded in the CDOs to EU and some of the developing countries. After the credit crunch, due to the rapid fall in the asset prices, banks lost a significant amount of their assets. Second, the troubles in the banking sector turned out to a government finance problem due to the public debt problem in Greece and Italy and the private sector debt in Ireland and Spain, which was mainly sourced by the housing bubble. As a consequence of the financial flows from the rich states of the EU to the GIIPS, which was facilitated by the usage of the Euro in 19 countries (Eurozone) of the EU, the crisis spread from one nation to the other quickly. High integration level among the financial and real sectors increased the spread effect of the crisis. Along the crest of these issues, the default crisis in Greece, which took place in the second quarter of 2010, threatened not only some of the European states but also the monetary union.

The most significant sign in the Eurozone was with the announcement of the bailout of Hypo Real Estate, who was the second biggest creditor in the Eurozone in September 2008. Ireland government announced the government decision on guaranteeing savings in Irish banks. Following Irish government, in the Euro Summit in October, Eurozone leaders declared an action plan that consisted of a list of measures to protect the stability of the financial system in the Eurozone. EC (2008) adopted the “European Recovery Plan” in November which consists of 200 billion euros. (Approximately 1.5% of EU GDP) 30 billion euros would be funded by the European Investment Bank and the rest of the budgetary expansion of the member states. Between December 2008 and May 2009, ECB cuts interest rates five times 2.25% in total (ECB, 2009). At December 8, 2009, Fitch decreased the credit note of Greece from A- to BBB+. (Voss, 2011)

After this note decrease, EU Commission (2010) declared the report “Final Report on Greek Government Deficit and Debt Statistics” and pointed out “Severe Irregularities” in Greek accounting procedures. (EC, 2010) Election of the new government in November 2009 or

¹⁸ Systemic risk refers to the risk or probability of breakdowns in an entire system, as opposed to breakdowns in individual parts or components, and is evidenced by co-movements (correlation) among most or all the parts. Thus, systemic risk in banking is evidenced by high correlation and clustering of bank failures in a single country, in a number of countries, or throughout the world.(Kaufman &Scott, 2003, p: 371,372)

publication of this report according to some economists is accepted as the start of the Eurozone Crisis.

In this section, the evolution of the crisis in specific countries will be examined.

2.3.2.1 Greece

Although problems were anticipated due to lower growth rates and high unemployment rates in the Eurozone, Greece was the weakest economy in the Eurozone. The most important reason Greece was the first state that faced economic crisis was the weak public finance and fraud in fiscal data. IMF (2010) considers the declaration of a new government in November 2009 as the official start of the economic crisis in Greece. With the election of the new government misreported fiscal data was corrected and re-announced.

“The 2008 budget deficit is revised from 5% to 7.5% of GDP. Instantly, provisioned 2009 budget deficit is revised to 12.7 from 3.7 of GDP. In April 2010, Eurostat declared that the previous announcement of the budget deficit as 12.7% of GDP is 13.6% of GDP, which refers to 32.4 billion euros. On the other hand, government loan stock which was assumed as 99.6% of GDP was revised to 115.1% of GDP by 2009 year end. (IMF, 2010, p: 6-7)

Lack of financial discipline and fraud in government reporting were not the sole reasons. High-level military expenditures and inefficient tax collection were also among the key factors. “Fiscal discipline problem that is the cause of the crisis is about the fact that, country’s budget revenues are far behind EU average and military expenditures are exceeding the norms. The high level of corruption and informal economy indicates a high degree of tax evasion.”(Dağdelen, 2011, p: 2)

The problems in Greece, which impacted European banking system diffused to Italy, Ireland, Portugal, Spain (GIIPS) states. The reluctance of Germany and France in financial aid to Greece caused panic in the money markets and eventually countries like Ireland, Portugal, Spain, Italy also faced the risk of an economic crisis. These countries did not have the default risk. However, they had other structural problems like unemployment and private sector debt. Having low-interest rates triggered domestic spending and the increased household and corporate spending in the southern states of the Eurozone was financed by the trade surplus of stronger states of the Eurozone, primarily Germany.

2.3.2.2 Ireland

The cause of the crisis in Ireland was not fiscal indiscipline, but an obligation to salvage the banking sector. Ireland, similar to the USA experienced the property bubble which was caused by the downward movement of the property prices in 2007. “The economy expanded rapidly during 1997–2007 with an investment stimulated, in part, due to a low corporate taxation rate. With low-interest rates, there was a rapid enlargement of credit and property valuations from 2002 to 2007. The rise in mortgages was accompanied by banks relying heavily on wholesale external borrowing. As property prices showed a downward movement from 2007 Irish banks stood exposed and came under severe pressure.” (Anand et al., 2012, p: 11, 12)

National Asset Management Agency (Ireland) (NAMA)'s first action was to issue a second one-year bank guarantee in 2009 and introducing a very harsh budget in 2009 afterward. CIA Factbook (2013) stated that the measures taken in 2009 budget were not enough, and the budget deficit reached 32,4% of GDP, which was the largest deficit in the world due to the financial backing of the banking sector.

2.3.3.3 Spain

The crisis in Spain carries similar characteristics with Ireland. The Spanish economy experienced a real estate boom in the construction industry, representing nearly 16% of GDP. With the effect of the global crisis, real-estate prices drop by 15.9% by July 2008 in Spain which is the sharpest decline in the Eurozone. (Eurostat News Release, 2008, p: 2)

Spain did not have the debt burden problem as Greece and Italy had on the government side and Ireland and Portugal in the private sector. The growth rate of the economy was not as low as Portugal, and the total debt/GDP rate was declining. The major problems in the Spanish economy were structural and mostly related to the competitiveness of the overall economy. Marco (2014) explains that low domestic savings rates and poor productivity in Spain revealed three weaknesses. These weaknesses were the external deficit, lack of structural reforms in the labor market, the housing market, the banking sector, etc. and the existence of over-dimensioned and undercapitalized sectors like housing. As a consequence of these weaknesses especially in the housing sector, a similar pattern of the subprime crisis was seen in Spain. The booming in the real estate sector, which was facilitated by low-interest mortgage credits like the USA created a bubble when the 3.7% growth rate in 1999-2007 declined to 1% (BBC News, 2012). However, unlike Ireland, nationalization did not take place in Spain. Consolidation in banking net which brought high dismissals in the banking sector, an extension of the asset debts

of the real-estate sector by the government and the banks were the primary actions taken during the crisis.

2.3.3.4 Portugal

Referable to the effects of the fiscal crisis, domestic demand fell dramatically during 2008-2012. The biggest reason in the Portugal economy was the competitiveness problem which is a combination of unemployment, current account deficit, and high private sector debt. The General government debt portion in GDP reached 98.14% in 2010 from 75.55% in 2007 whereas the portion of the private sector in GDP reached 324.72% in 2010 from 294.76% in 2007 (OECD, 2014). However, Portugal was already suffering from the high private sector debt since 1997, and low growth rate was another problem. “Unlike Greece, Ireland or Spain, where economic growth had been sustainably high before the crisis, Portugal experienced low growth since 2001. In 2003, Portugal went into recession (–0.9 percent), the only euro area country together with Germany (–0.2 percent) to register negative growth that year. That same year, Greece’s economy expanded by 5.9 percent, Ireland’s by 4.4 percent and Spain’s by 3.1 percent” (Lourtie, 2011, p: 5)

2.3.3.5 Italy

The most significant problems in Italy were the high government debt and the low growth rate. Italy’s private sector debt was also high, but it did not exceed 200% level as well as Portugal and Ireland. “... Growth eventually stagnated, and between 2001 and 2008 average growth was only 0.8% of GDP” (Menendez, 2012). The government debt/GDP was over 100% after 90’s and fluctuated in 119-130% band between 1995 to 2011 and reached 141% in 2012 with a peak. (OECD, 2014)

As a consequence of the high government debt and low growth rate, Italy was caught vulnerable to the economic crisis of 2008 and in the subsequent crisis in the Eurozone. Italy came under intense financial pressures in 2011 as Government bond yields broke above 7% whereas it broke 29% in February 2012 in Greece (Eurostat, 2014). It was urged several times by the Institutions of the EU to address structural weaknesses considered to be causing its very low growth rates. Like Spain, Italy is considered too big to fail. “Italy’s debt ratio is the second worst in the Eurozone, behind only Greece. The country's national debt weighs in at roughly 120% the size of its gross domestic product or about 2.6 trillion USD” (Weismann, 2011). High burden of the social security system that also brings risks to the competitiveness is an obstacle. A summary table of the macroeconomic indicators is in Table 11.

Table 11: Macroeconomic indicators in the GIIPS States (2005-2014)

GDP growth (annual %)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Greece	5,82	3,54	-0,44	-4,39	-5,45	-8,86	-6,57	-3,90	0,77
Ireland	5,47	4,93	-2,61	-6,37	-0,28	2,77	-0,31	0,17	4,79
Italy	2,01	1,47	-1,05	-5,48	1,71	0,59	-2,77	-1,70	-0,43
Portugal	1,55	2,49	0,20	-2,98	1,90	-1,83	-4,03	-1,60	0,89
Spain	4,17	3,77	1,12	-3,57	0,01	-0,62	-2,09	-1,23	1,39
Current account balance (% of GDP)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Greece	-10,82	-13,99	-14,47	-10,89	-10,10	-9,90	-2,47	0,58	0,93
Ireland	-3,41	-5,14	-5,59	-2,14	1,06	1,19	4,17	6,22	
Italy	-2,46	-2,34	-2,81	-1,89	-3,49	-3,07	-0,44	0,94	1,89
Portugal	-10,32	-9,79	-12,18	-10,52	-10,16	-6,86	-2,01	0,52	
Spain	-8,77	-9,77	-9,45	-4,65	-4,37	-3,61	-1,20	0,77	
External balance on goods and services (% of GDP)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Greece	-10,55	-12,42	-12,98	-10,36	-8,58	-6,85	-4,48	-2,96	-2,37
Ireland	9,32	8,85	8,72	14,76	17,45	20,28	20,51	20,80	
Italy	-0,84	-0,36	-0,79	-0,66	-1,97	-1,57	1,00	2,32	3,18
Portugal	-8,24	-7,64	-9,71	-6,92	-7,56	-4,28	-0,51	0,89	0,47
Spain	-5,92	-5,99	-5,13	-1,15	-1,31	-0,24	1,56	3,41	2,38
Central government debt ¹⁹ (% of GDP)	2006	2007	2008	2009	2010	2011	2012		
Greece	123	120	117	133	127	109	164		
Ireland	28	28	47	67	84	98	120		
Italy	105	101	103	117	116	109	127		
Portugal	67	65	76	88	91	90	124		
Spain	33	29	34	46	47	55	66		

Source: Worldbank, 2015

As a summary, attempts and actions in the USA led to financialization that resulted in lowered interest rates, so-called toxic financial products and eventually a credit bubble. Credit bubble led property prices fell, and a great asset lost in the banking industry. It will not be a false order to describe the evolution of the crisis as the financialization, banking crisis, and sovereign debt crisis except for countries like Greece. As far as the debt of the government in countries like Greece and Italy and the private sector debt in countries like Ireland, Portugal, and Spain came together with the banking crisis, Eurozone faced the sovereign debt crisis which will be explained in more depth in the following sections.

¹⁹ Most recent data for central government debt is for 2012 for the GIIPS states.

2.3.3 Root Causes of the Eurozone Crisis

Membership of the Eurozone brings specific benefits for the member states in various areas. Free movement of labor, single market and the usage of a single currency are some of the advantages introduced. However, the perception of the Eurozone may change from positive to negative as a result of the fact that financial regulations and the policies ECB implies may create diverse effects in different countries and also for various economic groups.

Therefore, costs and benefits must be examined separately in country and timeframe basis. One other important fact is the societal benefit of the economic unification. Financial aid, to comparatively poorer states like Greece, Ireland, and Portugal helped economy improve in these states in terms of GDP per capita, new jobs and foreign direct investment (FDI). Nevertheless, the usage of the EU funds and financial aids ineffectively is also considered as a cause of the Eurozone crisis. Another hazard is the market deregulation brought by EMU. "... There is a danger that the general deregulation and liberalization of the internal market and EMU will result in a logic of competitive deregulation, leading to an undermining of national employment conditions and social standards"(Bieling, 2001, p: 94; Schulten, 2000, p: 232). Thus, criticism on the societal impacts of economic unification must not be overlooked. It is justified to say that the financial integration brought both advantages and risks for every single member of the EU. Some economists criticize the framework of the Optimum currency area (OCA)²⁰ which is presented in Annex 2 as it created huge gaps in economic terms between the poor and relatively developed states of the Eurozone.

The Eurozone crisis hit some states like the GIIPS countries harder which will be detailed in the next sections. The crisis experienced in Greece was sourced mainly due to the public sector. In Ireland, the weakness in banking and real estate industries was the reason that affected the crisis. High level of current account deficit and the risk around the banking sector were the triggering events in Portugal. In Spain, fall in the economic activities compared to the

²⁰ The idea of the Eurozone is used on Mundel's OCA theory that asserts that fixing one of the factors in the gold price, money supply, exchange rate and price level causes the other three variables to be flexible. The basic aim of OCA is to avoid asymmetric shocks by satisfying the factors of financial integration.

Padoa-Schioppa (1994) defined OCA as an impossible trinity which consists of free trade and capital mobility, monetary policy autonomy, and fixed exchange rates which can never be reconciled. According to this scheme which is indicated in Appendix 2, to sustain free trade and free movement of capital and labor, the free-floating exchange rate is necessary whereas, irrevocably fixed exchange rates for euro area countries have led EU to solve the impossible trinity under a single market.

pre - crisis era due to insufficient internal and external demand and an unemployment level of 20%'s increased fragility. Weak fiscal position in Italy led fragility in the national economy.

Root causes of the Eurozone crisis are still discussed. The basic output may be summed up in terms of the imbalance of current account deficit/surpluses of countries. The current account surplus of a few countries as Germany and current account deficit of states like Greece, Ireland, Italy, Portugal, and Spain (GIIPS) create an asymmetry. "... The introduction of the euro spurred the emergence of enormous macroeconomic imbalances that were unsustainable, and that the Eurozone has proved institutionally ill-equipped to tackle."(Tilford& Whyte, 2011, p: 3). On top of the macroeconomic imbalances, the surplus of Germany is transferred via portfolio and investment channel to GIIPS countries. This surplus leads monetary expansion and wage increases as a cause and also the output of inflation. "French and German capital has depended on the country consuming beyond its means. Public and private debt ensured that Greece could function as an export market for German products, without adding to wage pressure" (Seymour, 2014, p: 106)

This scheme has deep relations with the competitiveness issue and must be examined separately. Although the monetary unification was achieved among 17 states by 2011, the lack of fiscal integration and the difference in competitiveness levels among countries created asymmetric shocks and triggered the Eurozone crisis. Especially, the gap in competitiveness is evident as Finland, Netherlands and Germany were the third, fifth and sixth most competitive countries in the world whereas Italy, Spain, Portugal and Greece were in the 36., 42, 49 and 96th places respectively, in 2012-2103 ranking (Global Competitiveness Index, 2013).

The problems concerning the decision-making process which is primarily because of the institutional framework was considered as one of the most important triggering events. The framework of EU dictates the coordination and the centralization of the monetary policy, whereas the fiscal policies are yet found at the country layer. On that point are certain obligations on budget discipline with the Maastricht Treaty and the SGP, however, the fiscal federalism leads imbalances and eventually shocks due to the growing imbalances related to this policy mix. "The EU lacks the competencies to bring about the necessary harmonization of the national economies whose levels of competitiveness are drifting drastically apart."(Habermas, 2012, p: 3)

Disagreements among key policy makers like France, Germany, UK and the southern lands may be conceived as the third most significant cause. "Unless European authorities step

in and correct their mistakes by buying the excess supply of securities, financial asset prices will collapse to a point where the whole banking system could become dysfunctional. Thus, there is a conflict of interest between European authorities and private markets that increases the risks of the crisis. The crisis is reinforced by the collective action problems within the European economic governance.”(Collignon, 2012)

Fourth, corruption in countries like Greece, especially in the misuse of EU funds and misreporting of government budget data is an important cause.

Fifth, capital flows became an important problem in EU. “The inflow of capital and subsequent build-up of public and private debt over the past decade into the Eurozone “periphery” countries was a key factor in the build-up to the current crisis”(Nelson et al., 2012, p: 3, 4)

The divergence in the regulations and the brass of the banking organization is discussed as a 6th reason. European banking system governance is primarily founded on the Basel II framework, and the inadequacies of this structure increased the exposures in certain banks. “European banks are less well capitalized than US banks. This is partially due to the absence of a leverage ratio requirement in Europe, where authorities instead rely on the Basel system, which applies capital requirements only to Risk-Weighted Assets (RWA) without any citation to the ratio of RWA to total assets (TA) in banks. EU banks systematically reduced the share of RWA to TA by a variety of techniques prior to the crisis and raised leverage commensurately to very high levels.”(Blundell et al., 2011, p: 13)

As a 7th reason, not only the noncompliances of countries like Greece, Italy, Portugal, and Spain with the Convergence criteria and SGP but also their unwillingness of taking precautions for the long run, accelerated the spread of the crisis. These precautions certainly should include reforms in the government position and social outlays. Consequently, social expenditures for the citizenry of Europe and the burden on governments were the most important cause of the crisis according to some neoliberal thinkers. Yet, this argument is not self-explanatory of the dynamics of the Eurozone crisis as far as social expenditures are not the common problem in the provinces which experience the crisis, and also, the diffusion effect cannot be construed.

The impact of the subprime crisis is considered as a serious event by some economists. Jean-Fitoussi and Saraceno (2009) explain that the reason behind the fact that crisis hit the Eurozone harder than the USA and Japan was that answers of the EU governments and ECB to

the crisis were not aggressive as it should be. Neither ECB followed a robust monetary policy nor could the governments of the Eurozone apply a comprehensive fiscal policy.

Last but not least, the increment of the private sector debt is a real event which caused the crisis and also increased its diffusion except Greece. The impact of private sector debt, both on competitiveness and also government debt indirectly causes structural harm in certain states. "... It is clear that it is difficult to maintain that the cause of the government debt crisis in the Eurozone is due to government profligacy prior to the crisis. The only state where this can be averred to be true is Greece. It does not apply to the other countries, where the fundamental cause of the crisis is to be found in unsustainable private debt accumulations forcing governments to step in to help out (in some cases to save) large segments of the private sector."(De Grauwe, 2010, p: 8)

The impact of the debt, particularly private debt will be discussed in Section 2.3.4 briefly.

2.3.4 Debt as a Cause of the Crisis

One of the reasons that the Eurozone crisis differs from 1929 crisis is the difference in world trade structure. Effects of globalization like the increase of the possibilities in the transportation, usage of technology in manufacturing and the dispersion of the production process create the need for trade finance. The impact of the debt on demand and growth has contagious effects on the trade partners, as a result. Especially developing countries are affected negatively in crisis periods.

The increase in the government and private sector debt has different implications for the national economies. "... When private borrowing has fiscal backing, default increases public debt and the ability of the public sector to sustain a given level of debt depends on its ability to raise revenue or its fiscal capacity – something that could become compromised if the private sector is already highly indebted."(Cecchetti et al., 2011, p: 5)

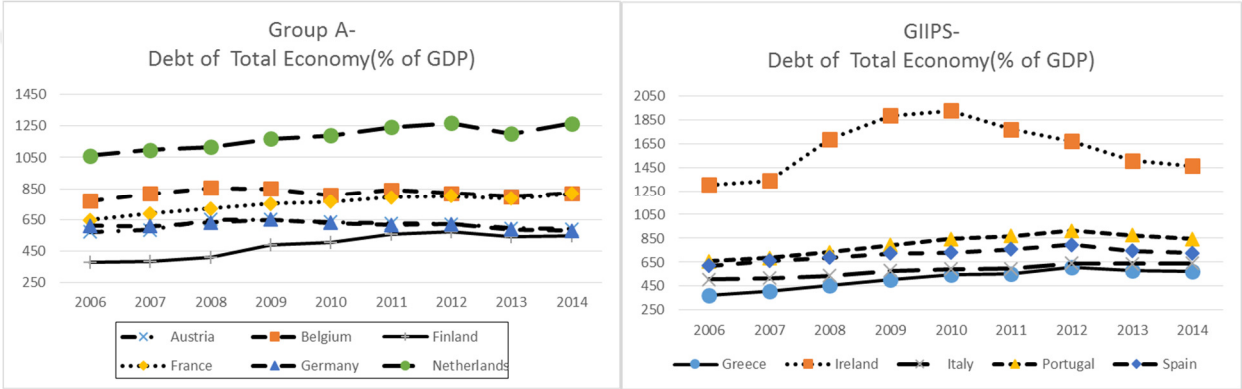
Nevertheless, particularly in the Eurozone, because the Eurozone states do not default, as it may lead an exit of the EU, borrowing becomes more expensive. OECD emphasizes the sectorial interconnections and the risks carried by debt from the private sector to government and government to the private sector. "The implications of the vulnerabilities created by debt and the interconnections between sectors suggest that high levels of debt can migrate and cascade across sectors. Typically, debt builds up more rapidly in the private sector, and when

the economy enters recession, private-sector debt as a share of GDP decelerates or declines. On the other hand, government debt tends to rise (OECD, 2013, p: 6).

The debt analysis will be made in comparison with Austria, Belgium, Finland, France, Germany and the Netherlands (Group A) whose GDP are over 100 billion USD and the GIIPS states.

As it is seen in Figure 11, between 2006 and 2014, total debt²¹ in the Eurozone countries increase significantly. Ireland, Netherlands, and Portugal are the countries with the highest debt to GDP ratios.²²

Figure 11: Debt of Total Economy (% of GDP) in the Selected States of the Eurozone



Source: OECD, 2015

In the following sections, government and private sector debt will be analyzed.

2.3.4.1 Analysis of Public Debt

In this section, public debt after the banking crisis will be analyzed. As far as the sovereign debt crisis is the inability of some states in the Eurozone to accomplish their financial commitments, structural analysis of the debt is crucial to investigate. Several precautions have been taken both by the EU itself and also the member states. One of these actions was the Politically Acceptable Debt Restructuring in the Eurozone (PADRE) plan that would substantially lower the Eurozone nations’ debts without cross-nation transfers. PADRE plan assumes that several countries in the Eurozone may not bankrupt. However, they seem unsustainable to raise resources for debt restructuring. Paris& Wyplosz (2014) explained this

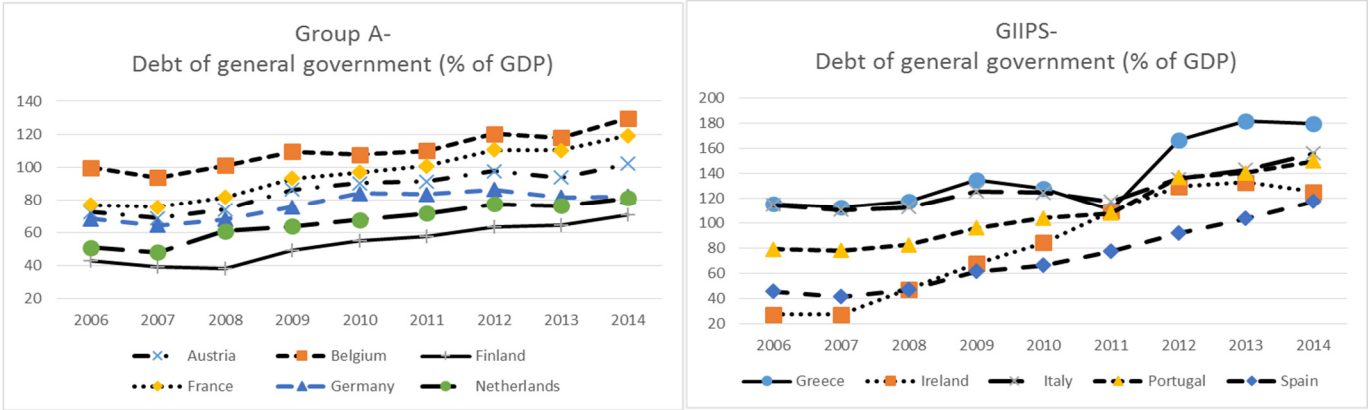
²¹ OECD (2014) defines debt as all liabilities that require payment or payments of interest or principal by the debtor to the creditor at a date or dates in the future.
²² Luxembourg is excluded in the total debt figure.

problem as the prevention of fiscal policy, which is the only instrument in a monetary union due to the debt burden triggered by economic growth.

PADRE plan brings a framework on the public debt. The adequacy of PADRE plan, its impacts on the survival of the crisis needs criticism in an overall evaluation together with the precautions taken by the ECB and member states. It is obvious that public debt was considered seriously in EU with PADRE plan and also the other actions. However, this view was not sufficient to bring a comprehensive solution to the debt issue. Private sector debt was not considered seriously as the public debt, although problems related to the private sector debt might be much more severe as it carried serious implications for competitiveness, employment, and growth in the mid run. One of the biggest implications of the Eurozone crisis is the transfer of private debt to public debt, which has been reflected on government balance sheets. Several banks in Ireland, Portugal, Spain, and Greece were recapitalized in 2012 through ESM. Therefore a significant portion of the private sector debt transformed into public debt. “Private debt restructuring may be needed to revive medium-term productivity and growth, thereby supporting a country’s balance of payments adjustment. Furthermore, high levels of private debt can negatively impact public debt sustainability with the potential transfer of private debt to government balance sheets. In such circumstances, the contingent government liabilities relating to private debt could inform a judgment that a country’s public debt is unsustainable”. (Laryea, 2010, p: 4)

As indicated in Figure 12, in Group A, Netherlands and Belgium seem to have a significant increase in government debt. However, the increase in the GIIPS countries is severe. Greece and Italy have the government debt problem traditionally, unlike total debt to GDP ratio. Portugal exceeded 100 % by 2010 and Ireland by 2011.

Figure 12: General Government Debt in the Selected States of the Eurozone



Source: OECD, 2015

2.3.4.2 Analysis of Private Sector Debt

Private sector debt affects trade in 2 channels; the first impact is on the trade finance channels that facilitate an important portion of the world trade. The contagion effects of the global crisis created difficulties in the trade finance market. There are a couple of reasons for that. First of all, credit channels are narrowed due to the overrated interest rates sourced from the private sector. An example of this fact is the reluctance of financial institutions to confirm the letter of credits or trade related insurances in crisis times. “A very large share of international trade requires some form of credit, insurance or guarantee. This stems from the fact that international trade involves particular forms of commercial risk relative to domestic trade: payment risk, risks related to the value of the expected payment linked to possible fluctuations of the exchange rate or the price of commodities, transportation risk...” (Maurer& Escaith& Auboin, 2011, p: 4).

On top of the narrowing effect of the credit channel, increasing the need for liquidity in the developing countries is also an issue. Recalling the significant market share of financial institutions in the developed countries, it is obvious that, especially the default risk in the Eurozone constrained these institutions to decrease liquidity needed for trade finance either by decreasing the number of instruments or increasing complications.

The second impact is on the demand side. As far as the private sector debt includes households and the enterprises, the focus on deleveraging narrows the internal demand and also decreases the demand for imports. Laeven and Laryea (2009) explained that household debt overhang and debt servicing problems feed into different directions. First, they weaken bank balance sheets by increasing the nonperforming loans and also as a result of the reduction in credit availability, house prices and prices of other asset classes are pressured. After comes the negative impact of household debt problems on consumption. These two effects create problems as lower growth and higher unemployment.

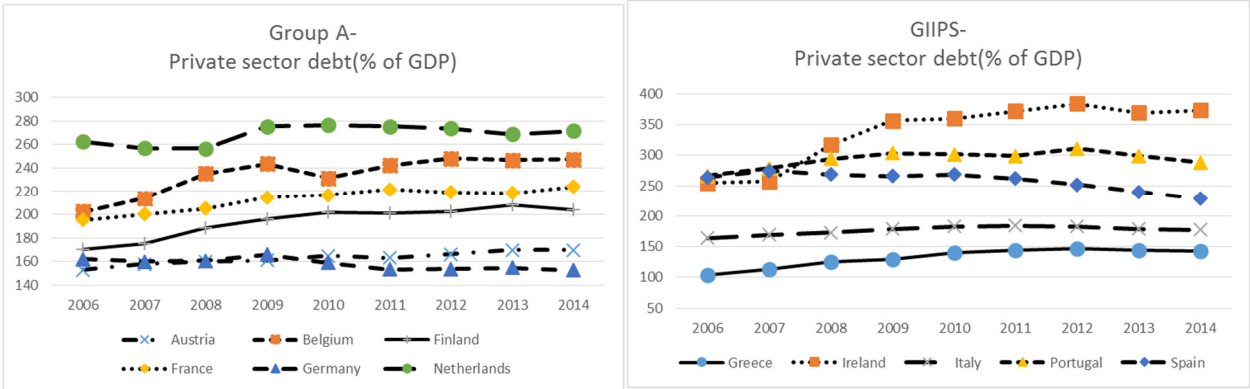
An important area of the private sector debt to be investigated is the deleveraging process which is a distressed process as the post-crisis era still carries fragilities due to financial volatility, imbalanced demand, and political flu environment. On the one hand, there are firms whose revenues are declining, but the borrowing costs are increasing. On the contrary, there are households who are suffering due to the decrease in wages and unemployment is rising. In this environment, both consumption and investments start to decline as far as they become vulnerable to price shocks. Due to the demand fall, the asset prices begin to fall, and banks that provide the linkage between the firms and households begin to get affected. As far as the

borrowing costs of the firms increase and the household income decreases, banks tend to tighten lending and increase interest rates. From the government perspective, the tendency for increasing taxes start and government spending decreases which eventually decreases tax revenue. The loop among the private sector, financial sector, and the government carry the risk to increase the debt burden and minimize profits. (Bornhorst& Arranz, 2013)

The deleveraging process starts during the crisis and is decidedly influenced by the credit ratings which are crucial for the overall economy for surviving the crisis. Debt deleveraging leads a pressure on consumption and investment. Moreover, in case the increase of the debt is greater than the GDP increase, the deleveraging process becomes distressed and has implications in other areas of trade and competitiveness. "... Both private consumption and investment fall sharply in the aftermath of financial crises with deleveraging. The fall in consumption is similar to the fall in GDP, but the fall in investment is more than three times as large – an example of the investment accelerator at work."(Buiter& Rahbari, 2012, p: 13)

When we analyze the private sector debt²³, it is seen that Ireland and Portugal are the countries whose private sector/GDP ratio exceeded 300% as indicated in Figure 13. Greece and Italy are under 180%, and they do not have the problem as they have in the government sector debt. In Group A countries, Netherlands is the most problematic country in terms of private sector debt which will be explained in detailed in the debt of financial corporations section.

Figure 13: Private Sector Debt (% of GDP) in the Selected Eurozone States



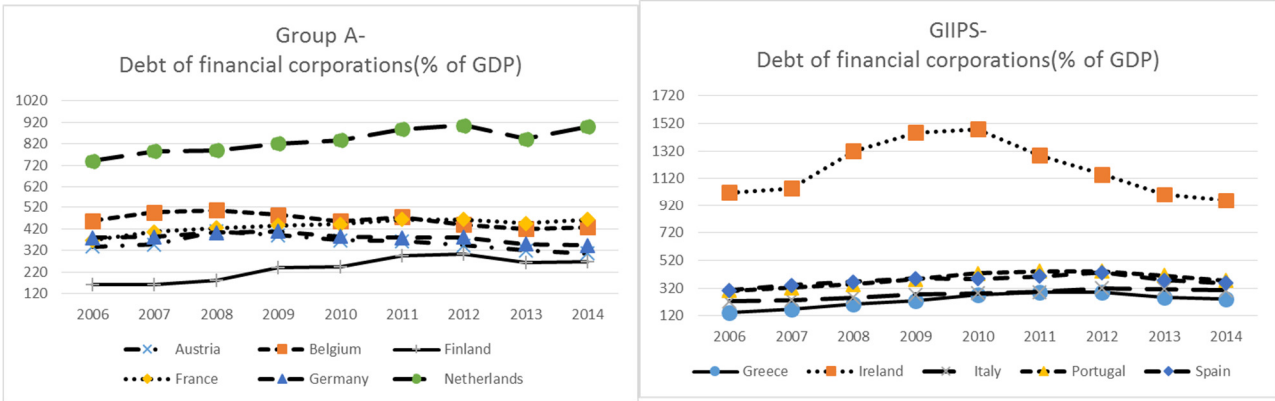
Source: OECD, 2015

²³ Private sector debt refers to the indebtedness of both sectors, non-financial corporations and households and NPISHs, as a percentage of GDP. (OECD, 2014)

Private sector debt may be classified under three pillars as financial corporations, non-financial corporations and households and non-profit institutions serving households (NPISH).

In terms of financial corporations’ debt, Ireland is the most problematic country exceeding 1500% by 2010 among GIIPS states. Netherlands also has a significant problem as its debt/GDP ratio exceeds 800% as it is shown in Figure 14. The most important reason for this problem is the recapitalization of some significant Dutch banks.

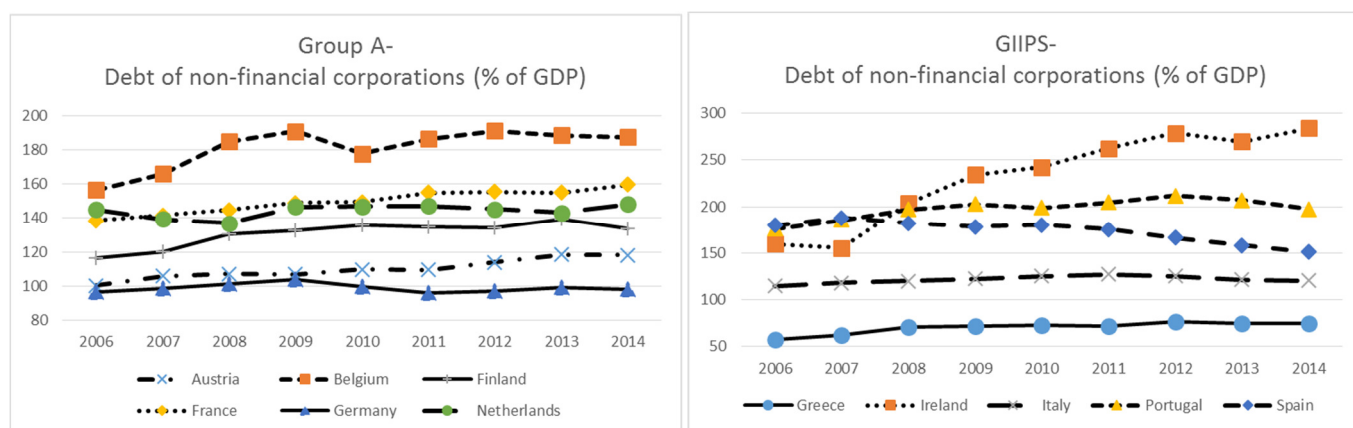
Figure 14: Debt of Financial Corporations (% of GDP) in Selected Eurozone States



Source: OECD, 2015

Figure 15 shows the non-financial corporations’ debt/GDP ratio. In Group A, Belgium has the highest debt which is in 180-200% band, where Ireland and Portugal carry the most significant risks in GIIPS states. Ireland approaches 300% where Portugal is over 200%, and Spain is very close to 200% level by 2012. “Corporate debt, meanwhile, has not shown a tendency to rise significantly across the sample in the years following the introduction of the euro, with the exception of Spain and Ireland, the only countries in which investment also rose significantly during the period.”(Lapavitsas et al., 2012, p: 20) The deleveraging process in the corporate sector was not reflected in the ratios as fast as it was assumed. Therefore, the impact of the corporate sector debt burden on foreign trade will be reflected in balance sheets of the Eurozone countries and also developing countries with a lag.

Figure 15: Debt of Non-Financial Corporations (% of GDP) in Selected Eurozone States



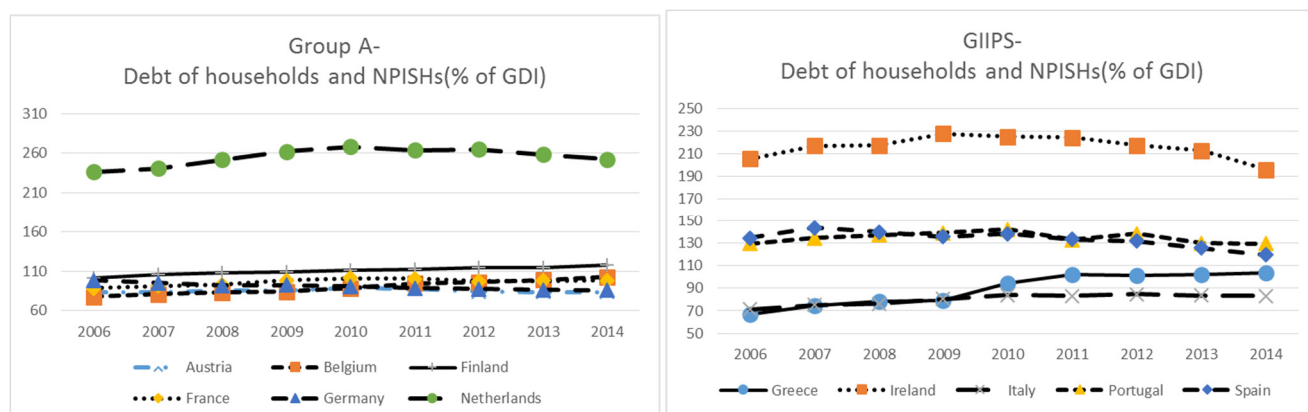
Source: OECD, 2015

There is a necessity to differentiate the households and corporate borrowing due to the difference in their behaviors in decision-making. Especially in the crisis times, the decision-making patterns matter. The debt of the households may be crucial, especially in high population countries, and behavior of the households is affected by various factors which are very hard to measure and take precautions.

Figure 16 indicates the households and NPISH debt ratio²⁴ which primarily points out the risky situation in Netherlands in Group A and Ireland in GIIPS. In the household area, an important discovery is finding out that some countries which were severely impacted by the crisis did not have high household and NPISH debt/GDP ratios. Greece and Italy, who had high government debt ratios, did not have the same problem on the household side. This fact may have a relation with the strong social security system, especially in healthcare and education. This may also be an indication that household consumption and the government expenditure credit channels work differently.

²⁴ The household debt-to-GDI ratio shows the debt of households and non-profit institutions serving households (NPISHs), as a percentage of their Gross Disposable Income (GDI). (OECD, 2015)

Figure 16: Debt of Households and NPISH (% of GDI) in the Selected Eurozone States



Source: OECD, 2015

2.3.5 Precautions Taken For the Eurozone Crisis

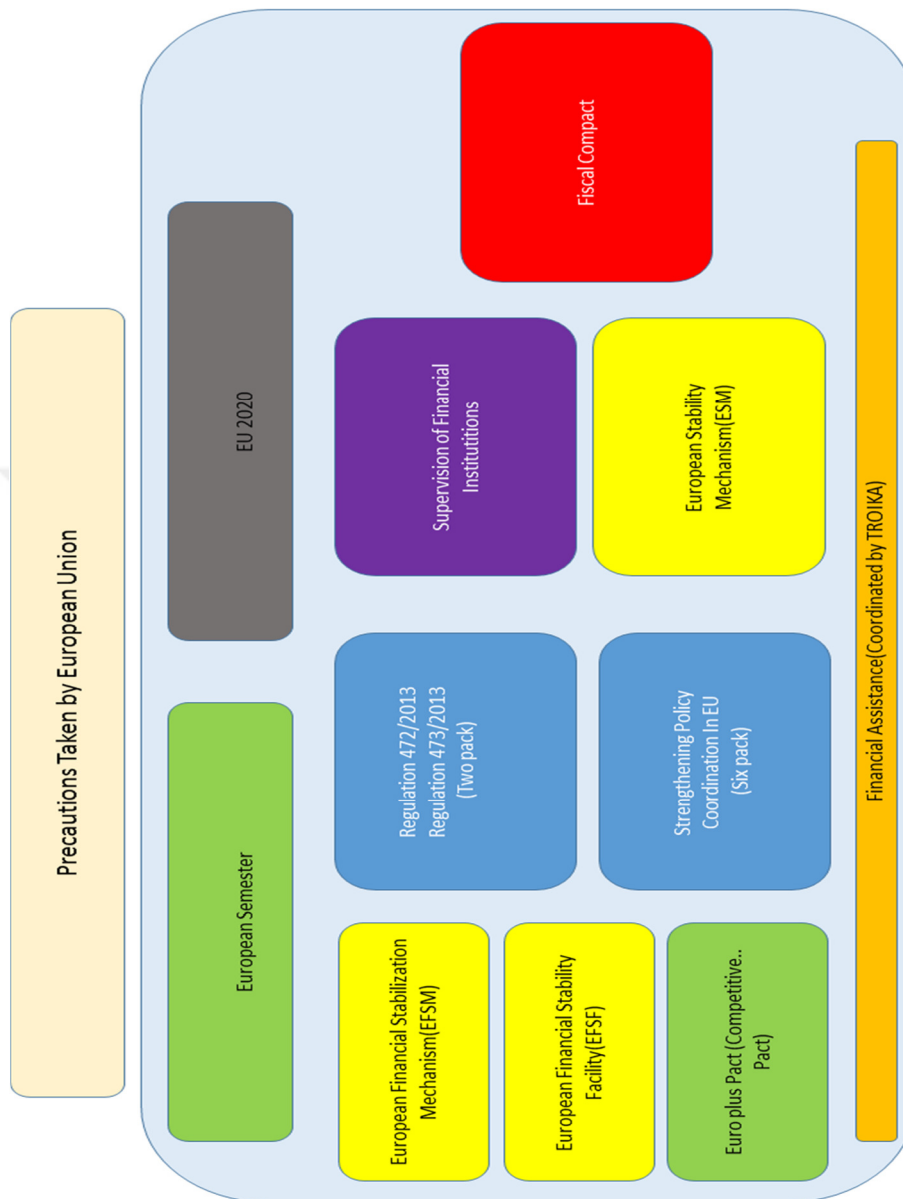
The precautions taken in the Eurozone crisis may be classified in two headlines. Precautions implemented by the EU and the measures applied by states. These two areas will be examined separately.

2.3.5.1 Precautions Taken by EU

Spread out of economic crisis affected severely, and negatively all European states by 2008 and precautions became obligatory due to the fiscal problems in the European countries.

There were various alternatives in strategy and tactic basis. “Among the proposals under discussion, are increasing the equity capital of the banks, greater transparency for the activities of hedge funds, improved oversight of stock markets and rating agencies, the prohibition of fanciful but economically destructive speculative instruments, a tax on financial transactions, a bank levy, the separation of investment from commercial banking, and the precautionary break-up of banking conglomerates that are ‘too big to fail’ (Habermas, 2012, p: 125,126). Under these discussions, the EU prepared a plan by the end of 2011 and adopted a comprehensive package of measures to respond to the crisis, and to preserve financial stability to strengthen the economic governance and increase the competitiveness of the euro area and of the EU. These actions aimed to bring structural changes to policy making and also to the institutional framework as shown in Figure 17. EU basically took significant actions in monitoring, prevention and correction domains and also provided financial assistance to the states which suffer from the crisis as a member of the TROIKA.

Figure 17: Precautions Taken by EU



Source: EU, 2014

a) Europe 2020

The crisis revealed severe weaknesses in the financial sector, which forced the governments to step in to prevent a number of banks from collapse. Not only targeting to put precautions against the crisis but also to advance “smart, sustainable, inclusive growth”, EC proposed a 10-year strategy on 3 March 2010 named as Europe 2020. Europe 2020 consists of 5 objectives as employment, innovation, education, social inclusion and climate/energy.

EU Commission (2015) defines the targets of Europe 2020 in 5 topics as indicated in Table 12.

Table 12: EU 2020 Targets

<i>EU 20 Targets</i>	
1. Employment	75% of the 20-64 year-olds to be employed
2. R&D	3% of the EU's GDP to be invested in R&D
3. Climate change and energy sustainability	Greenhouse gas emissions 20% (or even 30%, if the conditions are right) lower than 1990 20% of energy from renewables 20% increase in energy efficiency
4. Education	Reducing the rates of early school leaving below 10% at least 40% of 30-34-year-olds completing third level education
5. Fighting poverty and social exclusion	at least 20 million fewer people in or at risk of poverty and social exclusion

Source: EC, 2015

b) European Semester

The monitoring of the member states was an essential element of the Europe 2020. To avoid a similar situation as Eurozone crisis which may arise in the future, the EU set up some economic rules to be implemented in an annual cycle by the European Semester. These rules aimed an annual cycle of monitoring and coordination activities in the budget and fiscal area as indicated in Table 13.

Table 13: The Annual Cycle of the European Semester

September-October	Governments present the budget draft to their Parliaments.
November-December	EC announces the Annual Growth Survey (AGS) and Alert Mechanism Report (AMR), and EC announces its opinion on draft budgetary plans. The CoE discusses the budgetary plans. Bilateral meetings with the member states are made in December.
January	AGS results are shared with the member states. Member states adopt conclusions of AGS and AMR.
February	AGS is discussed by the CoE and the European Parliament.
March	Member states prepare their national reform Program. EU leaders adopt economic priorities based on AGS.
April	The Member States present their national reform Program.
May	EC assesses these Programmes and provides country-specific recommendations.
June-July	CoE formally adopts the country-specific recommendations.

Source: EU, 2014

c) Euro Plus Pact

Euro Plus Pact, which is also named as the Competitiveness Pact, aims to coordinate some EU states to take solid actions on competitiveness, employment, sustainability of public finances, financial stability, and tax policy. Euro Plus Pact was agreed in spring 2011 by Bulgaria, Denmark, Latvia, Lithuania, Poland and Romania and the 17 members of the Eurozone.

CoE explains the primary objective of the Pact in Euro plus Pact official website as; “This package will strengthen the economic governance of the EU and ensure the lasting stability of the euro area as a whole. We also agreed on robust action at the EU level to stimulate growth by strengthening the Single Market, reducing the overall burden of regulation and promoting trade with third countries.”(CoE, 2011, p: 1)

d) The Two-Pack

To strengthen the fiscal discipline, two new regulations were prepared and introduced by the EC on 23 November 2011. These two new regulations were Regulation 472/2013 and 473/2013. These regulations entered into force by 30 may 2013.

Regulation 472/2013 urged the member of the Eurozone, which were receiving financial assistance either from European Financial Stability Mechanism (EFSM) or European Financial Stability Facility (EFSF) or European Stability Mechanism (ESM) or IMF or who had an ongoing EIP to increase the frequency of reporting and surveillance which meant publication of "status reports for corrective action" on a quarterly basis.(Official Journal of the EU, 2011)

As defined in Regulation 473/2013, it was obligatory for the Eurozone states which were involved in an Excessive Deficit Procedure (EDP), EIP or Financial Assistance program bringing more in debt reporting. The states outside of the EDP or EIP would be expected only to submit their draft fiscal budget to the EC no later than 15 October each year.

e) The Six Pack

Six pack is a legislative package to strength SGP, which entered into force by 13.12.2011. The main objective of six-pack was to prevent and correct macroeconomic imbalances. “Six-pack does not aim only fiscal surveillance, but also the macroeconomic surveillance under the new Macroeconomic Imbalance Procedure (MIP).” (EC, 2013)

“MIP is a surveillance mechanism that aims to identify potential risks early on, prevent the emergence of harmful macroeconomic imbalances and correct the imbalances that are already in place.”(EC, 2014) MIP consists of 4 arms;

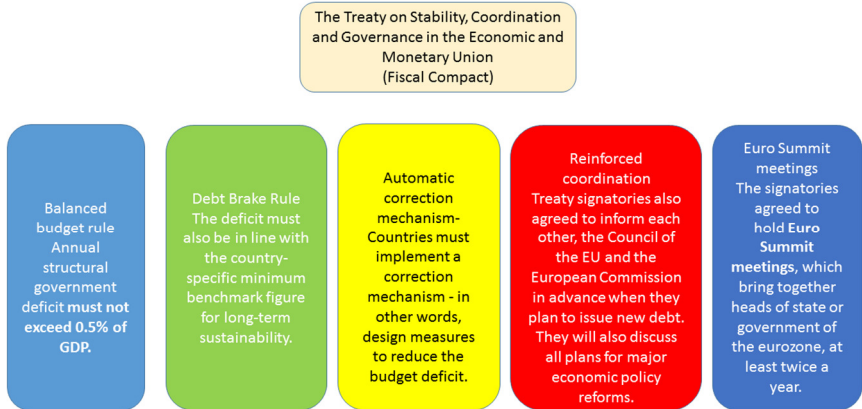
- AMR which examines some selected indicators by country basis,
- The in-depth reviews of the selected member states identified in the AMR,
- The preventive arm which asks the Commission and the Council to adopt preventive recommendations for the member state and
- The corrective arm that applies when an Excessive Imbalance Procedure (EIP) is opened for a member state. (EC, 2014)

Six pack consists of 1 directive for a budgetary directive for budgetary frameworks and five regulations on surveillance and coordination of the budgetary positions and also prevention and correction of the macroeconomic imbalances.

f) Fiscal Compact

Fiscal Compact which is also known as the fiscal arm of “The Treaty on Stability, Coordination, and Governance in the Economic and Monetary Union” entered into force on 1 January 2013. It is a stricter version of the previous SGP, signed on March 2012 (EC, 2014). As explained in Figure 18, the aim of the fiscal compact was to increase the coordination and collaboration to strengthen the fiscal discipline by implying rules and policies as a balanced budget rule, debt brake rule, automatic correction mechanism. It also necessitates Euro Summit meetings and reinforced coordination among treaty signatories.

Figure 18: Fiscal Compact



Source: Eurozone Portal, 2014

g) EFSM

EFSM was created to provide financial assistance to the EU Member States in financial difficulties with the EU Economic and Financial Affairs Council decision on 11 May 2010. EFSM is executed by EC which has a borrowing limit up to 60 billion euros. EFSM has been activated for Ireland and Portugal with 22.5 billion euros and 26 billion euros respectively to be disbursed between 2011 and 2014.

h) EFSF

EFSF was created in June 2010 and provided financial assistance to Greece, Portugal, and Ireland through bonds and some other debt instruments. The primary objective of the EFSF was to sustain financial stability by providing loans. EFSF provided 17.7 billion euros in Ireland, 26 billion euros to Portugal and committed to providing up to 109.1 billion euros to the second program of Greece. (EFSF, 2014)

i) ESM

To assist and support the countries that were having financial problems as a consequence of the Eurozone crisis, a stabilization mechanism was established on 8 October 2012. This mechanism replaced EFSM and EFSF preserving its main features and brought a new framework that puts a stronger focus on debt sustainability.

ESM aims to provide financial stability. ESM is an intergovernmental organization founded by 17 euro area members under the public international law which is based in Luxembourg. The total subscribed capital is €700 billion, with paid-in capital (€80 billion) and committed a callable capital (€620 billion); effective lending capacity is €500 billion. (ESM, 2013)

ESM is a permanent crisis resolution mechanism for the countries of the euro area. The ESM issues debt instruments in order to finance loans and other forms of financial assistance to Euro area the Members States. The decision leading to the creation of the ESM was taken by the CoE in December 2010. The euro area Member States signed an intergovernmental treaty establishing the ESM on 2 February 2012. The ESM was inaugurated on 8 October 2012. (ESM, 2013)

j) Supervision of Financial Institutions

In accordance with the European Semester and the National Semester, new supervisory authorities were established in 2011 as;

European Banking Authority,
European Insurance and Occupational Pensions Authority,
European Securities and Markets Authority and
European Systemic Risk Board for macro-prudential supervision (Eurozone Portal, 2013).

Due to the decision by the CoE on 24/25 March 2011, The European Banking Authority and relevant authorities decided to carry out stress tests. This process would be conducted in close cooperation with national supervisors, the European Systemic Risk Board, the Commission and the ECB in order to increase the consistency and quality of the results. “Member States will prepare, ahead of the publication of the results, specific and ambitious strategies for the restructuring of vulnerable institutions, including private sector solutions (direct financing from the market or asset sales) but also a solid framework in line with State aid rules for the provision of government support in case of need.”(CoE, 2011, p: 5)

By September 2012, EC announced a roadmap for the Banking Union. Banking Union brought Single Supervisory Mechanism (SSM) which positioned ECB as the central supervisory body which would directly supervise large banks whereas national supervisors would be responsible for the remaining banks. In July 2013, the Single Resolution Mechanism (SRM) was proposed by EC, which facilitated resolution for the banks under SSM through a Single Resolution Board. The last pillar of the Banking Union was the European Deposit Insurance Scheme (EDIS) which was proposed by EC in November 2015 which would bring insurance to deposits below 100.000 euros of all banks in the Eurozone in an insolvency or resolution situation.

k) Financial Assistance to the Eurozone States

Financial assistance to States was provided with the cooperation of 3 entities, EC, IMF, and ECB, which is also named as TROIKA.

The financial aids by EC were provided by three channels. EFSF, EFSM, and ESM. EFSF provided 141.8 billion euros to Greece between March 2012 and August 2014 in 21 times. The financial assistance provided to Ireland was 17.7 billion euros between February 2011 and December 2013 in 12 portions. The last country that received financial aid from EFS was Portugal with 26 billion euros between June 2011 and April 2014 in 15 portions.

EFSM provided a total of 46.8 billion euros which consists of 22.5 billion euros to Ireland between January 2011 and June 2012 and 26 billion euros whose 24.3 billion euros is disbursed to Portugal between May 2011 and November 2014.

ESM provided Spain 39.5 billion euros on December 2012 and 1.8 billion euros in February 2013 which may be extended to 1000 billion euros.

ESM committed 86 billion euros to Greece between August 2015 and August 2018. ESM already provided 26 billion euros in 2015 in two tranches.

IMF provided 11.98 billion euros to Greece between March 2012 and August 2014, 22.5 billion euros to Ireland between March 2012 and August 2014(19.5 billion SDRs are used), 26 billion euros to Portugal between March 2012 and August 2014,

On top of this assistance, Ireland received 3.8 billion euros from the United Kingdom, 0.6 billion euros from Sweden and 0.4 billion euros from Denmark. Last but not the least Ireland also received 17.5 billion euros from the National Pension Reserve Funds.

With the coordination of TROIKA, states which were under financial problems received the following aids as specified in Table 14.

Table 14: Amount& Lender of Financial Assistance to States

Greece	(Disbursed Amount: First Package:77.3 billion euros(May 2010-June, 2013)& Second Package: 130 billion euros+ 34.5 billion euros of the undisbursed portion of First Package)(March 2012-December 2014) Third Package:86 billion euros(August 2015-August 2018)
EFSF	74 billion euros (March 2012-June 2012)& 53.2 billion euros (December 2012-May 2013)& 3.3 billion euros (May 2013-June 2013)& 3 billion euros (July 2013-December 2013)& 8.3 billion euros (April 2014-August 2014)
ESM	10 billion euros(August 2015)-first tranche 13 billion euros(August 2015)-second tranche 3 billion euros(Autumn 2015)-second tranche
IMF	1.6 billion euros (March 2012-June 2012)& 3.24 billion euros(January 2013)& 1.74 billion euros(May 2013)& 1.8 billion euros(July 2013)& 3.6 billion euros(April 2014)

Ireland	(Disbursed Amount:85 billion euros)
EFSM	21,7 of 22.5 billion euros used(March 2014)
EFSF	17.7 billion euros of 22.5 billion euros used (December 2013)
IMF	19.5 billion SDR of 22.5 billion euros used (End of 2013)
UK	3.8 billion euros
Denmark	0.4 billion euros
Sweden	0.6 billion euros
Ireland Treasury & National Pension Reserve Fund	17.5 billion euros
Spain	(Disbursed amount:100 billion euros)
ESM	39.5 billion euros(December 2012)& 1.8 billion euros(February 2013)
Portugal	(Disbursed Amount:78 billion euros)
EFSM	24.3 billion euros of 26 billion euros used (November 2014)
EFSF	26 billion euros of 26 billion euros used (April 2014)
IMF	26 billion euros of 26 billion euros used (June 2014)

Source: EC, 2015

Sapir et al. (2014) asserted that the overall economic situation helped Ireland exit the austerity program, and there is certain optimism on Portugal. However, the same optimism is not valid for Greece. “Greece is in the worst situation with unemployment at more than 25 percent and public debt at 175 percent of GDP, but the other three countries, with unemployment at about 15 percent and public debt at about 120 percent of GDP, are also not faring well.”(Sapir, et.al, 2014, p: 59)

1) Precautions Taken by the ECB

ECB traditionally followed the separation principle which referred to the division of monetary policy and liquidity management (Trichet, 2011). Based on this principle ECB implemented main refinancing operation and the enhanced credit support policy under its conventional monetary policy.

ECB decided to implement unconventional monetary policy after 2008 as the crisis deepened and added instruments like Fixed rate full allotment (FRFA) which gave the facility for the banks that their Central Bank liquidity demand would be satisfied as far as they have sufficient collateral.

Securities Market Program (SMP) which was effective between may 2010 and August 2011 was not enough. Therefore, ECB took other actions to reduce volatility and increase

liquidity. These actions were open market operations and long-term refinancing operations in 2011 and 2012.

The introduction of the outright purchases of private sector assets in September and October 2014 was the last important part of the unconventional monetary policy of ECB. This program was extended to public sector assets in January 2015 with a commitment of purchase of 60 billion euros between March 2015 and September 2016. (ECB, 2015). This decision was in line with Mario Draghi's speech at July 2012 in which he stated that ECB would do whatever needed to preserve the euro. (Bloomberg, 2012)

2.3.5.2 Austerity Measures Taken by Countries

States which were struck by the crisis, besides getting help from the EU took austerity measures and prepared their reform plans around four areas. These areas are government reform & social expenditures, tax, employment, and competitiveness. Greece was the leading country in the implementation of the austerity measures which is followed by Spain, Portugal, Ireland and Italy respectively.

Austerity measures taken by states are summarized under 4 headlines;

Government reform & social expenditures, tax, employment, and competitiveness,

Greece

Greece is the leading country amongst countries which suffered from budget deficits and sustainability of loans. The Global crisis had adverse effects on Greece such as growth, unemployment, increasing high budget deficits and debt stocks. As explained in Table 14, Greece is the country that received the highest amount of financial aid among the GIIPS countries. In coordination with the TROIKA and also the governments of the EU, Greece announced the following 7 austerity packages between May 2010 and November 2011;

Austerity Package 1: May 2010,

Austerity Package 2: November 2010,

Austerity Package 3: January 2011,

Austerity Package 4: July 2011,

Austerity Package 5: October 2011,

Austerity Package 6: November 2011

Austerity Package 7: October 2012

Austerity Package 8: July 2013

Austerity Package 9: April 2014

Austerity Package 10: July 2015

Austerity Package 11: August 2015

The first six austerity packages were based on the Hellenic Stability and Growth Program, which intended the period between 2010 and 2013. The seventh program was a part of the Medium Term Fiscal Strategy Framework-2013-2016. The eighth program was prepared through April/July 2013 measures. Ninth program was a part of the Medium-term Fiscal Strategy plan-2015-2018 whereas tenth, and eleventh packages were prepared due to the urgent prerequisites for the negotiation and conclusion of an agreement with the ESM.

Reforms were planned in 5 major areas in the first 6 packages as;

- a) Strengthening the transparency, accountability and monitoring of budget execution and the budget process,
- b) Tax Policy
- c) Tax Administration
- d) Competition & Growth
- e) Other structural reforms (Local administration reform i.e.) (IMF, 2014)

An important section of the Program was the fiscal correction. The Greek government aimed to achieve 4053 million euros (1.7% of GDP) with one-off savings in expenditure and revenue sides (EC, 2014). Some of the expenditure areas were like salaries and pensions, subsidies to social security funds, social protection, grants to public sector entities and consumption and election expenditures. On the revenue side, new taxes were brought for the incomes which are higher than 60K+ euros, profitable firms and high-value real estates. Tax settlements and revenue from bank liquidity scheme were the other actions of one-off revenue based savings.

On the permanent savings side, cutting general government expenditure on salary, allowances by %10, freezing recruitment and having a reduction in short-term contracts, operating costs, pension fund subsidy in overtime, etc. and decreasing military and hospital expenditures were intended. On the revenue side, actions as increasing and applying new

special taxes on property, cigarettes, alcohol, mobile telephones and petrol were planned. 6292 million euros (2.6% of GDP) were aimed at permanent savings and revenue gains. (Greece Ministry of Finance, 2010)

Lapavitsas (2012) explains that privatization of ports, airports, railways, finance, the water supply and energy was planned as well as the public land. Privatization not only would decrease public finances but would also boost the economy.

The seventh plan brought reforms in the banking system and continued efforts in fiscal policy. Eighth and the ninth packages targeted wage decreases and layoffs in the education and health sectors. Tenth and eleventh programs brought structural tax and pension reforms.

Portugal

During the Eurozone crisis, Portugal was one of the countries having difficulties like Spain and Greece. With the approval of 750 billion Euros worth recovery package by EU Leaders' summit in the first week of May, Portugal went under pressure to take retrenchment measures. Among these measures were, reducing the government deficit to below 4.5% of GDP which eventually would lead to a deficit of 3% of GDP in 2013. Taking the government debt-GDP ratio on a downward path as of 2013 and continuing savings were the other fiscal targets. (IMF, 2012)

On the expenditure side, actions were taken by reducing and suspending wages in the public sector, reducing the number of employees in government, decreasing the number of temporary positions in public administration, suspending all promotions, and reducing health benefits and pension expenditure for government employees. On top of these policies, controlling costs in the health sector, reducing costs in state-owned enterprises, cutting costs in education, reducing capital expenditure in investment projects and improving the efficiency of central administration were targeted as defined in the document "Portugal: Memorandum of Understanding on Specific Economic Policy Conditionality" on June 2012. On the revenue side, increasing VAT revenues, personal income taxes, and corporate taxes, cutting tax allowances for health expenditure, eliminating tax deductibility, raising taxes on particular areas as car sales, tobacco, and alcohol products, introducing electricity excise taxes and changing property taxation were the planned actions in 2012 and 2013. (CoE, 2012)

Ireland

Ireland announced austerity measures in 2009, 2010 and 2011. These measures included the introduction of new taxes, lowering income tax band, changing social security system which

increases the employee contribution and cutting wages in the public sector. On the revenue side, Ireland did not take serious steps except increasing indirect taxes by increasing VAT 2%.

Italy

Most important restructuring need in Italy was in capital and labor markets and fiscal stability. The most important reason for the crisis in Italy was the competitiveness due to the labor costs. Silvio Berlusconi declared the first National Reform Program in 2011. With this program, Italy committed to start and continue reforms in pensions, fiscal discipline, productivity, and education.

The National Reform Program consisted of;

- Fiscal Reform,
- South,
- Labor,
- Public Works,
- Private Construction,
- Research& Development,
- Education& Merit,
- Tourism,
- Agriculture,
- Civil Justice,
- Public Administration and Simplification (Italy Ministry of Economy and Finance, 2014)

Subsequently, the government changed, Monti, the prime minister after Berlusconi continued the National Reform Program with the 2012 program. The most significant cost savings (about 26.6 billion in the 2011-2014 period) were driven from the public expenditure restraint, especially due to the substantial savings requested of ministries, the suppression and reorganization of agencies and public bodies as well as the rationalization of health care expenditure. (Monti, 2012, p: 31) National reform programs continued with 2013.

Spain

Spain was another country having difficulties with both debt stock and budget deficits. According to World Development Indicators (2014), public debts to GDP ratio, which was 36.2% before the crisis rose to 64.9% in 2009. The general management budget balance, which made a surplus of 1.9% in 2007, declined to a loss of 11.2% in 2009 (Caritas Europa, 2014). Spain tightened unemployment protection conditions, decreased social benefits, reduced child benefits, increased taxes for top earners and increased VAT rate from 16% to 18% by July 2010 (OECD, 2014). Due to the fact that these measures were not enough to decrease the budget deficit, further, measures were introduced in 2011 as expenditure cuts in education and health which were equal to 1% of GDP and increase marginal tax rates on personal and capital income and on property sales.(Caritas Europa, 2013)

Various efforts have been put both through the EU and also the member states, and significant steps have been taken so far. “In short, the EU responded to the euro crisis with institutional innovations and through the adoption of measures that aim at addressing the root of the problem. However, precisely because of the very nature of decision-making in the EU, most of these responses were directly influenced by the diverging preferences of the EU members leading to suboptimal results.”(Müftüler Baç, 2013, p: 8)

Therefore, there are still risks for the future of the Eurozone sourced by the institutional framework. Marco Buti, General Director of Economic and Financial Affairs of EC, placed three main challenges to be discussed. These challenges are new fiscal policies, solving the conflict between policy objectives and economic realities and financial stability and financial markets integration. (Buti, 2014)

The impact of the precautions against the crisis are still discussed, and there are perspectives which assume that actions taken by the EU were insufficient. Overtveldt (2011) concludes that, despite the profound crisis, European Authorities have not taken the necessary steps on fundamentally important issues like rebuilding the banking sector, restoring public finances, improving structural growth performance of the economy and rebuilding the institutional framework.

Another perspective was the criticism to the austerity packages which strongly focused on the reduction of public and private sector debt.” Given the spread of the austerity policies, the public and private debts that were accumulated during the last decade were unlikely to be

significantly reduced. It was even possible that peripheral countries could enter a deflationary spiral...” (Lapavitsas, 2012, p: 125)

From a labor organization point of view, European Trade Union Confederation (ETUC) strongly criticized the austerity measures applied in Spain. Bernadette Segol, the General Secretary of ETUC, made a declaration before the demonstration which 800,000 people joined and said;“The government’s measures are unfair and useless they will not provide any solution to the crisis. These budgetary cuts, which have also strongly hit Italy, Portugal, Greece, and Ireland, are merely ideological and are undermining social cohesion” (Segol, 2012).

2.4 Turkish Economy During the Crisis

2008 crisis is different from the other entire crisis experienced in the world history because the diffusion effect of both 1929 and 1970 crisis was limited. Especially with the increasing velocity of globalization in 2000’s, economic unions, FTAs and the fluidness of financial capital it has no more been possible to keep the impacts of a crisis in one state. Therefore, insufficiency of fiscal and monetary precautions has come forth. Although there have been attempts for a monetary cooperation among central banks, the crisis deepened because of the differences in social and fiscal policies. The sub-prime crisis started in 2006, got deeper in 2007 and globalized in 2008. In Turkey, the crisis got effective, particularly in the second half of 2008 but the real impact of the crisis was felt by 2010 and 2011 in the Eurozone. The reason for this lag was because of the difference in the transmission channels of the crisis sourced from the developed countries. Many emerging economies experienced high economic growth in 2010 and throughout most of 2011. “..., toward the end of 2011, emerging markets began to feel the effects of the European sovereign debt crisis as banks in Europe and the U.S. tightened credit in anticipation of a prolonged economic slowdown in Europe.”(Christensen, 2012, p: 10)

Unlike Eurozone and some other developed countries, Turkey got less affected by the global economic crisis based on a couple of reasons. First of all, due to the experience of the 2001 crisis, the Turkish banking industry had safe measures in terms of capital adequacy, liquidity and credit efficiency. “...Turkish banking sector which had been restructured after 2001 crisis could stand against the global crisis in a strong way.” (TÜSİAD, 2012, p: 1, 2)

Second, subprime credits and CDOs which were among the root causes of the global crisis were not marketed in Turkey.

Eurozone crisis has affected the Turkish economy through three channels. These channels are identified as follows;

- a) Financing problems,
- b) Portfolio investments,
- c) Foreign trade,

Credits form the most important channel which carries contagion effects which occur in the form of spillovers mainly through bank lending. Turkish banking system did not experience a structural distortion with the precautions taken and the regulations set after 2001 crisis. However, with the effect of the Eurozone crisis, banks started experiencing problems in credits and foreign borrowing as they could not prevent the degradation of the foreign funds. In Turkey, both banks and corporations used credits from European foreign banks with problematic balance sheets. As a consequence of the closure of this channel, the shrinkage of the credit volume forced companies and banks to shrink their balance sheets. The process that began with the credit channel revealed a degradation in the economy by creating a domino effect in micro and macro levels. In the micro level, the diminution in the usage of commercial credits affected overall supply chains of the enterprises. In the macro level, this decline stimulated a chain reaction from non-financial enterprises to financial institutions and households and showed itself in all aspects of the economy. Small-scale businesses to large companies, almost every sector, has been affected. Due to these effects, structural damages consolidated in bank balance sheets.

Another channel that 2008 crisis affected Turkey was the portfolio investments. Hedge funds and private equity funds were essential for Turkey from financial flow perspectives. During the crisis, a net inflow of these funds significantly declined, and this decline led problems in refinancing corporate and government debt and some infrastructure investments. However, due to tight fiscal policy and the firm stand of the Central Bank of the Republic of Turkey (CBRT), this effect was minimal.

Cömert& Çolak (2014) asserted that foreign trade was an important channel which affected Turkish economy. Problems in financial and credit markets have affected the real sector from the first quarter of 2009. As a reflection of the crisis in financial markets to the real sector, the growth rates of all countries have declined. An important part of the developed economies entered recession. Especially Turkey who performs a large portion of its exports to European countries experienced declines in its foreign trade due to the shrinkage in the demand

in foreign markets. Another effect was the depreciation of the euro which affects the trade flows in developing economies and also Turkey. On the one hand, there are countries whose currencies were pegged to the euro benefit from a weaker euro, which made their exports more competitive in world markets. Nevertheless, there are also countries with USD-linked exchange rates, which suffered from an appreciation of the USD against the euro. Because the Turkish economy is in a link with both currencies, the impact was both ways. However, due to the fact that the biggest portion of Turkey's economy is dependent on the relations with the Eurozone, the devaluation of Euro carried more significant risks to the Turkish economy compared to the fluctuations in USD.

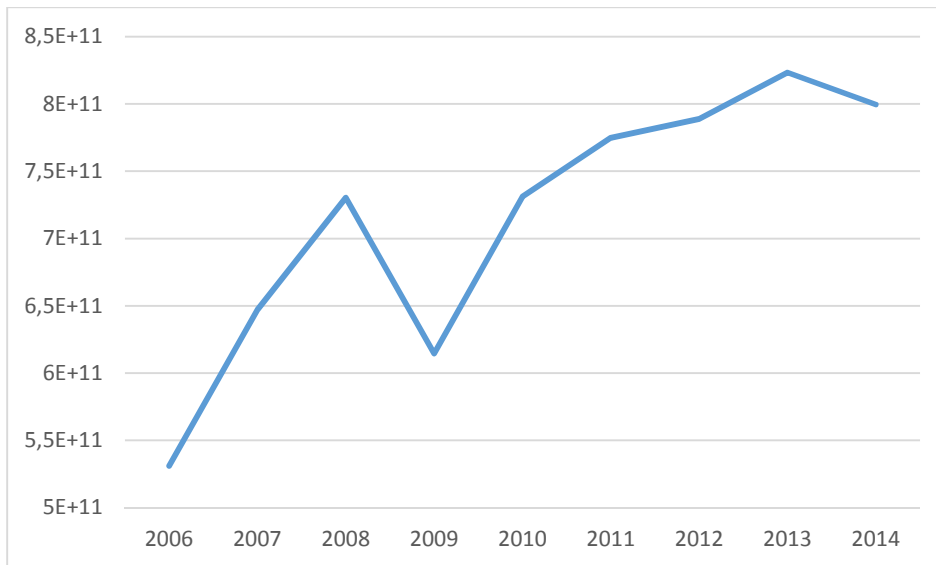
The effects of the Eurozone crisis on the Turkish economy will be examined under the headlines of GDP, employment, current account balance, external balance, inflation, fiscal analysis, industrial production index (IPI) and foreign trade perspectives.

2.4.1 GDP

GDP, which is a solid macroeconomic element and indicator, is deeply affected by the crisis. Effects of the crisis began to be felt in Turkey by the third quarter of 2008.

After the significant GDP increase in 2007 which is 647 billion USD from 530 billion USD in 2006, the growth of the Turkish economy continued in 2008. Most important contributor to this growth was the performance of the USD. Nonetheless, with 2009 with the impact of the Eurozone crisis, GDP of Turkey fell even lower than 2007 level to 614 billion USD. In 2010, Turkey's GDP caught 2008 level of 730 billion USD (Worldbank, 2015). After a sharp incline in the GDP after 2009, GDP declined from 2013 to 2014 to 800 billion USD level as seen in Figure 19.

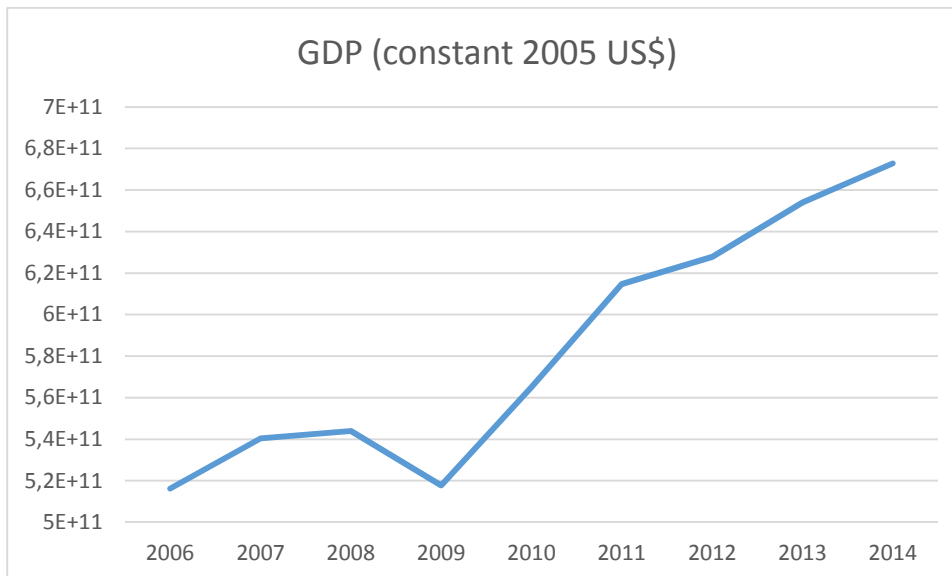
Figure 19: GDP of Turkey in Current USD (2006-2014)



Source: Worldbank, 2015

Figure 20 shows the GDP of Turkey in constant USD during 2006 and 2014. GDP of Turkey fell from 543 billion USD to 517 billion USD in 2009 (4.4% decline) which was almost the 2006 level. From 2009 to 2014 GDP increased to 670 billion USD and 628 billion by 2014 (Worldbank, 2015).

Figure 20: GDP of Turkey in Constant USD (2006-2014)

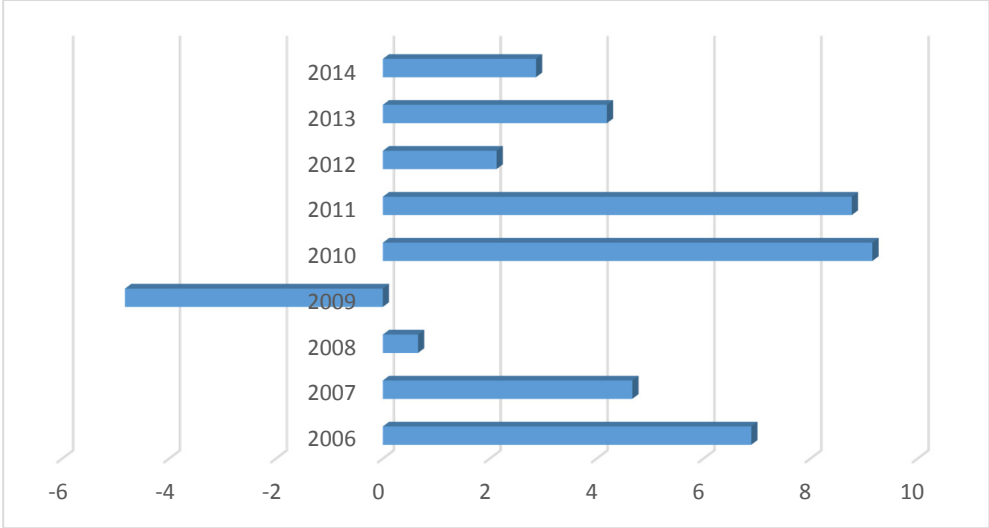


Source: Worldbank, 2015

Figure 21 shows that the decline in the annual growth rate in 2009 is significant, and the most important difference is in the growth rates of 2011 and 2012. One important point to be kept in mind is that the growth rate in Turkey was inconsistent and occurred below developing

countries' average when 2000's are taken into account. From the downsizing perspective, 2009 was the worst year compared to 2001 with 5.9%, and 1994 with 6.9% GDP decline rates in Turkey.

Figure 21: Annual GDP Growth Rate of Turkey (2006-2014)

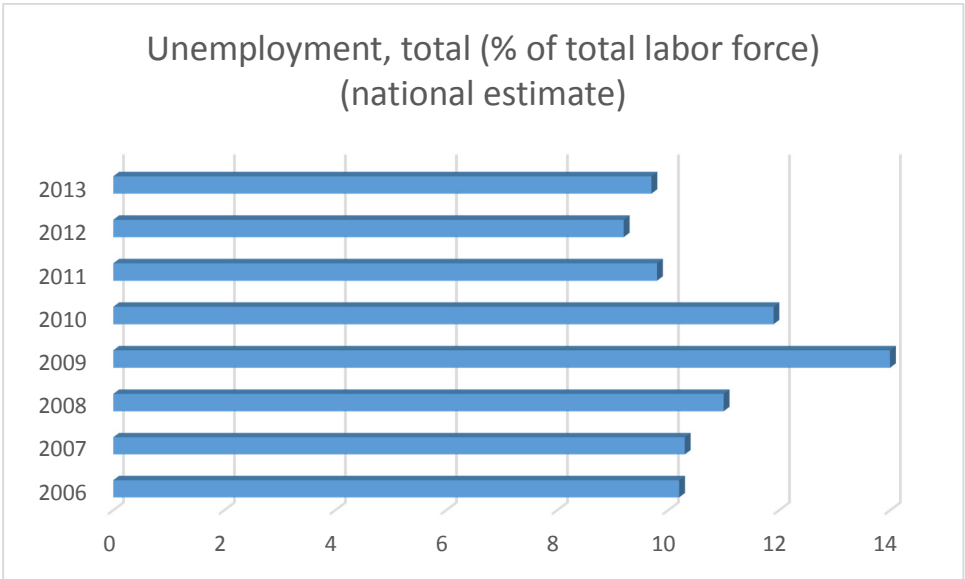


Source: Worldbank, 2015

2.4.2 Employment Analysis

As shown in Figure 22, in 2008, the unemployment rate reached 11%, and 2009 was the year with the highest unemployment rate where unemployment reached 14% and declined to 9.80% in 2011 gradually.

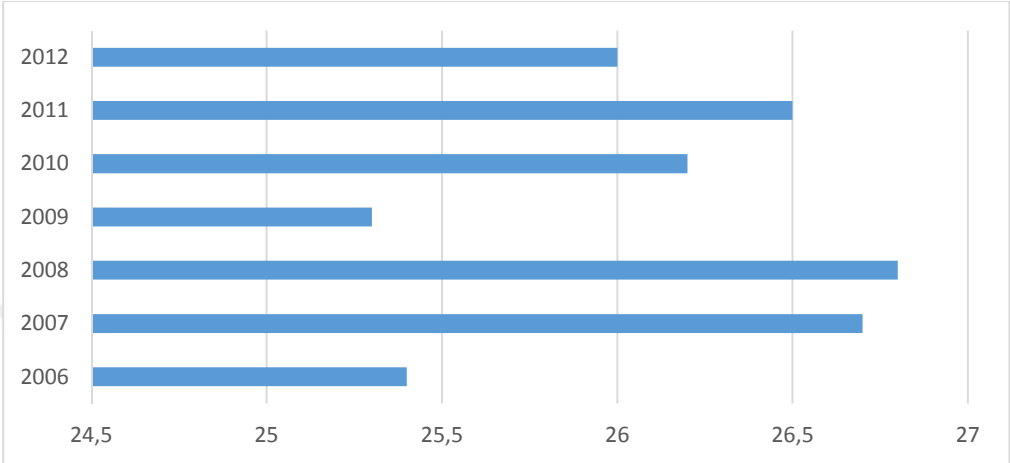
Figure 22: Unemployment Ratio of Turkey (% of total labor force) (2006-2013)



Source: Worldbank, 2015

In terms of the employment ratio in the industry, there is a significant decline between 2006 and 2007. Employment in the industry was 25.4 % in 2006 and increased to 26.8 % in 2008. However, with the effect of the global crisis, there was a sharp decline in 2009 with 25.3%. Employment in the industry rose to 26.5% in 2011 as indicated in Figure 23.

Figure 23: Employment of Turkey in Industry (% of total employment) (2006-2012)



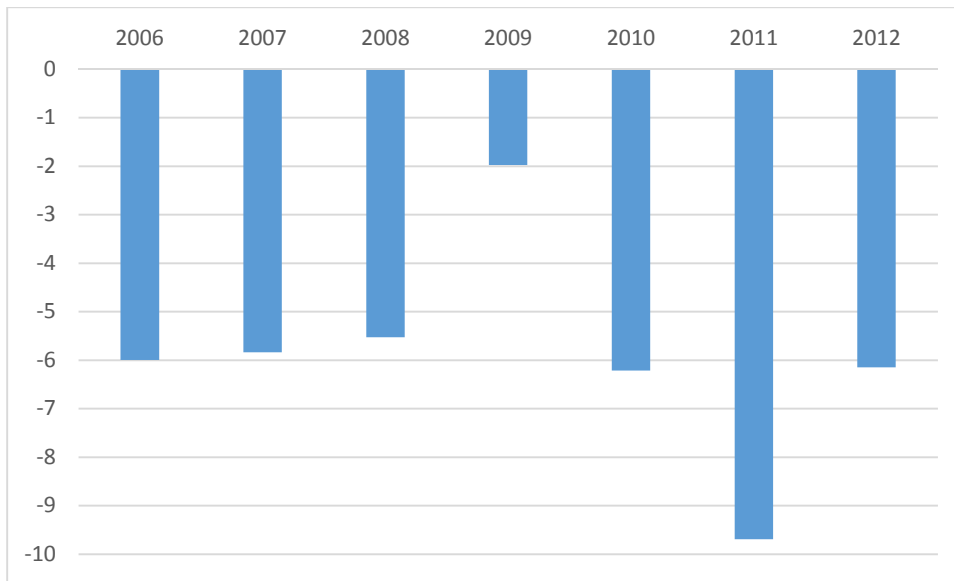
Source: WB WDI Database, 2014

2.4.3 Current Account Balance & External Balance on Goods and Services

During the crisis, with cheap loan facilities, cheap import, and low exchange rate policies, Turkish economy revived the real sector, achieved a growth rate goal, but couldn't solve the current account deficit problem. By not taking the necessary precautions for the current account deficit problem, the Turkish economy was deeply affected by the crisis with the shrinkage during the financial crisis.

Current account deficit is a major problem for Turkey. Even in the crisis years where the imports have fallen to a deep level, current account deficit was around 2 % in 2009. This ratio increased to 6% by 2010 and nearly surpassed 10 % in 2011 and decreased lower than 6% level in 2014, as shown in Figure 24. With the fall in energy prices, the decline continued in 2015.

Figure 24: Current Account Balance of Turkey (% of GDP) (2006-2014)



Source: Worldbank, 2015

As indicated in Table 15, the budget deficit to GDP was the highest in 2009 and 2010. Although the natures of 2001 and 2009 crisis were different, the impact on budget balance was negative in both. The important point is, in 2001, due to the declining internal demand, current account balance was positive, however even it fell to 2% level, still having a current account deficit was a significant risk for Turkey.

Table 15: Current Account Balance/GDP and Budget Balance/GDP Ratios (2006-2014)

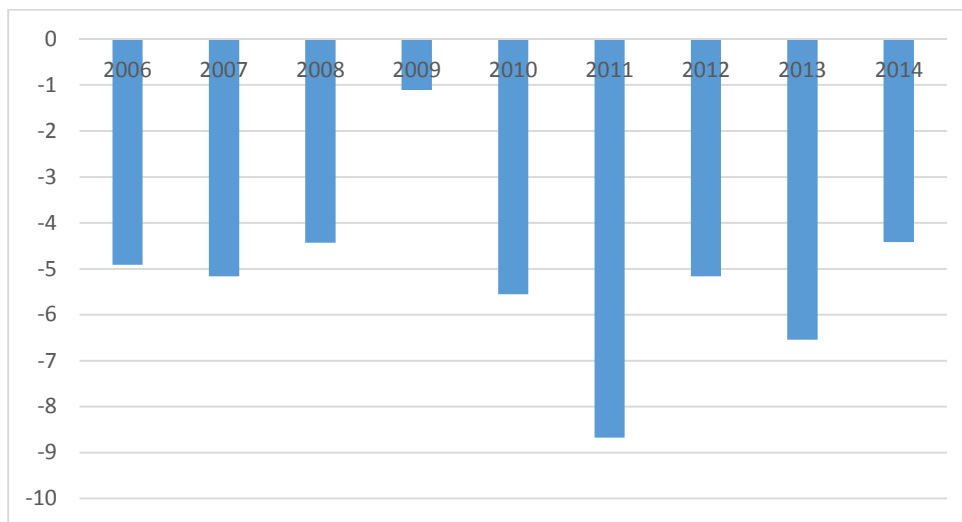
Year	Current account balance (% of GDP)	Public Finance- Cash surplus or deficit % of GDP
2006	-6,00	-0,60
2007	-5,84	-1,60
2008	-5,50	-1,80
2009	-1,95	-5,50
2010	-6,20	-3,60
2011	-9,68	-1,40
2012	-6,15	-2,10
2013	-7,85	-1,20
2014	-5,75	-1,30

Source: Worldbank& TUIK, 2015

Just like the current account deficit, external balance on goods and services is also a significant problem for Turkey. The external deficit was around 5 % in 2006, and it was nearly the same level in 2012. Turkey's most negative year in terms of external balance on goods and

services²⁵ was 2011 with 9 % deficit as indicated in Figure 25. In 2009, the external deficit on goods and services was the lowest with nearly 1 %.

Figure 25: External Balance on Goods and Services of Turkey (% of GDP) (2006-2014)



Source: Worldbank, 2015

2.4.4 Inflation Analysis

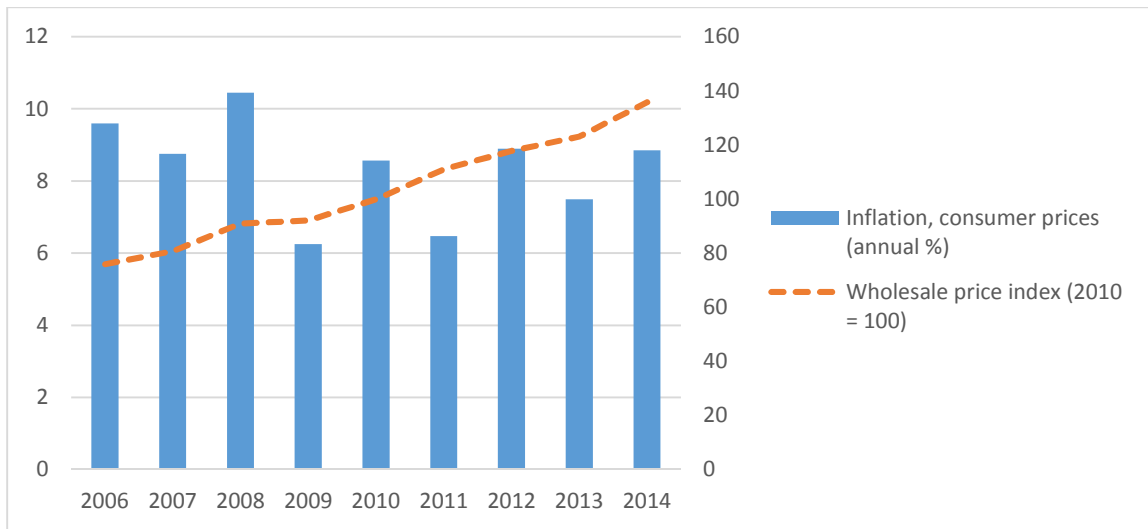
The inflation rate of Turkey decreased significantly from 10.51% in 2006 to 6.25% in 2009 as shown in Figure 26. “With respect to the international fiscal crisis, Turkish economy began 2007 with its milder domestic demand structure. However, with the liquidity crunch in mid-2007, the crisis made itself felt in developing countries in 2008. Quick capital outflow from developing countries, like other countries, caused the Turkish currency to decline in value.”²⁶ (Yılmaz, 2008, p: 7) after 2009, consumer prices fluctuated and approached 9 % level in 2012.

From the wholesale perspective, referencing the 2005 year as 100%, there is a significant increase in 2008 and 2011 in the wholesale price index. Between 2007 and 2008, the producer price index rose from 5.94% to 8.11% between 2007 and 2008” (CBRT, 2010).

²⁵ External balance also includes the services and refers to the difference between the exports and imports of goods and services.

²⁶ Inflation may occur in countries which doesn't possess a strong currency. By harming the basic variables of economy, inflation empowers retrospective expectations which drive the economy into inflation spiral and makes inflation more chronic. On the other hand, with respect to other countries, the implementation of the fixed exchange rate system in countries with high inflation rate increases the real value of currency and affects current account balance negatively. (Çağlar, 2003, p: 149)

Figure 26: Inflation in Turkey (2006-2014)

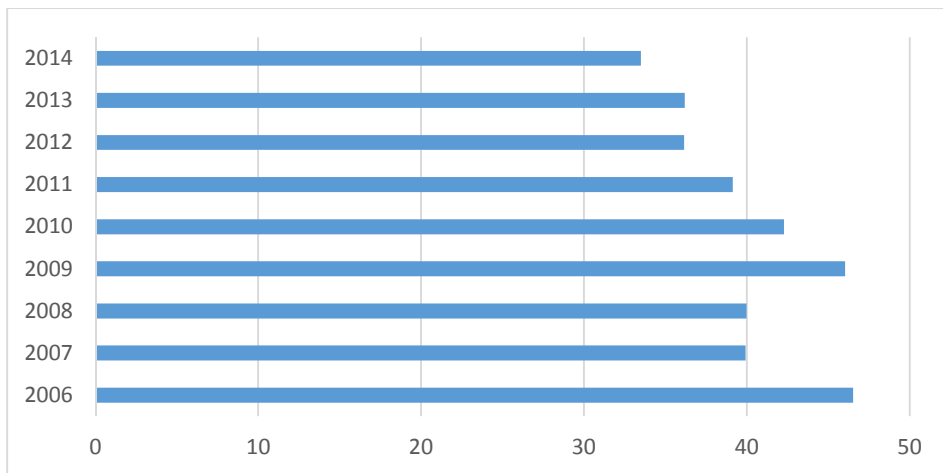


Source: Worldbank, 2015

2.4.5 Fiscal Analysis

Between 2006 and 2014, Turkey sustained approximately 40-45% level debt, however through 2014 there is a significant decline in the general government gross debt as 2014 figure was about 33 % as designated in Figure 27.

Figure 27: General Government Gross Debt of Turkey (% of GDP) (2006-2014)

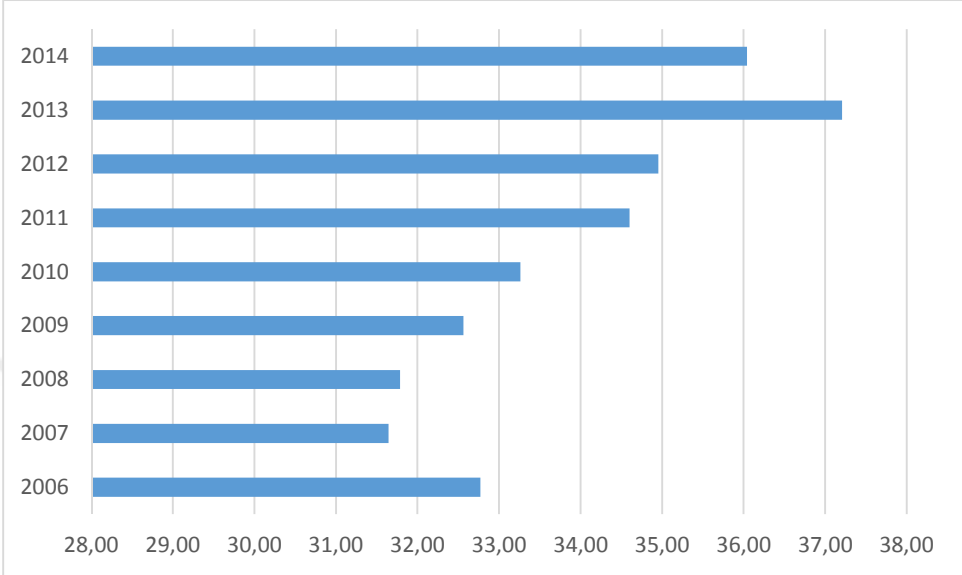


Source: World Economic Outlook Database, 2015²⁷

²⁷ 2014 value of general government debt as a % of GDP data is an estimate by the World Economic Outlook.

In terms of general government revenue, Turkey’s performance is slightly improving from 2006 to 2013 as it slightly surpassed 37 % level in 2013 but declined to 35% level in 2014 as it is shown in Figure 28.

Figure 28: General Government Revenue of Turkey (% of GDP) (2006-2014)



Source: World Economic Outlook Database, 2015²⁸

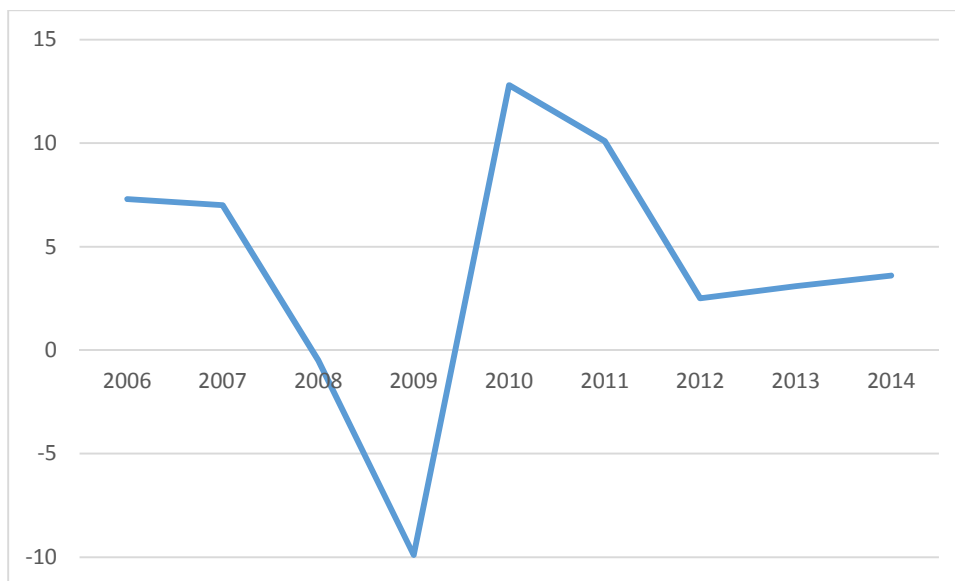
2.4.6 IPI Analysis

Figure 29 shows that there is a significant decline in IPI in 2009 with the decline in both internal and external demand. In 2006, IPI was around 7%, and TUIK summarizes Turkey’s IPI performance as putting a special emphasize to 2006. TUIK (2006) stated that in 2006 when the crisis started in the USA, Turkish IPI²⁹ increased 2,5% and in sub-sector level, mining sector index decreased 13.3%, manufacturing industry sector index increased 3.3% and electric, gas and water sector indexes increased 2.5%. After the significant fall in 2009, IPI is still under 5% by 2014 which carries significant risks for the Turkish economy.

²⁸ 2014 value of general government revenue as a % of GDP data is an estimate by the World Economic Outlook.

²⁹ Industrial production refers to the volume of output generated by production units classified under the industrial sectors, i.e. B, C, D and E of the International Standard Industrial Classification of all Economic Activities (ISIC Rev. 4). Data are generally presented in indices of industrial production, which measure volume changes of output, as well as in physical volume or in a ratio. Specific information is available in country metadata. (OECD, 2015)

Figure 29: Turkey IPI (Growth Based on Previous Year) (2006-2014)



Source: OECD, 2015

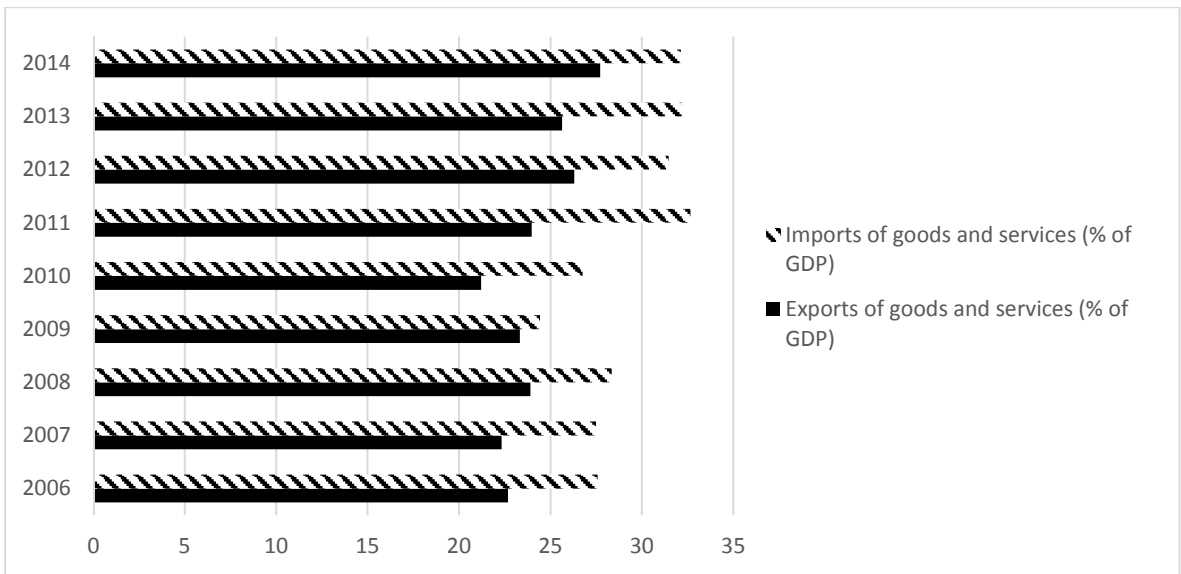
2.4.7 Foreign Trade & Direct Investment Analysis

Foreign trade analysis will be made on the imports and exports of goods and services, whereas direct investment analysis will be made on inflow and outflow aspect.

As shown in Figure 30, the share of exports of goods and services in total GDP of Turkey increased to 25 % in 2012 and reached the highest value by 2014. The negative impact of the crisis is in 2010 where the ratio declined to 21 %. The rationality of the modest increase in Turkey's Goods and Services export ratio in GDP is due to the increasing internal consumption. Therefore, the magnitude of the crisis in foreign trade may be considered as declining.

In the imports portion, Turkey's imports of goods and services increased from 27.5% to 31 % in the 2006-2012 era which is a larger step-up than the exports. In 2011, the ratio of the imports to the GDP approached 32%.

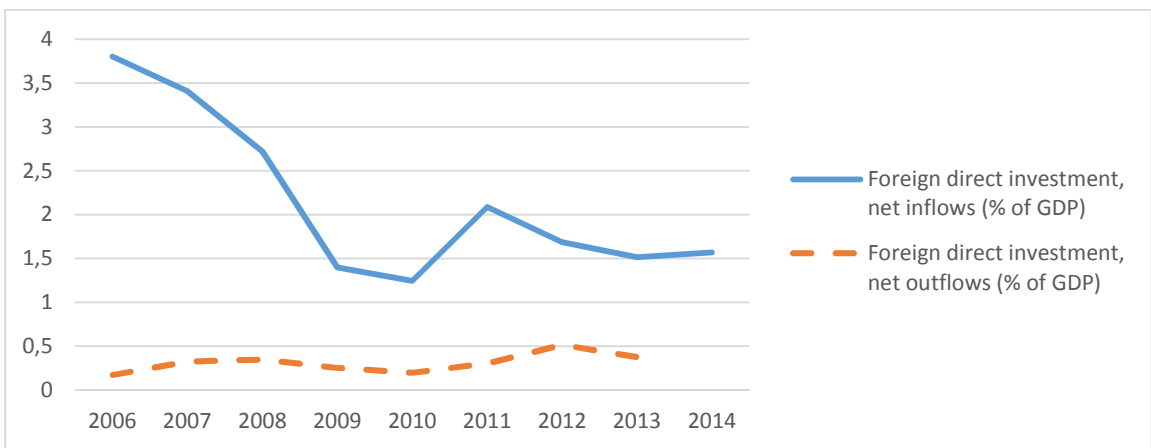
Figure 30: Trade in Goods and Services of Turkey (% of GDP) (2006-2014)



Source: Worldbank, 2015

From FDI perspective, 2006 was the most successful year with 3.80 % of GDP inflow and 2010 was the worst year with 1.25 % inflow. The outflow of Turkey increased after 2010 and surpassed 0.50% level in 2012 as demonstrated in Figure 31.

Figure 31: Net Inflows & Net Outflows of Turkey (% of GDP) (2006-2014)

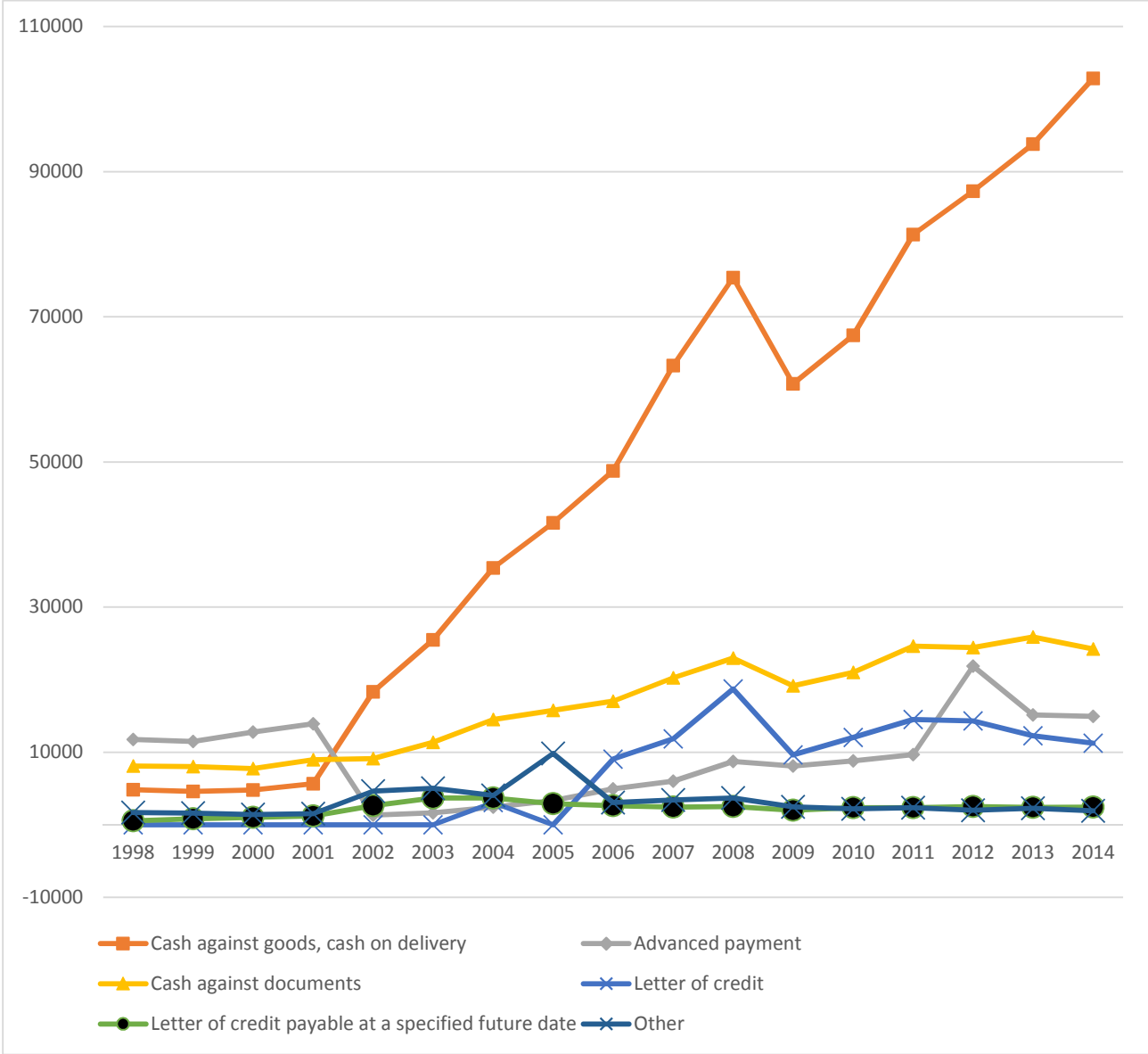


Source: Worldbank, 2015

From trade finance point of view, total exports of Turkey have reached nearly 160 billion USD by 2014 as shown in Figure 32. The method that is used the most is cash against goods, cash against delivery, which has reached a peak of 87 billion USD. Cash against documents is the second method which is used the most as it reached 24 billion USD. The most important point is the dramatic rise in advanced payment with 21 billion USD. This is an important indicator of the diminution of trust of Turkish exporters to their international

customers. Letter of credit method made a peak in 2008, the crisis year, nonetheless, it declined sharply in 2009 most probably due to the high cost of it.

Figure 32: Turkish Trade Finance Instruments in Export (million USD) (1998-2014)

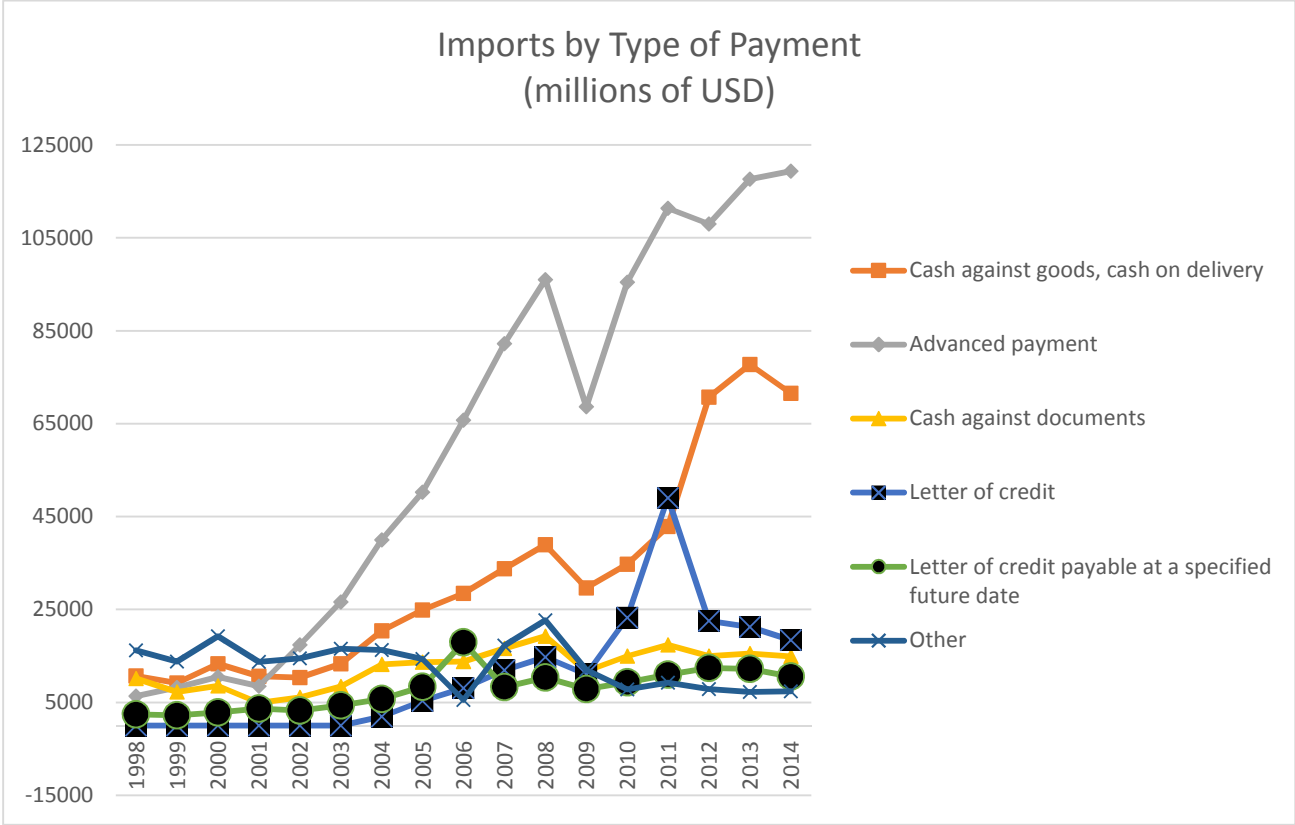


Source: TUIK, 2014

On the import side, total imports have declined from 240 billion USD to 236 billion by 2012 as indicated in Figure 33. The same trend was followed by the imports done with advanced payment which is the riskiest method. There is a significant increase in the transactions done with this method that shows the tendency of importers not to take risks in payment collection. Cash against goods, cash against delivery method also increased dramatically to 70 billion USD. Usage of the letter of credit caught a peak in 2011 of 4.9 billion USD, however, fell dramatically to 2.25 billion USD. The pattern of the letter of credit usage is different from the

total and also the cash against the good which may be interpreted as the lag of the impact of the Eurozone crisis in the Turkish banking system.

Figure 33: Turkish Trade Finance Instruments in Import (1998-2014)



Source: TUIK, 2014

3 Impact of Crisis on Trade

The third chapter starts with the interrogation of the effects of the global crisis on world trade. As the world economies, including Turkey, enters crisis by September 2008 after the bankruptcy of Lehmann Brothers, the impact of the subprime crisis increased and turned into a global crisis. Because the impact of the Eurozone crisis in world trade is very significant, it will be examined in a separate section briefly.

3.1 Impact of Global Crisis on World Trade

The Global crisis of 2008 had a severe impact also on the globalization of trade, which has been a long effort for the world nations. The decline in demand, the hurdles in trade finance, issues as disagreements on the taxation of investments and the discussions on the ownership of intellectual property were already the most known and substantial problems for the world economies to overcome. The shifting balance between the developed and the developing countries which is on benefit of the developing countries was reflected in DOHA rounds eventually due to the level of globalization, usage of technology and the aging of the population in the developed economies. With that landscape, the shock forthcoming with the crisis eventually had different impacts on the countries' approach to foreign trade.

The subprime crisis had affected all stakeholders severely in the USA. From households' perspective, the loss was enormous. "Total home equity in the United States, which was valued at 13 trillion USD at its peak in 2006, had dropped to 8,8 trillion USD by mid-2008 and was still falling in late 2008. Total retirement assets, Americans' second-largest household asset, dropped by 22 percent, from 10,3 trillion USD in 2006 to 8 trillion USD in mid-2008. During the same period, savings and investment assets (apart from retirement savings) lost 1.2 trillion USD, and pension assets lost 1.3 trillion USD." (Altman, 2009)

The global crisis severely impacted developing countries. The need for labor-intensive products³⁰ fell, and the trade volumes decreased. Countries, except oil producers, experienced significant GDP losses, and unemployment increased in these countries. Particularly in 2009, strong exporters like China was affected due to the fall in import demand from the USA. "Emerging Markets with stronger external linkages—higher dependence on demand from advanced Economies or larger exposure to foreign bank claims—experienced sharper falls in

³⁰ Labor-intensive products have higher price elasticity compared to capital-intensive products and a deficiency in demand in the developed countries eventually cause decline in trade volumes and also an increase in the developing countries as a decrease in the demand for a good/service ends up also with a decrease in the requirement of the particular resource used in that good/service.

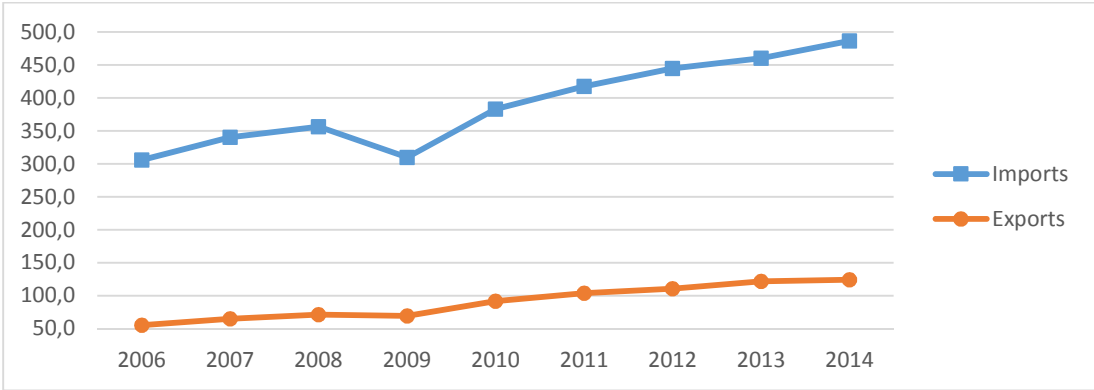
output during the crisis. The analysis also indicates that countries that experienced pre-crisis credit booms experienced sharper output falls during the crisis, although to a lesser extent than during previous crisis episodes.”(Llaudes et al., 2010, p: 24)

The dramatic decrease in GDP growth in the world economy was examined in the previous chapter. Most important reasons for this decrease were the insufficient demand in the consumption and the decline in trade volume. “One of the main consequences of the crisis has been the drastic decline in world trade, generated largely by the sharp drop in lending for trade transactions and the greater vulnerability of trade goods to the fall in worldwide demand” (United Nations Economic Commission for Latin America & the Caribbean, 2009, p: 19)

Global crisis affected both developed and the developing economies in terms of unemployment, fall in exports, poverty, and capital flows. However, while the decline in demand, increased protectionism, the advance of state capitalism, and expensive rescue packages were the most significant problems in the developed world, starvation, health problems and issues related to migrant laborers were the major problem areas in the developing countries (USA Congressional Research Service, 2014).

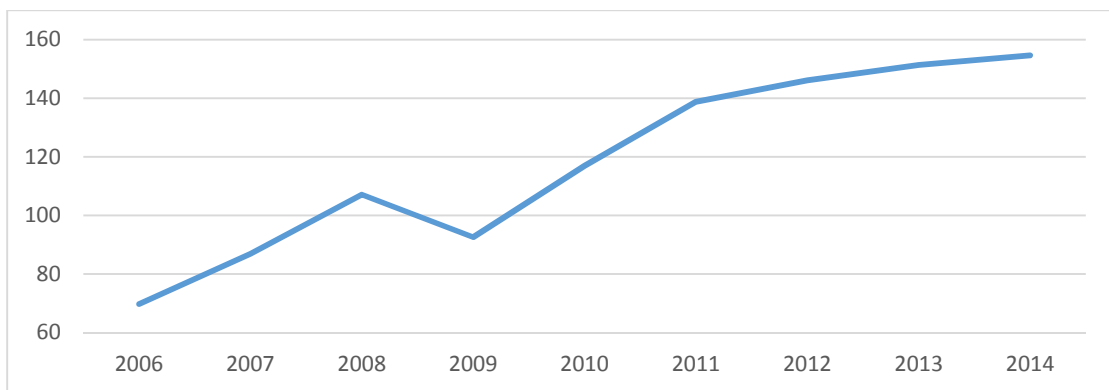
The decline in the domestic demand occurred differently not only between developed and developing countries but also among the countries in the same league. The networks between manufacturing and service industries affect the balance between exporters and importers. Especially in 2009, strong exporters like China was affected due to the fall in import demand from the USA as shown in Figure 34, whereas India is affected due to the downfall in its service sector as indicated in Figure 35.

Figure 34: USA Trade in Goods with China (billion USD) (2006-2014)



Source: Trademap, 2015

Figure 35: India Service Exports (billion USD) (2006 -2014)



Source: Worldbank, 2015³¹

Hurdles in trade finance are the second important issue. The new possibilities in transportation, usage of technology in the fabrication and the scattering of the production process create the demand for trade finance. Trade finance facilitates international trade, so far, at crisis time, it is a contagion for the negative impacts of the economic crisis. “The negative impact on world trade finds its way through two main channels. First the credit crunch resulting from the financial market turbulences has led to a decline in the supply of trade finance, which has rightly been described as the oil of the wheels of international trade; and secondly, spillover of the financial crisis into the real economy has caused the worst recession since the Great Depression and fuelled a contraction of trade volumes.” (Bheenick, 2009, p: 2)

The international institutions also underline the importance of trade finance. “Continuous financing of trade is crucial as more than 90% of international trade flows involves some credit, mostly short-term.” (WTO, 2007, p: 1) Therefore, any fluctuation on the demand side in merchandise markets and its impact on credit rates affect trade finance channels.

Protectionism in trade is the third area to investigate. What are the types of trade protectionism? “Trade barriers include all costs of getting a good to the final consumer other than the cost of producing the good itself: transportation costs (both freight costs and time costs), policy barriers (tariffs and non-tariff barriers) and internal trade and transaction costs (including domestic information costs, contract enforcement costs, legal and regulatory costs, local distribution, customs clearance procedures, administrative red tape, etc.)”(WTO, 2014, p:

³¹ 2014 service export values are estimated.

55). Traditionally tariffs were the most used trade barriers. However, non-tariff measures usage is increasing not only in terms of products but also in terms of countries using them.

The contribution of protectionism to the global crisis is not the subject of this dissertation. However, the indications about trade barriers that tend to change during and after a crisis will solely be discussed as far as protectionism rose, and signs of discrimination against foreign goods and services increased since 2008. Another issue is the introduction of new protectionist measures, although their impact seems to show up in the mid and the long term that will create a possible negative effect on global trade. According to the research performed by Simon J. Evenett in the Global Trade Alert study (November 2011-June 2012), 429 new protectionist measures were introduced, and 309 of them were the protectionist measures except unfair trade and safeguards investigation. Among these 309 measures, 37 were amber which meant that this measure has been implemented since November 2008 and likely involves discrimination against foreign commercial interests or this measure has been announced or is under consideration and would (if implemented) almost certainly involve discrimination against foreign commercial interests. 220 measures were red which meant that the measure has been implemented since November 2008 and almost certainly discriminates against foreign commercial interests (Evenett, 2013). Therefore, Table 16 shows that there is a significant rise in the trade protectionism after the crisis.

Table 16: Protectionism³² Trend Analysis (2012)

Statistic	This report(June 2012)		Increase from previous G20 meeting(November 2011)	
	Total	Total except unfair trade and safeguards investigation	Total	Total except unfair trade and safeguards investigation
Total number of measures in GTA database	2430	1793	429	309
Total number of measures coded green	553	449	69	52
of which currently in force	350	333		
of which no longer in force	87	85		
Total number of measures coded amber	538	319	48	37
of which currently in force	161	159		
of which no longer in force	41	39		
Total number of measures coded red	1340	1025	313	220
of which currently in force	1082*	797		
of which no longer in force	258	228		

Source: Global Trade Alert, 2014

3.2 Impact of the Eurozone Crisis on World Trade

The Eurozone is one of the unique models of economic integration in the world. Consisting of 19 countries, 320 million population, the total GDP of the Eurozone is nearly

³² (a)Sum of these represents the total number of protectionist measures currently in force. (b) Red: The measure has been implemented since November 2008 and almost certainly discriminates against foreign commercial interests.(c)Amber:(i) The measure has been implemented since November 2008 and likely involves discrimination against foreign commercial interests; OR (ii) The measure has been announced or is under consideration and would (if implemented) almost certainly involve discrimination against foreign commercial interests.(d)Green:(i) The measure has been announced and involves liberalization on a non-discriminatory (i.e., most favored nation) basis; OR (ii) The measure has been implemented since November 2008 and is found not to be discriminatory: OR (iii) The measure has been implemented since November 2008, involves no further discrimination, and improves the transparency of a jurisdiction’s trade-related policies”.(Global Trade Alert, 2014)

about 10 trillion euro. Due to the size of the Eurozone, shocks caused by an economic crisis not only impact the member states but all world economy.

The Eurozone crisis carried 3 significant risks for the global economy as the impact on the trade partners, the recession risk it brought to the global economy and its impact on the real sector and financial markets in the Eurozone.

3.2.1 Impact of the Eurozone Crisis on its Trade Partners

First, change in Euro value, directly impacted the Eurozone trade partners, especially developing countries, some of whom are important trade partners for goods and services like China and India. Change of the Euro against USD also created risks for the USA in terms of its trade relations with third parties.

As Lehmann Brothers filed for Chapter 11 bankruptcy protection³³ on September 15, 2008, Euro/USD parity reached 1.464 on 26 September. By 02.12.2009 parity reached 1.509. During the months which subprime crisis showed its effects, the euro was much powerful against the USD. However, as the crisis began to show its impacts not only in the Eurozone but also in the other countries of the EU, the euro lost its value, and the bottom value was 1.1959 by 07.06.2010. Euro& USD exchange rate fluctuated from June 2010 to mid-2014 with a lower frequency as it can be seen in Figure 36.

³³The chapter of the Bankruptcy Code provides (generally) for reorganization, usually involves a corporation or partnership. (A chapter 11 debtor usually proposes a plan of reorganization to keep its business alive and pay creditors over time. People in business or individuals can also seek relief in chapter 11.) (US Courts, 2015)

Figure 36: Euro/USD Exchange Rate (15.09.2008-07.08.2014)

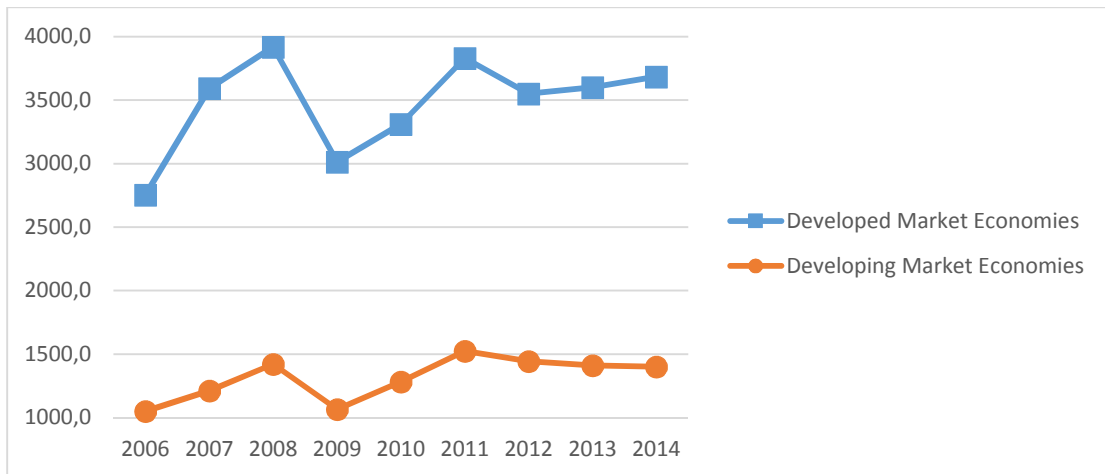


Source: ECB, 2015

The second pillar which the Eurozone crisis impacted its trade partners was the decline in demand. Eurozone imports were not affected by the sub-prime crisis as EU 15 imports from the developed market economies reached 4 trillion USD and imports from the developing market economies reached 1.5 trillion USD in 2008. However with the effect of the Eurozone crisis, imports of the EU15 decreased to 3 trillion and approximately 1 trillion from the developed market economies and the developing market economies respectively in 2009 as indicated in Figure 37. The increase in 2010 and 2011 did not continue and by 2012 total imports declined to 2007 level in both developed and developing market economies. After 2012, the imports followed an increasing trend in the developed market economies whereas there is a decline in the imports of the EU15 from the developing economies.

The impact of the Eurozone crisis on its trade partners will be explained through Figure 37 to Figure 42. Brazil, Russian Federation, India, China, Mexico and Indonesia will be examined based on their similarities to Turkey.

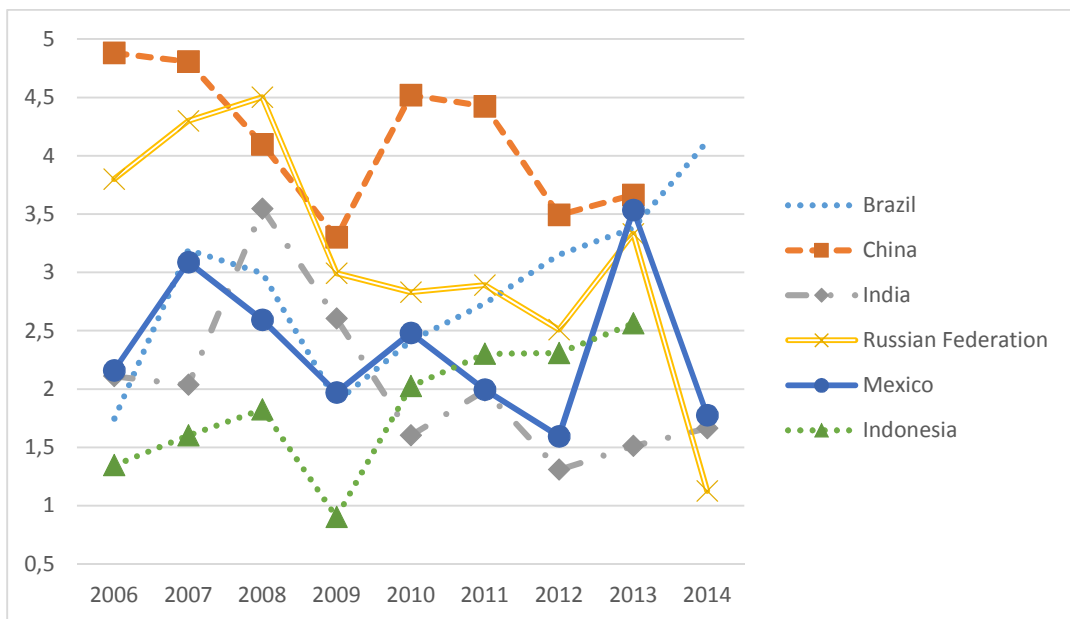
Figure 37: EU 15 Imports (million USD) (2006-2014)



Source: Trademap, 2015

The fluctuation in the euro was not the only problem for the trade partners of the Eurozone. Due to the financial instability, the bankruptcy of some financial institutions and the deleveraging process during the Eurozone crisis, FDI in the developing countries were affected negatively. By 2009, Russia's FDI started declining and experienced a sharp fall by 2012. Brazil and Indonesia have increasing FDI trend after the Eurozone crisis as demonstrated in Figure 38.

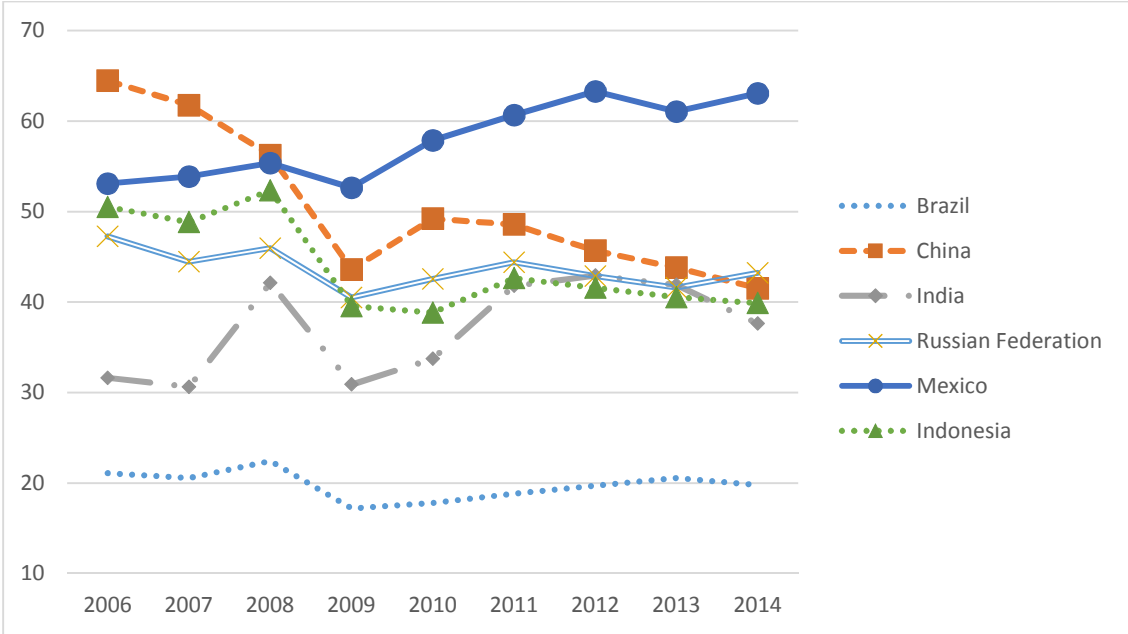
Figure 38: FDI, net inflows (% of GDP) of BRIC, Mexico, Indonesia (2006-2014)



Source: Worldbank, 2015

Developing countries trade is diversely affected by the subprime crisis as the decline in their trade portions started in 2007 and reached a minimum level in 2009. After 2009, there is a slight increase in the developing states trade portion in their total GDP. As indicated in Figure 39, especially Mexico and India had significant increases after the Eurozone Crisis started. China experienced a significant decline with the effect of the subprime crisis and could not catch the same level as its trade portion kept stable after 2010.

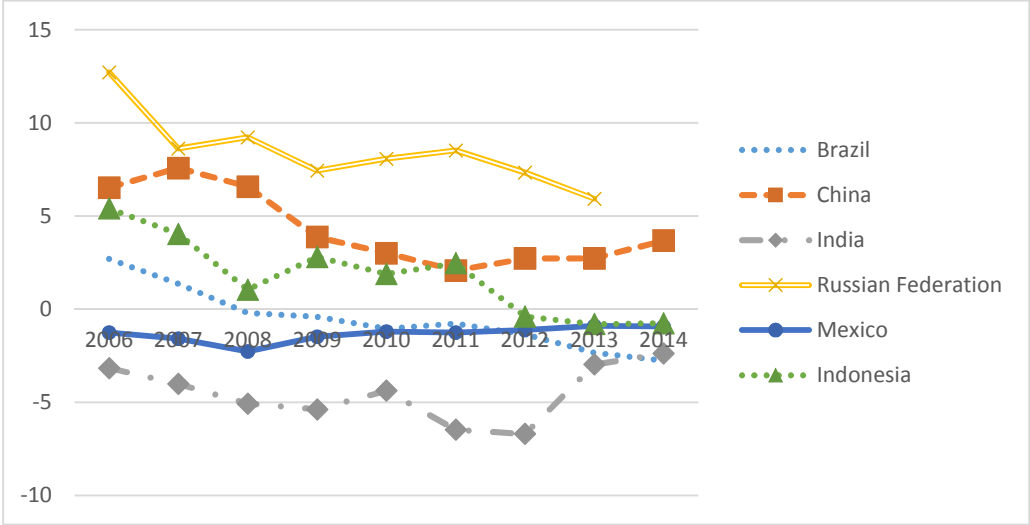
Figure 39: Merchandise Trade (% of GDP) of BRIC, Mexico, Indonesia (2006-2014)



Source: Worldbank, 2015

As shown in Figure 40, developing countries’ external balance on goods and services are in a negative pattern since 2007. Only Russia and China had an external surplus on goods and services after 2008, whereas the other developing countries are experiencing external deficits. Mexico, whose external deficit exceeded %2 by 2008, started decreasing this deficit by 2009.

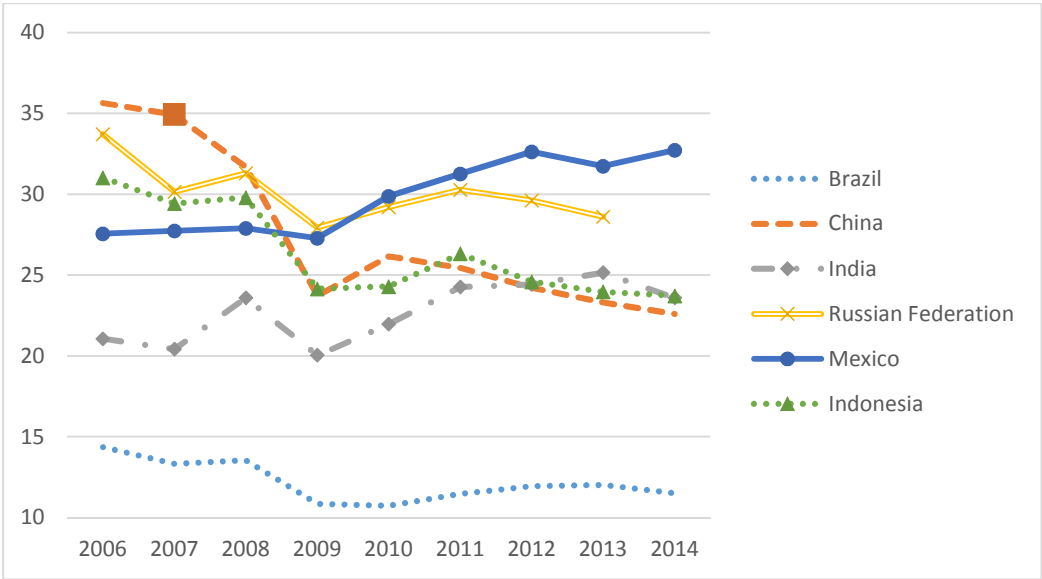
Figure 40: External Balance on Goods & Services (% of GDP) of BRIC, Mexico, Indonesia (2006-2014)



Source: Worldbank, 2015

Figure 41 shows that, with the start of the Eurozone crisis in 2009, shares of the exports of goods and services declined significantly and increased afterwards in China, India, Russia and Indonesia. Especially decline in China is significant and this decline had started in 2007 with the impact of the decrease in demand for imports in the USA. Mexico’s pattern was almost stable before the crisis and increase significantly after 2009.

Figure 41: Export of Goods & Services (% of GDP) of BRIC, Mexico, Indonesia (2006-2014)



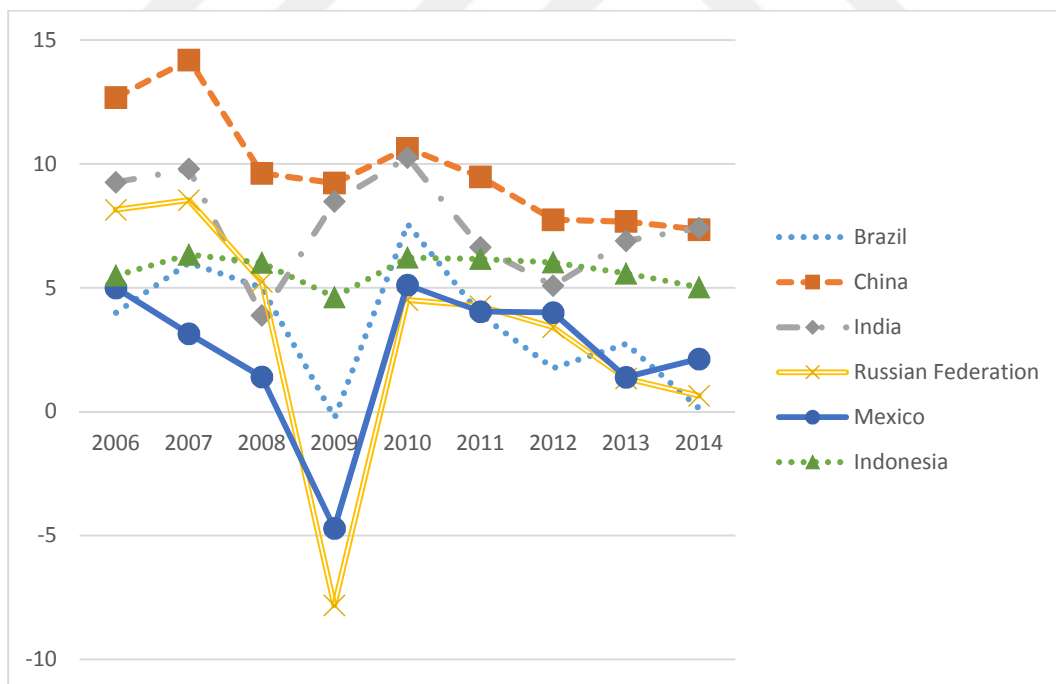
Source: Worldbank, 2015

3.2.2 Recession Risk Triggered by the Eurozone Crisis

As the debt crisis transforms into a systemic crisis, contagion effects of the Eurozone crisis carry the risk of recession in the global economy. The recession is always a major risk for the global economy. Edwards (2000) summarizes the characteristics of the term “contagion” in 3 aspects. These aspects are the channels of the contagion effect as a transmitter across countries, the magnitude of the contagion effect and the vulnerability of a particular country to these effects.

From a GDP perspective, not only the developed countries but also, the developing states had sharp GDP declines. As indicated in Figure 42, Brazil, Russia, and Mexico had sharp GDP declines in 2009 whereas India had a significant decline in 2008 which may be interpreted as India was much more affected by the subprime crisis. India had an increase in its GDP growth in 2009 which also continued in 2010, but the GDP growth rate of India declined below the 5 % level by 2012. Indonesia followed a stable path between 5-7% bands with an exception of the year 2009.

Figure 42: GDP Growth of BRIC, Mexico, Indonesia (2006-2014)

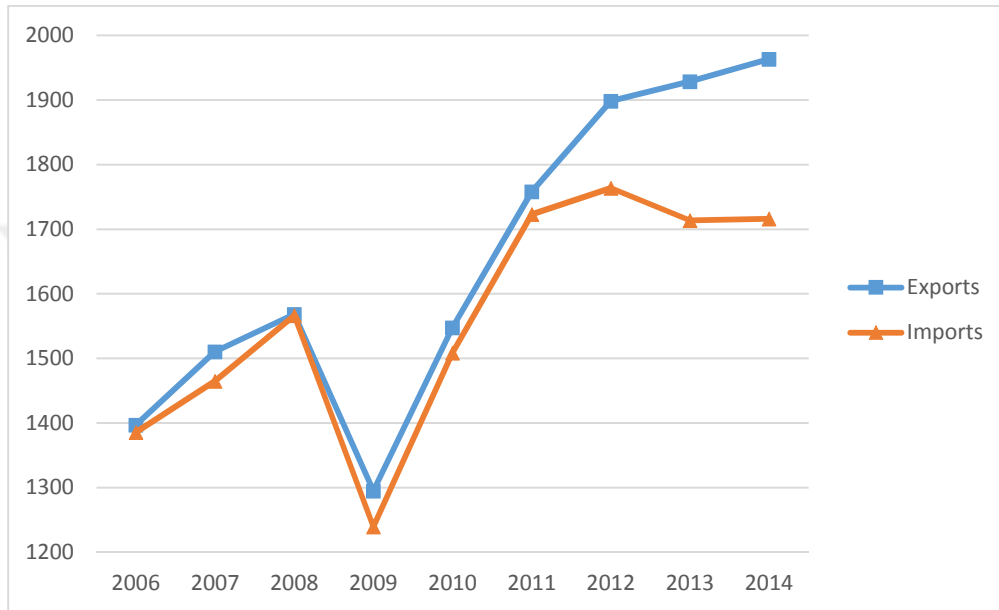


Source: Worldbank, 2015

3.2.3 Impact of the Eurozone Crisis on the Eurozone States

The Eurozone crisis created significant consequences also for the member states. In terms of trade, after seeing a peak both in exports and imports in 2008, there was a sharp decline in 2009 below 1,3 billion euros. Both exports and imports followed an increasing trend in 2010 and 2011. However, imports entered a declining trend after 2012 as shown in Figure 43.

Figure 43: Trade Figures in the Eurozone (€ millions)

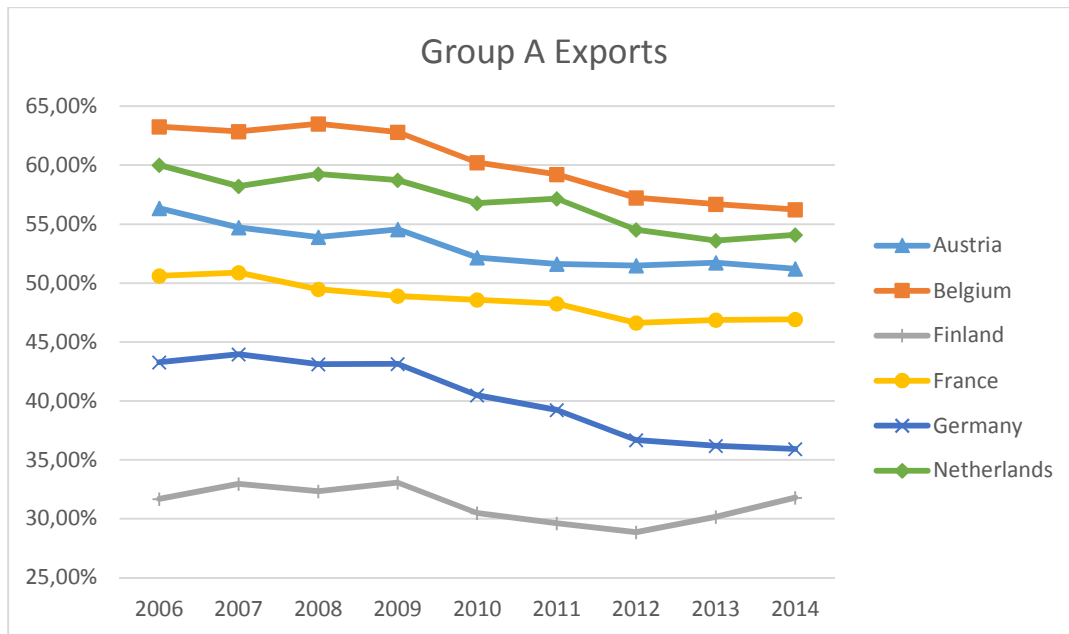


Source: ECB, 2014

From the intra-Eurozone trade perspective, an analysis is made as Eurozone countries are classified into groups as Austria, Belgium, Finland, France, Germany and the Netherlands (Group A) whose GDP is over 100 billion USD, Cyprus, Estonia, Luxembourg, Malta, Slovakia and Slovenia (Group B) whose GDP is under 100 billion USD and GIIPS.

As shown in Figure 44, Group A exports to Eurozone have the tendency to fall during 2006 and 2014 except Netherlands exports to the Eurozone increased after 2012.

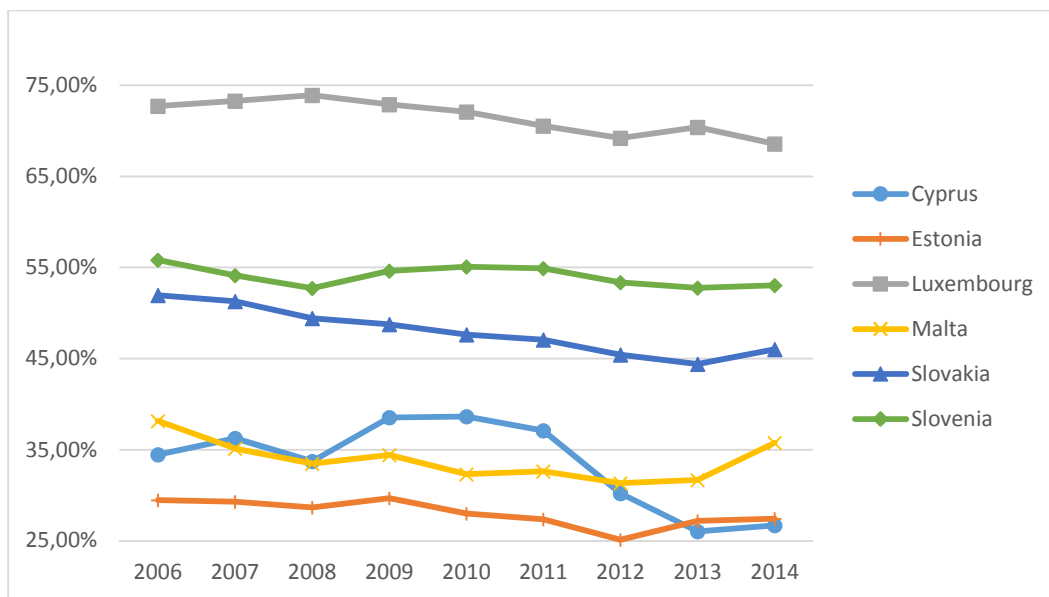
Figure 44: Group A Exports to Eurozone (2006-2014)



Source: Trademap, 2015

Group B exports to Eurozone also followed a similar pattern with Group A countries and intra-Eurozone export declined. From the exports to Turkey perspective, Malta made a significant increase, especially after 2012 while other Group B states exports to Eurozone kept a stable pattern except Slovakia as indicated in Figure 45.

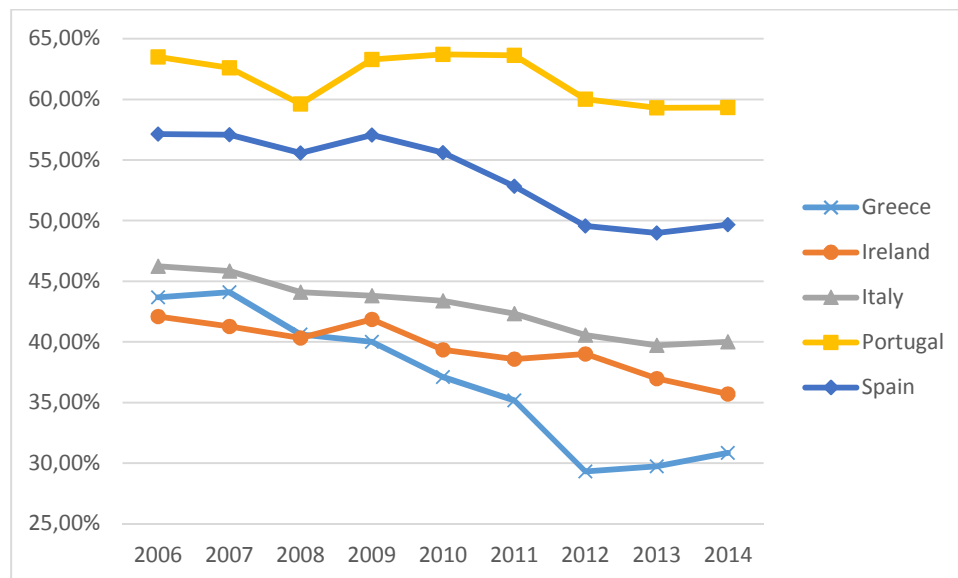
Figure 45: Group B Exports to Eurozone (2006-2014)



Source: Trademap, 2015

GIIPS exports to Eurozone have the tendency to fall as demonstrated in Figure 46 except Portugal kept stable more or less.

Figure 46: GIIPS Exports to Eurozone (2006-2014)



Source: Trademap, 2015

3.3 Impact of the Eurozone Crisis on Turkish Trade

The impact of the Eurozone crisis on Turkish trade will be examined from different perspectives. First of all, the impact of the volatility in the exchange rate will be discussed. Second, the impact of the Eurozone crisis on trade indicators as trade balance, trade volume, terms of trade and trade specialization will be analyzed. In the third part of section 3.3, the affection of the trade finance of Turkish exports will be examined. Last but not the least, Turkish trade defense strategy will be discussed briefly.

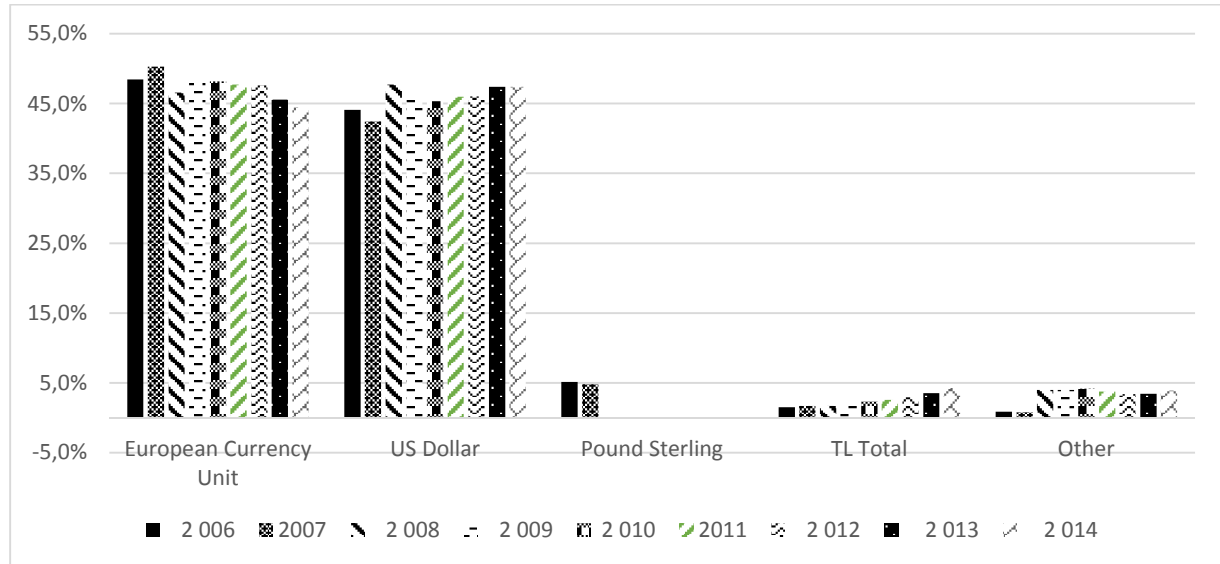
3.3.1 Impact of Currency Volatility on Turkish Trade

Exchange rate volatility affects trade in various ways³⁴. There is a decrease in the exports of Turkey done with euro from 2007 to 2009 about 2%. With the start of the Eurozone crisis, from 2009 to 2012, exports performed in terms of euro did not change significantly. Exports done with USD increased from 42.5% to 47% from 2007 to 2008 and had been nearly stable till 2014 with % 47,4. The increase in the exports performed with TL had started to

³⁴ First, real exchange rate is an indicator of the national competitiveness. Second, volatility in the exchange rates has an impact on the terms of trade from FDI perspective as increase in the net inflows with the help of the valuation in currency helps a country to develop its trade potential. Third, from the currency view, goods or services exported become cheaper as the national currency depreciates against the currency traded or vice versa.

increase after 2006 and nearly reached 3 times by 2014 and reached % 4,2 level as indicated in Figure 47.

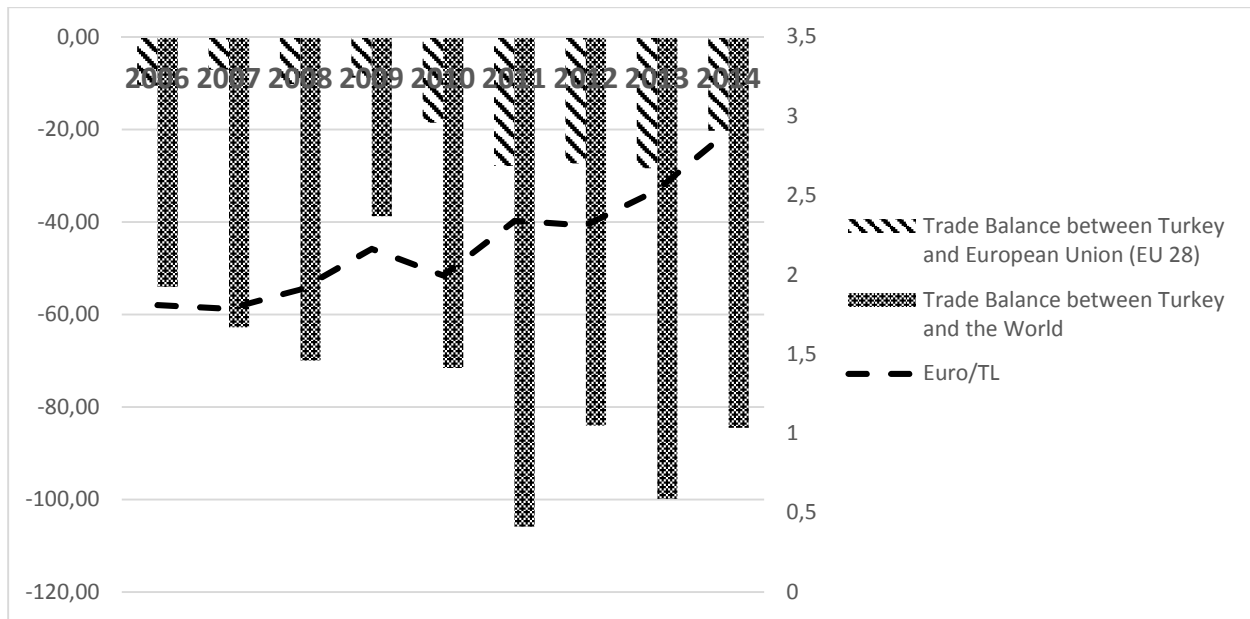
Figure 47: Export Shares of Currencies in Turkish Exports (2006-2014)



Source: TUIK, 2014

The change in the composition of exports from currency perspective has an impact on the trade balance. The depreciation of the national currency against a specific currency increases the trade deficit of the country in the total trade performed in that currency. Aysan & Hacıhasanoğlu (2007) asserted that real exchange rate change in Turkish exchange rate did not have a statistically significant effect on export-based on the results of their panel data study which examined 1996-2006 era. As it is seen in Figure 48, the total trade deficit of Turkey exceeded 100 billion USD in 2011 whereas euro/TL parity also reached a peak and approached 2,35. In 2009, the year which total GDP of Turkey declined radically, the total trade deficit was under 40 billion USD, and Euro/TL parity was slightly over 2. One important finding is that between 2009 and 2011, the trade deficit of Turkey with the Eurozone did not increase radically while total trade deficit increased significantly with a change from 40 billion USD to 105 billion USD. However, the total trade deficit of Turkey declined after 2011, and it was slightly over 80 billion USD.

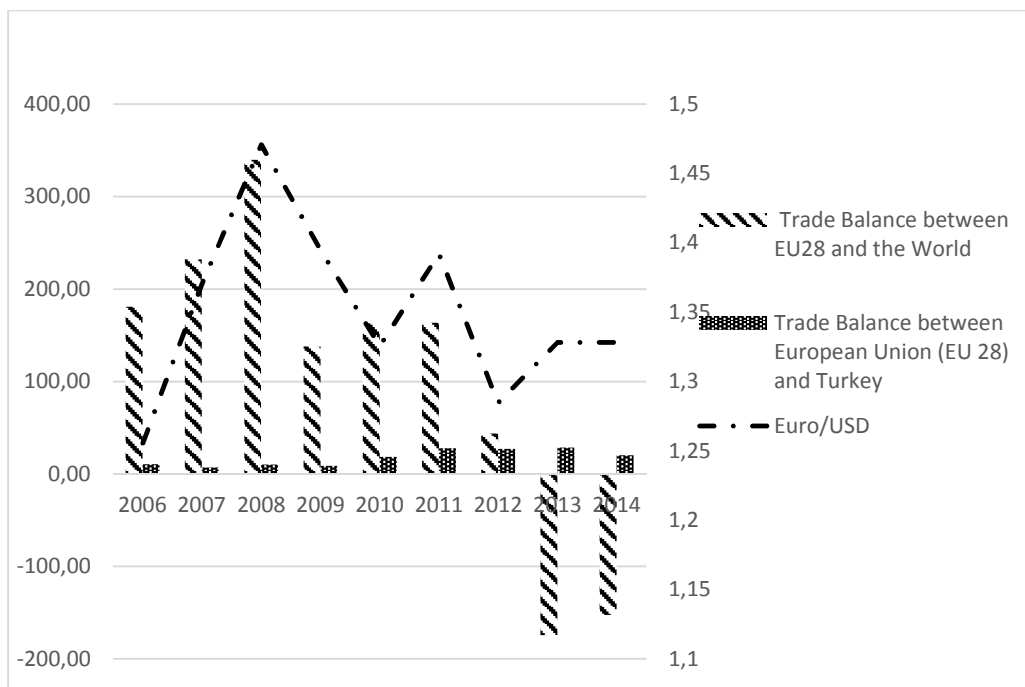
Figure 48: Turkish Trade Balance in Comparison with Euro/TL Parity (2006-2014)



Source: Trademap, Eurostat, 2014

In Figure 49, it can be seen that EU28 has a trade surplus with Turkey, whereas, the total trade balance is negative. Especially in 2008, the year just before the Eurozone Crisis, the total trade surplus reached a peak where the Euro/USD parity exceeded 1.45 levels. By 2013, EU28 started having a trade deficit in total where trade surplus with Turkey kept stable.

Figure 49: EU28 Trade Balance in Comparison with Euro/USD Parity (2007-2014)



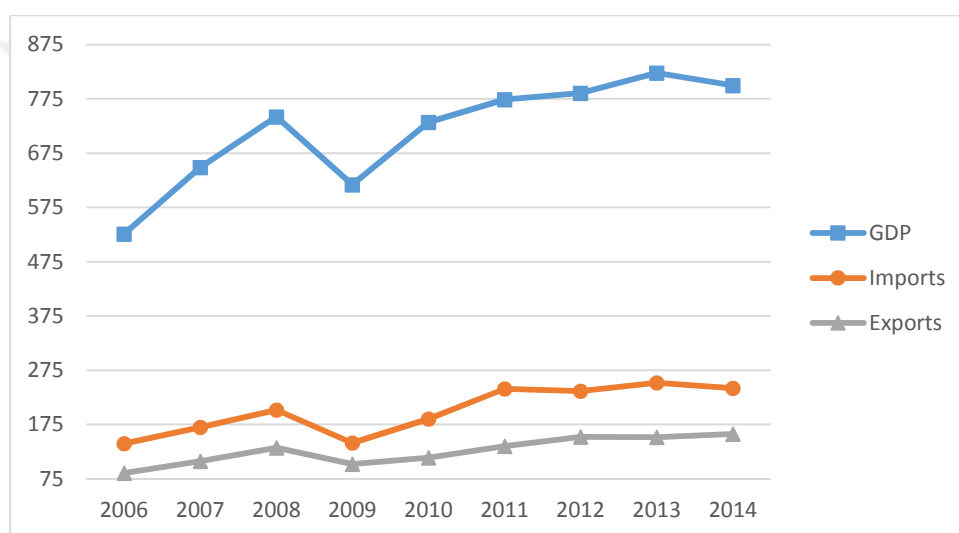
Source: Trademap, Eurostat, 2015

3.3.2 Impact of the Eurozone Crisis on Turkish Trade Indicators

To analyze the impact of the Eurozone crisis on Turkish trade, selected trade indicators as trade volume, trade balance, terms of trade and trade specialization will be examined.

As it may be seen in Figure 50, before the Eurozone crisis, from 2007 to 2008, there was an increase in the imports and GDP. There was also an increase in the exports which was not significant as it was in the imports. In 2009, affected by the sharp decline in the GDP, imports also declined significantly. After 2009, exports, imports and GDP increased with the exception of 2012 in which imports declined slightly.

Figure 50: Turkish Trade Figures and GDP (USD) (2006-2014)



Source: TUIK, 2015

a) Trade Volume

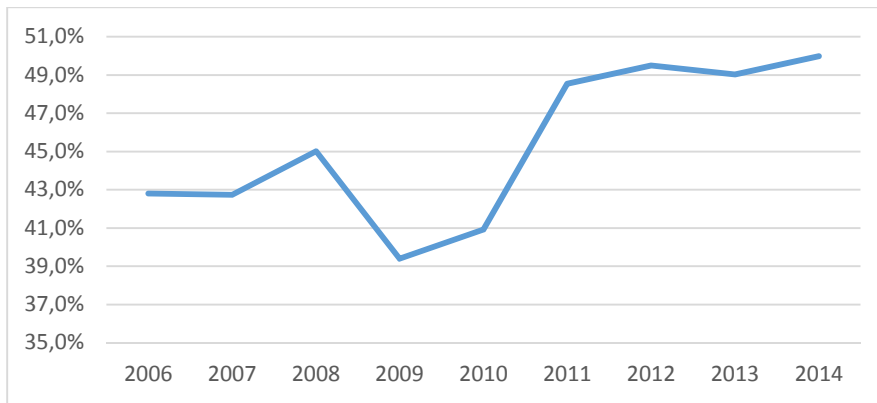
Trade Volume is the sum of the exports and the imports of a country on a certain product or product category.

$$\text{Trade Volume} = X_{ij} + M_{ij} \quad (1)$$

where X_i denotes the export, M_i the import of good i .

The share of trade in the GDP of Turkey increased between 2007 and 2008 and surpassed 45% level and declined between 2008 and 2009 under 40%. After the Eurozone crisis, portion of the trade in the total GDP increased sharply and nearly exceeded 50% by 2014 as indicated in Figure 51.

Figure 51: Turkish Trade Volume (% of GDP) (2006-2014)



Source: TUIK, 2015

b) Trade Balance

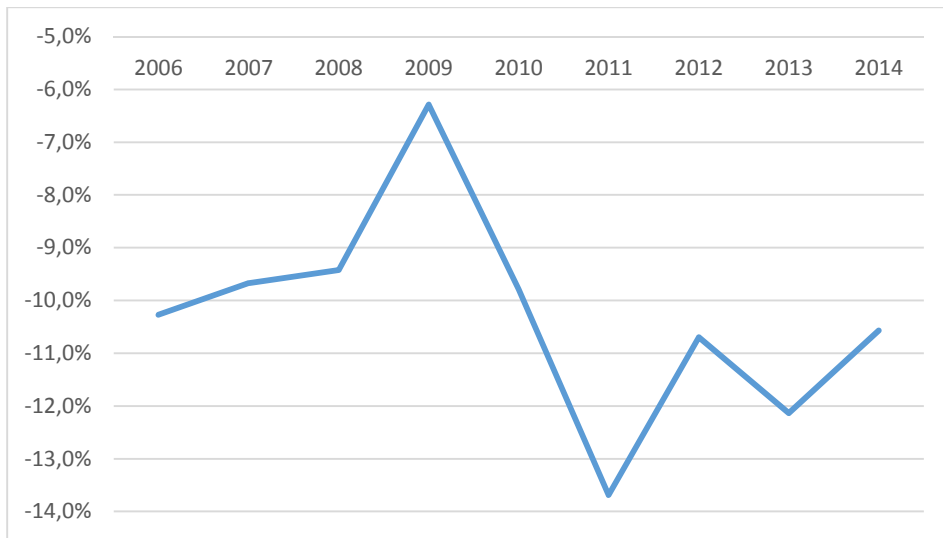
Trade Balance is the difference between the exports and imports of a country on a certain product or product category.

$$\text{Trade Balance} = X_{ij} - M_{ij} \quad (2)$$

Steps to replace the import substitute economic policy with export based economy policy started with 24 January 1980 decisions. With the liberalization of trade in the first half of the 1980s, a significant increase in foreign trade volume was observed. The trade balance has been the weak spot of the Turkish economy, especially after the CU. As far as the Turkish economy gets more open to the world economy, trade deficit increases. The trade deficit phenomenon is mostly due to the structure of the Turkish economy in which each export unit creates an import unit with a higher value. The reason for this relationship between import and export may be explained due to the deficiency of Turkey in human capital, technology usage and being incapable in the supply of capital goods and certain raw materials.

Figure 52 shows that trade balance ratio to GDP declined significantly in 2009, and it increased and surpassed 13% in 2011 which demonstrated a rather risky situation for the Turkish economy.

Figure 52: Turkish Trade Balance (% of GDP) (2006-2014)



Source: TUIK, 2015

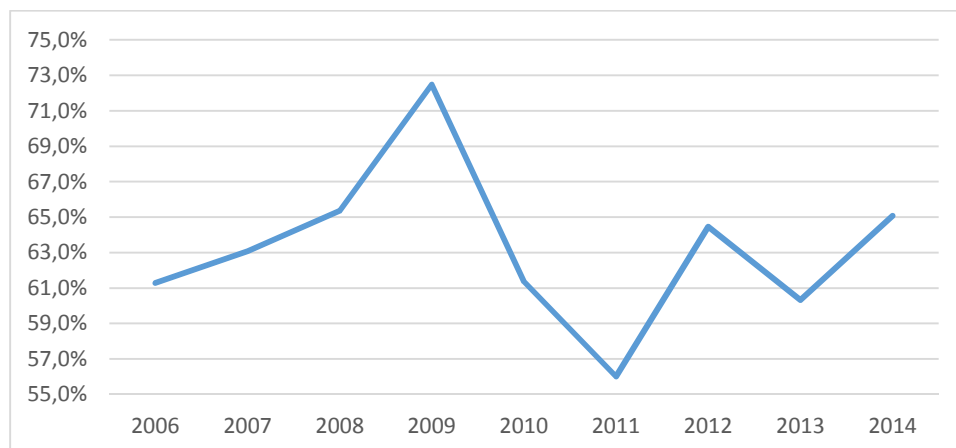
c) *Terms of Trade*

Terms of trade is the ratio of exports to imports. In other words, terms of trade can be understood as the number of import good which can be purchased per unit export.

$$\text{Terms of Trade} = \frac{X_{ij}}{M_{ij}} \quad (3)$$

As it is seen in Figure 53, from the terms of trade perspective, most successful year for Turkish trade was 2009, the crisis year. After 2009, with the increase in the GDP and the imports, terms of trade decreased significantly in 2011 which was also a significant year for trade deficit as explained in the previous graph.

Figure 53: Turkish Terms of Trade (2006-2014)



Source: TUIK, 2015

d) Trade Specialization

With the trade specialization index (TSI)³⁵, the structure of an economy for a particular product or country is investigated. UNCTAD (2015) defines trade specialization as the comparison of the net flow of goods to the total flow of goods as shown in Appendix 1.

$$TSI_i = \frac{X_i - M_i}{X_i + M_i} \quad (4)$$

The composition of the exports from a technology point of view has different implications for the developed markets and the new markets most of whom are the developing markets. “The fact that Turkish exports remained highly concentrated in the range of traditional product groups, with low-to-medium technology, has limited Turkish exporters’ success in developed country markets, leading them to target the more easily accessible neighboring markets” (Tekin& Tekin, 2015,p:50). According to the Table 17, between 2007 and 2009, TSI increased in total products as the decrease of the imports were higher than the exports gradually. After 2009, till 2012 TSI decreased as imports increased but with 2012 same level of 2007 was more or less caught which was slightly above -0,2. The increases in the labor intensive& resource intensive and high-skill& technology-intensive products groups in 2012 are remarkable from 0.27 to 0.35 and from -0.6 to -0.5 from 2011 to 2012 respectively. One other significant finding is the increase of TSI in low-skill& technology-intensive products from 2007 to 2009. After the fluctuations in 2010 and 2011, the 2012 level is nearly the same around 0.1, and quite important as 2007 value was below 0. Medium skill& technology-intensive products followed a rather balanced path and stayed between -0.13 and -0.12 levels.

Table 17: Turkish Exports& Imports according to Payment Types (2007-2014)

YEAR	2007	2008	2009	2010	2011	2012
Total all products	-0,2264	-0,2095	-0,1594	-0,2389	-0,2819	-0,2159
Labour-intensive and resource-intensive	0,3429	0,3515	0,3673	0,2879	0,2700	0,3401
Low-skill and technology-intensive	-0,0049	0,0985	0,0968	0,0306	0,0348	0,0792
Medium-skill and technology-intensive	-0,1231	-0,0696	-0,0807	-0,1454	-0,1735	-0,1319
High-skill and technology-intensive	-0,5638	-0,5740	-0,5621	-0,5864	-0,5968	-0,5263

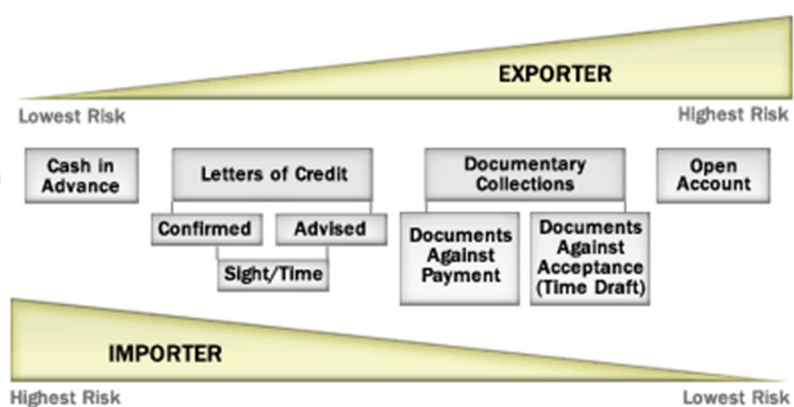
Source: UNCTAD, 2015

³⁵ “The range of values is between -1 and 1, the positive value indicates that an economy has net exports (hence it specializes on the production of that specific product) and negative values means that an economy imports more than it exports (net consumption).”(UNCTAD, 2015)

3.3.3 Trade Finance in Turkish Foreign Trade

The most used payment methods in Turkish foreign trade are cash against goods, cash on delivery, cash against documents, letter of credit and advance payment. Ausight (2015) describes in Figure 54 that advance payment as the lowest risk payment method, whereas documents against acceptance which refers to cash against goods, cash on delivery is the riskiest method for an exporter.

Figure 54: Payment Methods with Risk Perspective



Source: Ausight Publishing, 2015

From trade finance point of view, total exports of Turkey have reached 152 billion USD by 2012 as shown in Table 18 whereas imports were 237 billion USD. The method which is used the most in exports is cash against goods, cash against delivery, which has reached a peak of 103 billion USD in 2014, whereas it was around 49 billion USD in 2006. Cash against documents is the second method which is used the most as it reached 24 billion USD. The most important point was the dramatic rise in advanced payment with 22 billion USD in 2012 whereas it was around 5 billion USD in 2006. This is an important indicator of the diminution of trust of Turkish exporters to their international customers. Acar (2009) explains that the tightening of the credit standards by the banks made export credits more expensive. Second, companies searching for new markets were in the tendency of using insurance instruments to secure their payments which eventually led an increase in insurance premium. This tendency is also verified by the survey³⁶ made by Kalkan & Çağlayan & Dinççağ (2010) as %35 of the exporters were intending to move their exports to developing countries as Russia, Egypt,

³⁶ This survey has been made by TEPAV in April 2010 with 40 companies and 5 deposit banks selected from the first 1000 exporters which consist of the first and second 500 companies list of Istanbul Chamber of Industry (ISO).

Morocco, Iran, Libya and other African countries to decrease their dependency to developed countries markets.

Table 18: Turkish Exports according to Payment Types (2007-2014)

Exports(Million USD)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	85535	107272	132027	102143	113883	134907	152462	151803	157617
Cash against goods, cash on delivery	48788	63299	75415	60758	67473	81351	87325	93796	102839
Advanced payment	4971	6014	8725	8100	8819	9683	21876	15136	14930
Cash against documents	17031	20239	22975	19176	20994	24638	24410	25878	24229
Letter of credit	9049	11850	18708	9625	12029	14525	14329	12281	11240
Letter of credit payable at a spec. future date	2621	2426	2503	1991	2370	2362	2518	2420	2449
Other ³⁷	3074	3444	3701	2493	2198	2348	2005	2292	1930

Source, TUIK, 2015

As indicated in Table 19, the same trend was followed by the imports done with advanced payment which is the riskiest method for the importing country. Traditionally advanced payment is a very significant payment method for Turkish importers whose share did not change significantly during the 2006-2014 era. Cash against goods, cash against delivery method also increased dramatically to 71 billion USD in 2014 from 28,5 billion USD in 2006.

Table 19: Turkish Imports according to Payment Types (2007-2014)

Imports (Million USD)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	139576	170063	201964	140928	185544	240842	236545	251661	242177
Cash against goods, cash on delivery	28474	33788	38948	29648	34719	42855	70734	77764	71529
Advanced payment	65756	82217	95972	68655	95438	111372	108000	117640	119326
Cash against documents	13794	16591	19253	11756	14964	17358	14985	15523	14920
Letter of credit	8061	11932	14762	11009	23247	49000	22541	21271	18442
Letter of credit payable at a spec.future date	17932	8267	10370	7859	9347	10993	12405	12206	10543
Other	5559	17268	22658	12001	7830	9264	7880	7257	7417

Source, TUIK, 2015

3.3.4 Trade Strategy Applied by Turkey during the Eurozone Crisis

As it is seen in Table 19, currently EU and India are implementing 689 and 588 protectionist measures excluding trade defense measures. USA applies fewer protectionist

³⁷ Other trade finance methods include; By acceptance credit (1), advanced letter of credit (2), without waiver (3), payment type uncertain (4), type of payment with abroad credit(public) (5), account of barter (6), private barter (7), counter purchase (8) letter of credit with acceptance credit (9),documents with acceptance credit(10), goods with acceptance credit (11), private account (12)

measures compared to EU and India and when the total imports size is considered, the position of India is worth examination. It is obvious that more than %50 of the measures of EU, India, and Turkey are red and amber which means the measure has been implemented since November 2008. Another important point is that a significant number of the protectionist measures implemented by the EU exclude trade defense instruments, unlike Turkey. Therefore, this divergence is an important study area which may be evaluated as a contradiction with the CU.

Table 20: Comparison of Selected States in Terms of Protectionist Measures

All Measures	USA	EU27	China	India	Turkey
Number of measures in the database by specified jurisdiction	419	689	239	588	124
Number of measures in the database by specified jurisdiction classified (green)	61	80	69	149	10
Number of measures in the database by specified jurisdiction classified (amber)	142	90	52	80	11
Number of measures in the database by specified jurisdiction classified (red)	216	519	118	359	103
Number of tariff lines affected by red measures implemented by specified jurisdiction	531	714	729	711	142
Number of sectors affected by red measures implemented by specified jurisdiction	63	78	54	49	22
Number of trading partners affected by red measures implemented by specified jurisdiction	148	201	194	202	84

All measures (Excl. Trade Defense Measures)	USA	EU27	China	India	Turkey
Number of measures in the database by specified jurisdiction	235	572	174	394	29
Number of measures in the database by specified jurisdiction classified (green)	61	79	69	148	10
Number of measures in the database by specified jurisdiction classified (amber)	99	53	39	31	2
Number of measures in the database by specified jurisdiction classified (red)	75	440	66	215	17
Number of tariff lines affected by red measures implemented by specified jurisdiction	477	694	721	651	66
Number of sectors affected by red measures implemented by specified jurisdiction	63	78	54	49	8
Number of trading partners affected by red measures implemented by specified jurisdiction	139	198	192	198	78

Source: Global Trade Alert, 2014

4 Empirical Analysis

In this section, first of all, the econometric studies in the literature will be reviewed. Second, the sources of the data used in the panel analysis will be summarized. Third, the methodology used in the econometric analysis will be explained in detail. Finally, the presentation of the empirical findings will be discussed.

4.1 Literature Review

There are several studies on the impact of economic crisis on trade. In their study Aysan & Hacıhasanoğlu (2007) asserted that real exchange rate depreciation in Turkish exchange rate did not induce a huge increase in export based on the results of their panel data study³⁸.

Amiti & Weinstein (2009) took Japan as a case study to understand how financial shocks were transmitted to exporters³⁹. They concluded that the reason why exports fell much faster than the domestic output was mainly based on the greater credit default risks and longer time lags associated with the international trade which brought dependency on financing exports rather than domestic sales. They also asserted that there is a causal link between financial sector shocks and exports which impact multinationals and firms that export mostly by air less which is significant from trade finance point of view.

From her regression, Freund (2009) found out that the elasticity of trade⁴⁰ to income has increased over time, from under 2 in the 1960s to over 3½. Freund also found out that, East Asia and OECD countries have the largest elasticity of trade to income between 1995 and 2007⁴¹.

Berkmen et al. (2009) concluded that although the financial channel trumped the trade channel in the emerging countries as a transmission channel of the crisis, for some developing

³⁸ The export data used in the study covers the time period of 1996 to 2006 for Turkish manufacturing sector based on a two-digit level ISIC. The data set related to wages and productivity of manufacturing sector is driven from TUIK and CPI-based REER data was obtained from CBRT.

³⁹ Data used in the study is based on Development Bank of Japan (DBJ) and Nikkei NEEDS Financial Quest between 1986 and 2009.

⁴⁰ Elasticity of trade to income refers to the percentage by which trade falls for a one percent change in income.

⁴¹ The study uses historical trade and GDP data of World, OECD, low income countries, middle income countries, East Asia, Latin America, Middle East and South Asia countries in 1982-1994 and 1995-2007 era.

countries, the trade channel seemed to have a significant impact especially on the countries⁴² which export more advanced manufacturing goods compared to the countries exporting food.

Blanchard et al. (2010) found out that global crisis impacted growth via two channels as the collapse in trade and the sharp decline in financial flows. In their regression⁴³, it is seen that unexpected growth has a significant relationship with unexpected trade partner growth⁴⁴ and short-term debt⁴⁵.

Lane & Milesi-Ferretti (2010) concluded that there is a strong relationship between fast private credit growth and current account deficits on one side and the decline in the growth rate of output and domestic demand during the crisis on the other side. They also found out that countries with pegged exchange regimes experienced weaker output growth during the crisis in their econometric study based on approximately 50 countries.

Eaton et al. (2010) depicted that the changes in the composition of demand, rather than higher trade barriers led to the collapse of trade in their analysis where they examined 22 countries for 2008Q3.

Levchenko et al., (2010) have found out that in their research that the trade collapse after the global crisis is exceptional in two ways; “It is far larger relative to economic activity than what has been observed in previous U.S. downturns, and it is far larger than what would be predicted by the evolution of domestic absorption and prices over the same period“. They also added that they did not detect any impact of trade credit on the reduction of international trade.

Di Mauro et al. examined the impact of the crisis in the euro area. “In line with the developments in world trade, euro area exports of goods also fell sharply. Euro area merchandise exports decreased by about 16% between September 2008 and March 2009” (Di Mauro et al., 2010, p: 9).

In his study where he identified 18 key exogenous crisis events in 12 advanced and 13 emerging countries between 2010 and 2013, Stracca (2013) concluded that trade openness

⁴² 43 countries data from Consensus database whereas 141 countries data were taken from WEO database which is 2008 and 2009 year values.

⁴³ 29 emerging countries data between 2007 to 2009 is used in the study.

⁴⁴ Trade-weighted average for the country's trading partners of projected GDP growth minus actual growth over the same period, multiplied by the partner's export share of nominal GDP.

⁴⁵ Short term debt refers to debt with remaining maturity of less than 1 year.

between the Eurozone and non-euro area countries were the most consistent and sizeable conduit of transmission channels for all assets except exchange rates as it increased the contagion effect whereas, there was not a clear evidence of a financial channel⁴⁶.

Behrens et al.(2010) found out that the number of firms, the average number of destination and origin markets per firm, and the average number of products per market changed only very little during the crisis. Second, their analysis showed that there are some composition effects in the intensive margin fall along firm, product and country characteristics. According to their analysis, the most important factor explaining changes in exports of Belgium was the destination country's growth rate of GDP. Last but not the least, they concluded as the fall in trade was mostly based on economic activity and this fall could better be described as a trade collapse rather than a trade crisis.

Henn& McDonald (2011) claimed that they have obtained strong evidence that crisis import restrictions significantly decreased trade in affected products in their analysis on EU and 14 other G-20 states. "Estimates show that affected trade flows fell by 5 percent in response to border measures and 7 percent in response to behind-the-border measures, with these impacts possibly being somewhat underestimated." (Henn& McDonald, 2011, p:35)

Cecchetti et al. (2011) asserted in their panel study⁴⁷ for 18 OECD countries that high debt causes significant problems for the overall economy and surpass of the threshold level of 90% and 85% in corporate and household debt over GDP respectively, lead significant problems in the growth.

Anderton& Tewolde (2011) depicted that the sharp decline in world imports soon after the global crisis in 2008Q4-2009Q1 can be explained by the fall in exports and also by the decline in the highly-import-intensive category of investments in their panel study⁴⁸.

Öztürk et al. (2012) explained that based on their Granger Causality analysis⁴⁹, imports of Turkey is impacted by the industrial production index, exports, GDP and labor efficiency in a unidirectional mode and has a bidirectional relationship with the unit labor cost, inflation, and

⁴⁶ Data used in the study belongs to Australia, Canada, Denmark, Japan,Korea, New Zealand, Norway, Poland, Sweden, Switzerland, United Kingdom and United States of America as advanced economies and Argentina, Brazil, Chile, China, India, Indonesia, Malaysia, Mexico, Russia, South Africa, Thailand, Turkey and Venezuela as the emerging countries between January 2010 to May 2013.

⁴⁷ Data used in the study belongs to 18 OECD countries between 1980 to 2010.

⁴⁸ Data used in the study is based on 29 OECD countries between 1995Q1 to 2009Q1.

⁴⁹ Data in the study belongs to Turkey and starts at 2000Q1 and end at 2012Q2.

interest rates in the study where they explained the impact of the Eurozone crisis on Turkish trade.

Ergin asserted that the change of the Euro against USD also created risks for the USA in terms of its trade relations with third parties. “Devaluation of the euro increases the current account deficit and also increases the pressures in the USA whose foreign debts and the trade deficit with China grow.”(Ergin, 2013, p: 155).

Lee et al. (2013) depicted that euro crisis had an impact on developing Asia⁵⁰. However, its magnitude would significantly be smaller than the global crisis as euro crisis mostly impacted Europe whereas the global crisis affected EU, Japan, and the USA simultaneously.

Tunçsiper& Biçen (2013) found out in their panel study that in the long term GDP of EU states and Turkish exports have a positive relationship in econometric terms whereas there is not a significant relationship in the short run⁵¹.

Last but the least, Bobeica et al. (2015) examined the trade-off between domestic demand and exports with a dynamic panel study for 11 euro area countries⁵². Bobeica et al. (2015) stated that as far as the domestic demand declined in the crisis period, firms in the Eurozone reoriented themselves through increasing their exports which may be considered as a new adjustment channel. They also found out that exports are not significantly affected in boom times based on an expansion of domestic demand.

The relationship between the economic crisis and trade is a topic studied in the academy. However, the relationship between the determinants of the Eurozone crisis and its impact on trade with its partners has not been deeply investigated. This study examined the relationship between Turkish trade and independent variables such as government deficit, government debt, unemployment, tax data, GDP growth rate and private sector debt.

⁵⁰ Data used in this study is between 2000Q1 and 2011Q3 and covers 11 Asian economies (the PRC, Hong Kong- China, India, Indonesia, the Republic of Korea, Malaysia, the Philippines, Singapore, Taipei-China, Thailand, and Viet Nam.

⁵¹ Data used in the study is Turkish exports data driven from TUIK and EU countries GDP data driven from the Worldbank between 1960 and 2012.

⁵² Countries in the study are ;Germany, France, Italy, Spain, Netherlands, Belgium, Austria, Finland, Portugal, Ireland and Luxembourg. Time frame covered is 1995 Q1-2013Q3.Data source is Eurostat and ECB.

4.2 Data

Data collected for the study is from different sources. Trade figures are taken from OECD International Trade by Commodity Statistics Database (Harmonized System 1988) which contains values and quantities of exports and imports by partner countries and commodity or industry. Commodities are available at the most detailed level of the SITC (Revision 2 and 3) and the Harmonized System (HS 1988, HS 1996 and HS 2002). Trade data are also converted from commodity classifications to industry classifications and are shown at the most detailed level of the ISIC (Revision 2 and 3).

GDP data are current USD valued. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. Data are in current USD. USD figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used. The source is WB national accounts data, and OECD National Accounts data files.

Government deficit, public debt, unemployment, government tax revenue and private debt to GDP ratio statistics are taken from Eurostat.

The Government deficit and public debt data are taken from Government Finance Statistics (GFS) which form the basis for fiscal monitoring in Europe, most notably of the statistics related to the Excessive Deficit Procedure (EDP). The EDP is established in the Treaty and specified in the SGP legislation. The Member States report data related to the EDP to the Commission (Eurostat) who, in turn, is responsible for providing the data to the Council.

European GFS, including the statistics for the EDP, are produced in accordance with the European System of Accounts 1995 (ESA95), the EU manual for national accounts, supplemented by further interpretation and guidance from Eurostat, in particular, the Manual on Government Deficit and Debt.

Unemployment data is taken from the section 'Labor Force Survey (LFS) series-detailed annual survey results' reports. This data collection covers all main labor market characteristics, i.e. the total population, activity and activity rates, employment rates, self-employed,

employees, temporary employment, full-time and part-time employment, the population in employment having a second job, working time, total unemployment and inactivity.

Tax data is taken from “Main national accounts, tax aggregates database”. The methodological framework is the European system of accounts, 1995 edition (ESA 95). In addition, the "ESA95 Manual on Government Deficit and Debt" contains Eurostat decisions on recording of taxes and social contributions.

GDP growth rates are derived from the level series for the EU Member States. The source of the data is Eurostat.

Private sector debt over GDP data is taken from the European System of Accounts, 1995 Edition (ESA 95). Borderline classification issues are referred to in the chapters 2 and 3 in the Manual on sources and methods for the compilation of ESA 95 financial accounts.

There are some limitations on the availability of selected data. The primary data source is Eurostat and OECD and 15 of the Eurozone member countries⁵³, and Turkey, whose data is available from 1995 to 2011 are selected for the analysis. Data before 1995 either does not exist or is missing. Therefore, the analysis will start with the year that Turkey becomes a member of CU.

The analysis will be based on the annual data of government deficit, government debt, unemployment data, tax revenue, GDP growth rate, private sector debt and the ratio of the trade balance of Turkey with the respective country and Turkey’s trade balance with the world. In the analysis, the dependent variable is the ratio of the trade balance of Turkey with the respective country and Turkey’s trade balance with the world. Government deficit, government debt, unemployment, tax, GDP growth rate and the private sector debt to GDP are in index level.

4.3 Methodology

In the econometric analysis, panel data will be used to analyze the cross-sectional data. A panel data equation may be written as;

$$y_{it} = \rho_i y_{i,t-1} + z'_{it} \gamma_i + \epsilon_{it} \quad (1)$$

Where

⁵³ Malta and Luxembourg are excluded in the panel study due to the amount of missing data. Latvia and Lithuania were not the members of the Eurozone as of 2011.

$i = 1, \dots, N$ indexes panels;

$t = 1, \dots, T_i$ indexes time;

ρ_i is the coefficient

y_{it} is the variable being tested; and

ϵ_{it} is a stationary error term.

z_{it} term can represent panel-specific means with or without a time trend dependin on the unit root test.

γ_i is the linear time trend. (Stata, 2015).

Panel unit-root tests are used to test the null hypothesis

$H_0: \rho_i = 1$ for all i versus $H_A: \rho_i < 1$

As H_A may be valid for one i , a fraction of all i or all i ; we may rewrite the equation as;

$$\Delta y_{it} = \phi_i y_{i,t-1} + z'_{it} \gamma_i + \epsilon_{it} \quad (2)$$

So

$H_0: \phi_i = 0$ for all i versus $H_A: \phi_i < 1$

The unit root tests are conducted according to Im-Pesaran and Shin (2003) and Fisher-type tests which all have as the null hypothesis that all the panels contain a unit root. In other words;

Im, Pesaran, and Shin test is an extend version of Levin-Lin-Chu (LLC) test (2002) which does not require the panel data sets to be balanced and also developed a set of tests which relax the assumption of a common autoregressive parameter.

$$\Delta y_{it} = \phi_i y_{i,t-1} + z'_{it} \gamma_i + \epsilon_{it}$$

“Im, Pesaran, and Shin assume that ϵ_{it} is independently distributed normal for all i and t , and they allow it to have heterogeneous variances σ_i^2 across panels.”(Stata, 2015, p: 13)

Augmented Dickey-Fuller (1979) test asserts a null hypothesis as all panels are unit root, and the alternative is that at least one panel is stationary.

$$\Delta y_{it} = \alpha + \beta y_{i,t-1} + \delta_t + \zeta_1 \Delta y_{i,t-1} + \zeta_2 \Delta y_{i,t-2} + \dots + \zeta_k \Delta y_{i,t-k} + \epsilon_{it} \quad (3)$$

where k is the number of lags specified in the lags() option.

The noconstant option removes the constant term α from this regression, and the trend option includes the time trend δ_t , which by default is not included.

Testing $\beta = 0$ is equivalent to testing $\rho = 1$, or, equivalently, that y_t follows a unit root process.

To decide whether to implement a fixed effect or random effect regression model, Hausman specification test (1978) is applied. Hausman specification test compares estimator $\widehat{\theta}_1$ with estimator $\widehat{\theta}_2$ and checks whether it is consistent under the assumption it is tested.

Based on the Hausman specification test, either fixed effects or random effects are selected.

Panel analysis consists of a T-dimensional vector Y_i and a $T \times K$ -dimensional random matrix X_i . Random effects models assume that the error term is random and uncorrelated with the independent variables.

Random effects model can be defined as;

$$y_{it} = \beta x_{it} + \alpha + \mu_{it} + \varepsilon_{it} \quad (4)$$

where;

y represents the dependent variable

i represents entity

t represents time

x represents the independent variable

β represents the coefficient of the independent variable

α represents the unknown intercept

μ represents the between entity error

ε represents the within entity error

Thus, we estimate a very simple reduced-form equation;

$$\text{Trade Balance} = (\beta_1 * Gdef_{it}) + (\beta_2 * DGdebt_{it}) + (\beta_3 * Du_{it}) + (\beta_4 * Tax_{it}) + (\beta_5 * Gr_{it}) + (\beta_6 * Pdebt_{it}) + \varphi_{it} + \varepsilon_{it} \quad (5)$$

where *i* denotes countries, and *t* denotes years; Gd denotes government deficit and; gdebt denotes government debt (first difference) and; U denotes unemployment (first difference) and; Tax denotes tax revenue and; Gr denotes growth rate and; Pdebt denotes private sector debt. This equation denotes that trade balance is affected by the changes in the government deficit, government debt, unemployment, tax, GDP growth rate and the private sector debt. First, the fixed effects regression will be run which will be followed by the random effects regression. Based on the Hausman test, we will decide which model to use. Consequently, a panel analysis with a country specific dummy and a panel analysis with year specific dummy will be run to understand the impact of specific countries or years on Turkish trade balance.

4.4 Empirical Findings

4.4.1 Fixed Effects Regression

First the fixed effects regression is run;

tbtt	Coef.	Std.Err.	t	P> t	[95% Conf. Interval]	
						-
pdebt	-0,0002379	0,0000484	-4,91	0	-0,0003335	0,0001424
tax	0,0009192	0,0008759	1,05	0,295	-0,0008087	0,002647
dgdebt	0,000296	0,0003989	0,74	0,459	-0,0004909	0,0010828
gdef	-0,0004234	0,0005165	-0,82	0,413	-0,0014423	0,0005954
dunemp	0,0022031	0,0011161	1,97	0,05	1,59E-06	0,0044046
gdpr	0,0006168	0,000583	1,06	0,291	-0,0005332	0,0017668
_cons	0,0142019	0,0339901	0,42	0,677	-0,0528469	0,0812506
sigma_u	0,02945107					
sigma_e	0,0164537					
rho	0,76212406	(fraction of variance due to u_i)				
	F test that					
	all u_i=0:	F(14,189)	38,48		Prob>F=	0

4.4.2 Random Effects Regression

Second, the random effects regression is run;

tbtt	Coef.	Std.Err.	t	P> t	[95% Conf. Interval]	
						-
pdebt	-0,0002343	0,0000463	-5,06	0	-0,0003251	0,0001435
tax	0,0014016	0,0007506	1,87	0,062	-0,0000696	0,0028727
dgdebt	0,0003017	0,000395	0,76	0,445	-0,0004724	0,0010759
gdef	-0,0004672	0,0005121	-0,91	0,362	-0,0014709	0,0005364
dunemp	0,001992	0,0011079	1,8	0,072	-0,0001794	0,0041633
gdpr	0,000558	0,000581	0,96	0,337	-0,0005806	0,0016967
_cons	-0,0069854	0,0303228	-0,23	0,818	-0,066417	0,0524462
sigma_u	0,02913962					
sigma_e	0,0164537					
rho	0,75824778	(fraction of variance due to u_i)				

4.4.3 Hausman Test

To decide to use which regression, Hausman test is run;

	Coefficients		----	sqrt(diag(V_b-V_B))
	(b)	(B)	(b-B)	
	fe	re	Difference	S,E,
pdebt	-0,0002379	-0,0002343	-3,61E-06	1,4E-05
tax	0,0009192	0,0014016	-0,000482	0,00045
dgdebt	0,000296	0,0003017	-5,74E-06	5,6E-05
gdef	-0,0004234	-0,0004672	0,0000438	6,8E-05
dunemp	0,0022031	0,001992	0,0002111	0,00014
gdpr	0,0006168	0,000558	0,0000588	4,9E-05

b = consistent under Ho and Ha obtained from xtreg
B = inconsistent under Ha efficient under Ho obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(6)= (b-B)'[(V_b-V_B)^(-1)](b-B)
= 3,52
Prob>chi2= 0,7408

According to the results of the Hausman test, random effects is chosen.

4.4.4 Random Effects Regression with Country Specific Dummy

Country 7 refers to Germany, Country 10 refers to Italy.

tbtt	Coef.	Std.Err.	z	P> z	[95% Conf. Interval]	
						-
pdebt	-0,000210	0,000040	-5,26	0,000	-0,0002885	0,0001319
dunemp	0,002039	0,000824	2,47	0,013	0,0004230	0,0036547
tax	0,000863	0,000649	1,33	0,184	-0,0004090	0,0021342
Country7	0,066534	0,025634	2,60	0,009	0,0162917	0,1167754
_cons	0,009104	0,026431	0,34	0,731	-0,0427003	0,0609084
sigma_u	.02437017					
sigma_e	.01630301					
rho	.69083373 (fraction of variance due to u_i)					

tbtt	Coef.	Std.Err.	z	P> z	[95% Conf. Interval]	
						-
pdebt	-0,000209	0,000040	-5,19	0,000	-0,0002873	0,0001297
dunemp	0,002031	0,000825	2,46	0,014	0,0004133	0,0036484
tax	0,000785	0,000661	1,19	0,235	-0,0005107	0,0020806
Country10	0,058186	0,027284	2,13	0,033	0,0047106	0,1116606
_cons	0,012422	0,026915	0,46	0,644	-0,0403300	0,0651731
sigma_u	.02587892					
sigma_e	.01630301					
rho	.71588849 (fraction of variance due to u_i)					

4.4.5 Random Effects Regression with Year Specific Dummy

Year 2 refers to 1996, Year 3 refers to 1997; Year 4 refers to 1998; Year 7 refers to 2001.

tbtt	Coef.	Std.Err.	z	P> z	[95% Conf. Interval]	
pdebt	-0,0001873	0,000042	-4,46	0	-0,0002697	-0,000105
dunemp	0,0018207	0,000827	2,2	0,028	0,0001998	0,0034416
tax	0,00075	0,0006741	1,11	0,266	-0,0005712	0,0020712
Year2	0,0125091	0,0058329	2,14	0,032	0,0010769	0,0239413
_cons	0,0144222	0,0277307	0,52	0,603	-0,0399291	0,0687734
sigma_u	0,02964565					
sigma_e	0,01616352					
rho	0,77085003 (fraction of variance due to u_i)					

tbtt	Coef,	Std,Err,	z	P> z	[95% Conf, Interval]	
pdebt	-0,000192	0,0000411	-4,67	0	-0,0002726	-0,0001114
dunemp	0,0019526	0,0008181	2,39	0,017	0,0003491	0,0035562
tax	0,0006565	0,0006753	0,97	0,331	-0,0006669	0,00198
Year3	0,013471	0,0057306	2,35	0,019	0,0022392	0,0247028
_cons	0,0185736	0,0276858	0,67	0,502	-0,0356896	0,0728368
sigma_u	0,02964748					
sigma_e	0,01611705					
rho	0,77188734 (fraction of variance due to u_i)					

tbtt	Coef,	Std,Err,	z	P> z	[95% Conf, Interval]	
pdebt	-0,0001978	0,0000409	-4,83	0	-0,000278	-0,0001175
dunemp	0,0020876	0,0008183	2,55	0,011	0,0004837	0,0036915
tax	0,0006014	0,0006819	0,88	0,378	-0,0007351	0,001938
Year4	0,0112651	0,00546	2,06	0,039	0,0005636	0,0219666
_cons	0,0214545	0,0279114	0,77	0,442	-0,0332509	0,0761598
sigma_u	0,03010155					
sigma_e	0,01615969					
rho	0,77627915 (fraction of variance due to u_i)					

tbtt	Coef.	Std.Err.	z	P> z	[95% Conf. Interval]	
pdebt	-0,0002251	0,0000403	-5,59	0	-0,000304	-0,0001462
dunemp	0,0018575	0,0008215	2,26	0,024	0,0002473	0,0034676
tax	0,0006976	0,0006773	1,03	0,303	-0,0006298	0,002025
Year7	-0,0104454	0,0045654	-2,29	0,022	-0,0193935	-0,0014973
_cons	0,0225238	0,0279724	0,81	0,421	-0,0323011	0,0773487
sigma_u	0,03075728					
sigma_e	0,01612492					
rho	0,78440455 (fraction of variance due to u_i)					

4.5 Discussion of the Empirical Findings

In the panel analysis the findings are as follows;

<i>Test</i>	<i>Independent Variable</i>	<i>Coefficient</i>	<i>Relation</i>	<i>Level</i>
<i>No dummy applied</i>	<i>Private Sector Debt</i>	-0,0002343	<i>Negative</i>	<i>p<0,01</i>
	<i>Tax</i>	0,0014016	<i>Positive</i>	<i>p<0,1</i>
	<i>Unemployment</i>	0,001992	<i>Positive</i>	<i>p<0,1</i>
<i>Country-Specific Dummy-Germany</i>	<i>Private Sector Debt</i>	-0,0002102	<i>Negative</i>	<i>p<0,01</i>
	<i>Unemployment</i>	0,0020389	<i>Positive</i>	<i>p<0,01</i>
	<i>Germany</i>	0,0665335	<i>Positive</i>	<i>p<0,05</i>
<i>Country-Specific Dummy-Italy</i>	<i>Private Sector Debt</i>	-0,0002085	<i>Negative</i>	<i>p<0,01</i>
	<i>Unemployment</i>	0,0020309	<i>Positive</i>	<i>p<0,05</i>
	<i>Italy</i>	0,0581856	<i>Positive</i>	<i>p<0,05</i>
<i>Year-Specific Dummy-1996</i>	<i>Private Sector Debt</i>	-0,0001873	<i>Negative</i>	<i>p<0,01</i>
	<i>Unemployment</i>	0,0018207	<i>Positive</i>	<i>p<0,05</i>
	<i>1996</i>	0,0125091	<i>Positive</i>	<i>p<0,05</i>
<i>Year-Specific Dummy-1997</i>	<i>Private Sector Debt</i>	-0,000192	<i>Negative</i>	<i>p<0,01</i>
	<i>Unemployment</i>	0,0019526	<i>Positive</i>	<i>p<0,05</i>
	<i>1997</i>	0,013471	<i>Positive</i>	<i>p<0,05</i>
<i>Year-Specific Dummy-1998</i>	<i>Private Sector Debt</i>	-0,0001978	<i>Negative</i>	<i>p<0,01</i>
	<i>Unemployment</i>	0,0020876	<i>Positive</i>	<i>p<0,05</i>
	<i>1998</i>	0,0112651	<i>Positive</i>	<i>p<0,05</i>
<i>Year-Specific Dummy-2001</i>	<i>Private Sector Debt</i>	-0,0002251	<i>Negative</i>	<i>p<0,01</i>
	<i>Unemployment</i>	0,0018575	<i>Positive</i>	<i>p<0,05</i>
	<i>2001</i>	-0,0104454	<i>Negative</i>	<i>p<0,05</i>

Panel Result

$$TB \text{ Turkey} = -0,0069854 - (0,0002343 * pdebt) + (0,0014016 * tax) + (0,001992 * unemp)$$

Panel result with Country-Specific Dummy-Germany

$$TB \text{ Turkey} = 0,0091041 - (0,00021 * pdebt) + (0,002039 * unemp) + (0,0665335 * dummy \text{ Germany})$$

Panel result with Country-Specific Dummy-Italy

$$TB \text{ Turkey} = 0,0124216 - (0,0002085 * pdebt) + (0,0020309 * unemp) + (0,0581856 * dummy \text{ Italy})$$

Panel result with Year-Specific Dummy-1996

$$TB \text{ Turkey} = 0,0144222 - (0,0001873 * pdebt) + (0,0018207 * unemp) + (0,012509 * dummy \text{ 1996})$$

Panel result with Year-Specific Dummy-1997

$$TB \text{ Turkey} = 0,0185736 - (0,000192 * pdebt) + (0,0019526 * unemp) + (0,013471 * dummy \text{ 1997})$$

Panel result with Year-Specific Dummy-1998

$$TB \text{ Turkey} = 0,0214545 - (0,000198 * pdebt) + (0,0020876 * unemp) + (0,0112651 * dummy \text{ 1998})$$

Panel result with Year-Specific Dummy-2001

$$TB \text{ Turkey} = 0,022524 - (0,0002251 * pdebt) + (0,0018575 * unemp.) - (0,0104454 * dummy \text{ 2001})$$

In the econometric analysis, it is clearly seen that Turkish trade balance has a strong relationship with the private sector debt in the Eurozone. This relationship is in a negative way which may be interpreted as Turkish trade surplus decreases as the private sector debt in the Eurozone increases.

When we apply Country specific dummy, it is seen that Germany ($p < 0,05$) and Italy ($p < 0,1$) impact Turkish trade positively. The constant value changes from $-0,0069854$ to $0,066534$ when Germany is applied as a country specific dummy and $0,058186$ when Italy is applied as a country specific dummy. Private sector debt is significant in $p < 0,01$ in the cases when Germany and Italy are applied as country specific dummy. Unemployment is very significant when Germany and Italy are applied as country specific dummy with $p < 0,01$ and $p < 0,05$ respectively.

When we apply year specific dummy, it is seen that 1996 ($p < 0,05$), 1997 ($p < 0,05$), 1998 ($p < 0,05$) impact Turkish trade positively and 2001 ($p < 0,05$) negatively. The constant value changes from $-0,0069854$ to $0,0144222$ when 1996 is applied as year specific dummy, $0,0185736$ when 1997 is applied as year specific dummy, $0,0214545$ when 1998 is applied as year specific dummy and $0,0225238$ when 2001 is applied as year specific dummy. Private sector debt is significant in $p < 0,01$ in the cases when 1996, 1997, 1998 and 2001 are applied as country specific dummy. Unemployment is significant at $p < 0,05$ level when 1996, 1997, 1998 and 2001 are applied as year specific dummy.

According to the results of the econometric study, there is a relationship with the tax revenue even if it is not very strong ($p < 0,1$). However, this relation does not exist when country and year dummies are applied. EC (2015), in its report, pointed out that, by 2012, %51 of the tax revenue of the EU was sourced by labor-related tax revenue⁵⁴ whereas %21 is from capital-

⁵⁴ Employed labour From D.51 Taxes on income: D.51a + D.51c1 Taxes on individual or household income including holding gains (part raised on labour income) From D.29 Other current taxes: D.29c Total wage bill and payroll taxes From D.611 Actual social contributions: D.61111 Compulsory employers' actual social contributions D.61121 Compulsory employees' social contributions Non-employed labour From D.51 Taxes on income: D.51a + D.51c1 Taxes on individual or household income including holding gains (part raised on social transfers and pensions) From D.611 Actual contributions: D.61131 Compulsory social contributions by self- and non-employed persons (part paid by social transfer recipients)

related tax revenue⁵⁵ and %28 is from consumption related tax revenue⁵⁶. The social contributions form %37,1 of the tax revenue of Eurozone18 states in 2009(EC, 2015), and the increase of the social contributions may be interpreted as a welfare effect on labor and retired population which basically form a significant form of the household and may lead an increase in their demand. However, it is not very easy to build up a correlation with this indirect increase and Turkish trade balance.

Results of the econometric analysis show that there is a positive relationship between unemployment and the Turkish trade. It is common knowledge that unemployment rates increase in crisis era as recession means lower GDP growth rates and declining demand. Therefore, the expected relationship between the unemployment rate and Turkish trade balance may be expected to be negative. Therefore, this result which is low in terms of significance should not be considered as meaningful.

⁵⁵Capital and business income taxes:From D.51-Taxes on income: D.51a + D.51c1 Taxes on individual or household income including holding gains (part paid on capital and selfemployed income) D.51b + D.51c2 Taxes on the income or profits of corporations including holding gains.D.51c3 Other taxes on holding gains D.51d Taxes on winnings from lottery and gambling.D.51e Other taxes on income n.e.c. From D.611-Actual social contributions: D.61131Compulsory social contributions by self- and non-employed persons (part paid by self-employed) Taxes on stocks (wealth):From D.214-Taxes on products, except VAT and import taxes: D.214b Stamp taxes D.214c Taxes on financial and capital transactions D.214k Export duties and monetary compensatory amounts on exports From D.29-Other taxes on production: D.29a Taxes on land, buildings or other structures D.29b Taxes on the use of fixed assets D.29e Business and professional licences D.29h Other taxes on production n.e.c. From D.59-Other current taxes:D.59a Current taxes on capital D.59f Other current taxes on capital.D.91-Capital taxes

⁵⁶ D.211 Value added type taxes D.212 Taxes and duties on imports excluding VAT D.214 Taxes on products except VAT and import duties less D.214b Stamp taxes D.214c Taxes on financial and capital transactions D.214k Export duties and monetary compensatory amounts on exports From D.29 Other taxes on production: D.29d Taxes on international transactions D.29f Taxes on pollution D.29g Under-compensation of VAT (flat rate system) From D.59 Other current taxes: D.59b Poll taxes D.59c Expenditure taxes D.59d Payments by households for licenses.

5 Concluding Remarks

The global crisis started with the subprime crisis in the USA, evolved and triggered the Eurozone crisis due to the interaction not only between USA and Eurozone but also with the effect of the structural problems in the Eurozone. Problems concerning the decision-making process, disagreements among key policy makers like France, Germany, UK and the southern countries, lack of steps taken in fiscal integration after monetary unification may be counted as the root causes of the economic crisis at a supranational level. At the state level, uncontrolled capital flows, differences between the current account deficit/surplus levels and also the competitiveness gap between national economies may be counted as significant reasons. Corruption in some countries, differences in the regulations and the governance of the banking system and the noncompliance of some states with the convergence criteria may also be explanatory for the start and the evolution of the crisis.

Apart from the root causes analysis, economists also argued about the kind of precautions that should be taken in the state and EU level, to what extent can ECB take precautions or make regulations. A common agreement was that, at the supranational level, austerity measures should be applied and monitored to make sure that convergence among member states would become real while at the state level to achieve fiscal discipline, decreasing the social security burden and decreasing wages to accomplish austerity targets, national governments should focus on structural reforms. Lack of focus on competitiveness and related factors like innovation, education and SME's was an important criticism area. EU was also found insufficient in institutional level to take actions on the banking system, improve the public finances and perform reforms within the institutional framework.

It is true that the imbalance between European countries in current accounts, employment, and growth levels is a fact. However, these differences are not the root causes of the Eurozone crisis solely. The structural problems in the private sector also affect EU states in various ways. Lack of focus on SME competitiveness, the uncontrolled deleveraging process of the corporations and the increasing debt burden on the households are also among the important causes of the crisis.

The Eurozone crisis not only impacted the Eurozone states, but also its trade partners including Turkey. Based on the studies from the literature and the findings from our econometric study, it is solid that increase of the private sector debt in the Eurozone states have a negative impact on the Turkish trade balance. The increase in the private sector debt has 2

major impacts on the Turkish trade; the decline in the demand both from households and the non-financial sector perspective and the shrinkage on the trade finance.

Private sector debt consists of 3 main segments, financial corporations, non-financial corporations and the households. First of all, as the private sector debt of corporate and household segment increases, interest rates also increase. This two-way relationship decreases domestic demand. Second, an increase in interest rates also has an adverse impact on trade finance and affects overall GDP growth. There is increasing demand for the letter of credits and the governance brought by the EU in various ways (Basel II and Basel III, Bolkenstein Directive, etc.) puts a significant burden on private corporations. Third, the takeover of the banks which carry problematic credits by the government increases public debt and cause noncompliance with the SGP. Last but the least, debt restructuring issue is significant. As far as the private sector, including the corporate and the households goes into debt restructuring, it creates a rollout effect that definitely decreases the investments. The increasing debt of states as Ireland and Spain do not have a direct impact on Turkish trade. However, all the contagion effect of the risks it creates through the banking system affect markets like Germany, France and Netherlands who are the most significant trade partners of Turkey.

Claessens et al. (2011) investigated the effect of the Eurozone crisis on EU firms. In their econometric study on 3045 non-financial firms from 16 different countries in the 2010-2011 era. They also found out that trade linkages with periphery euro countries affected export demand and was a significant contagion channel for the firms whereas they also found out that crisis had a larger impact on firms especially in the creditor countries who are financially exposed to peripheral euro countries via banking channel.

The deleveraging process of the non-financial corporations had a negative impact on their import demands. The decline in demand of the households, the people of the Eurozone who are also affected from their increasing debt position had a negative impact on the Turkish trade. Cecchetti et al. (2011) explained that both non-financial corporate and household debt had a significantly negative relationship with the growth. Especially the banks in Netherlands, France, Germany and Italy had financial problems during the Eurozone crisis.

Non-financial corporations' debt in the Eurozone may have affected its trade with Turkey in a negative way as corporations tend to suspend new projects and investments during the Eurozone crisis. Second, the shrinking demand from the household segment also decreased the demand of the private corporations for the imported raw, semi and finished products.

Finally, usage of trade finance channels became harder during the crisis for the non-financial corporations which may also be sourced off the risky situation of the financial institutions of the Eurozone. Jenkins and Masters (2008) explain this with the change in the regulations in the Basel III framework, the leverage ratio of three-month trade finance loan as a year-long exposure, forced banks to keep more capital on the loans they provided. This caused an increase in the trade finance prices by 300% or more.

The policy recommendations for Turkey will be based on the impact of the private sector debt on Turkish trade. As discussed in the previous sections before, private sector debt has two significant impacts on the Turkish trade as it impacts the demand negatively and also has a negative impact on the trade finance.

As a first step, a monitoring mechanism for the debted corporations in the Eurozone must be established by the Turkish government in association with Turkish Exporters Assembly (TIM). Second, the NPISH debt ratios must be monitored continuously especially by the exporters who are specialized in consumer goods. Third, there should be close cooperation between CRBT and European Banking Authority to monitor the financial sector in the Eurozone, which has a strong presence also in the Turkish banking sector.

In the trade finance domain, trade finance instruments must be used effectively especially in the trade with heavily debted states. An Export Credit Insurance Institute should be established for the new trade agreements with new trade partners. Eximbank should increase its financing capacity for the exporters and also provide in-depth information on risk for the foreign trade partners.

The econometric analysis also pointed out that Germany and Italy specifically impact Turkish trade positively. Therefore, the structure of the trade with these countries must be examined from various angles and opportunities must be reflected in the trade with the other Eurozone countries.

Appendixes

Appendix 1

Classification of Products according to the degree of manufacturing groupings (SITC Rev. 3) by UNCTAD.

Labor-intensive and resource-intensive manufactures (TDRB); Low-skill and technology-intensive manufactures (TDRC); Medium-skill and technology-intensive manufactures (TDRD);

Medium-skill: Electronics (excluding parts and components) (TDRD1); Medium-skill: Parts and components for electrical and electronic goods (TDRD2); Medium-skill: Other, excluding electronics (TDRD3);

High-skill and technology-intensive manufactures (TDRE); High-skill: Electronics (excluding parts and components) (TDRE1); High-skill: Parts and components for electrical and electronic goods (TDRE2); High-skill: Other, excluding electronics (TDRE3)

The products under these groups are as follows;

TDRA Manufactured goods by degree of manufacturing

Code	Label
------	-------

TDRB Labor-intensive and resource-intensive manufactures

611 Leather

612 Manufactures of leather, n.e.s.; saddlery & harness

613 Furskins, tanned or dressed, excluding those of 8483

633 Cork manufactures

634 Veneers, plywood, and other wood, worked, n.e.s.

635 Wood manufacture, n.e.s.

641 Paper and paperboard

642 Paper & paperboard, cut to shape or size, articles

651 Textile yarn

- 652 Cotton fabrics, woven
- 653 Fabrics, woven, of man-made fabrics
- 654 Other textile fabrics, woven
- 655 Knitted or crocheted fabrics, n.e.s.
- 656 Tullies, trimmings, lace, ribbons & other small wares
- 657 Special yarn, special textile fabrics & related
- 658 Made-up articles, of textile materials, n.e.s.
- 659 Floor coverings, etc.
- 661 Lime, cement, fabrica. constr. mat. (excluding glass, clay)
- 662 Clay construction, refracto. construction materials
- 663 Mineral manufactures, n.e.s.
- 664 Glass
- 665 Glassware
- 666 Pottery
- 821 Furniture & parts
- 831 Travel goods, handbags & similar containers
- 841 Men's clothing of textile fabrics, not knitted
- 842 Women's clothing, of textile fabrics
- 843 Men's or boy's clothing, of textile, knitted, croche.
- 844 Women's clothing, of textile, knitted or crocheted
- 845 Articles of apparel, of textile fabrics, n.e.s.
- 846 Clothing accessories, of textile fabrics
- 848 Articles of apparel, clothing access., excluding textile

- 851 Footwear
- TDRC Low-skill and technology-intensive manufactures
- 671 Pig iron & spiegeleisen, sponge iron, powder & granu
- 672 Ingots, primary forms, of iron or steel; semi-finis.
- 673 Flat-rolled prod., iron, non-alloy steel, not coated
- 674 Flat-rolled prod., iron, non-alloy steel, coated, clad
- 675 Flat-rolled products of alloy steel
- 676 Iron & steel bars, rods, angles, shapes & sections
- 677 Rails & railway track construction mat., iron, steel
- 678 Wire of iron or steel
- 679 Tubes, pipes & hollow profiles, fittings, iron, steel
- 691 Structures & parts, n.e.s., of iron, steel, aluminium
- 692 Metal containers for storage or transport
- 693 Wire products (excluding electrical) and fencing grills
- 694 Nails, screws, nuts, bolts, rivets & the like, of metal
- 695 Tools for use in the hand or in machine
- 696 Cutlery
- 697 Household equipment of base metal, n.e.s.
- 699 Manufactures of base metal, n.e.s.
- 785 Motorcycles & cycles
- 786 Trailers & semi-trailers
- 791 Railway vehicles & associated equipment
- 793 Ships, boats & floating structures

895 Office & stationery supplies, n.e.s.

899 Miscellaneous manufactured articles, n.e.s.

TDRD Medium-skill and technology-intensive manufactures

TDRD1 Medium-skill: Electronics (excluding parts and components)

(SITC 775)

775 Household type equipment, electrical or not, n.e.s.

TDRD2 Medium-skill: Parts and components for electrical and
electronic goods (SITC 772)

772 Apparatus for electrical circuits; board, panels

TDRD3 Medium-skill: Other, excluding electronics

621 Materials of rubber (pastes, plates, sheets, etc.)

625 Rubber tyres, tyre treads or flaps & inner tubes

629 Articles of rubber, n.e.s.

711 Vapour generating boilers, auxiliary plant; parts

712 Steam turbines & other vapour turbin., parts, n.e.s.

713 Internal combustion piston engines, parts, n.e.s.

714 Engines & motors, non-electric; parts, n.e.s.

716 Rotating electric plant & parts thereof, n.e.s.

718 Other power generating machinery & parts, n.e.s.

721 Agricultural machinery (excluding tractors) & parts

722 Tractors (excluding those of 71414 & 74415)

723 Civil engineering & contractors' plant & equipment

724 Textile & leather machinery, & parts thereof, n.e.s.

725 Paper mill, pulp mill machinery; paper articles man.

- 726 Printing & bookbinding machinery, & parts thereof
- 727 Food-processing machines (excluding domestic)
- 728 Other machinery for particular industries, n.e.s.
- 731 Machine-tools working by removing material
- 733 Mach.-tools for working metal, excluding removing mate.
- 735 Parts, n.e.s., & accessories for machines of 731, 733
- 737 Metalworking machinery (excluding machine-tools) & parts
- 741 Heating & cooling equipment & parts thereof, n.e.s.
- 742 Pumps for liquids
- 743 Pumps (excluding liquid), gas compressors & fans; centr.
- 744 Mechanical handling equipment, & parts, n.e.s.
- 745 Other non-electr. machinery, tools & mechan. appar.
- 746 Ball or roller bearings
- 747 Appliances for pipes, boiler shells, tanks, vats, etc.
- 748 Transmis. shafts
- 749 Non-electric parts & accessor. of machinery, n.e.s.
- 771 Electric power machinery, and parts thereof
- 773 Equipment for distributing electricity, n.e.s.
- 774 Electro-diagnostic appa. for medical sciences, etc.
- 778 Electrical machinery & apparatus, n.e.s.
- 781 Motor vehicles for the transport of persons
- 782 Motor vehic. for transport of goods, special purpo.
- 783 Road motor vehicles, n.e.s.

- 784 Parts & accessories of vehicles of 722, 781, 782, 783
- 811 Prefabricated buildings
- 812 Sanitary, plumbing, heating fixtures, fittings, n.e.s.
- 813 Lighting fixtures & fittings, n.e.s.
- 893 Articles, n.e.s., of plastics
- 894 Baby carriages, toys, games & sporting goods

TDRE High-skill and technology-intensive manufactures

TDRE1 High-skill: Electronics (excluding parts and components) (SITC
751 + 752 + 761 + 762 + 763)

- 751 Office machines
- 752 Automatic data processing machines, n.e.s.
- 761 Television receivers, whether or not combined
- 762 Radio-broadcast receivers, whether or not combined
- 763 Sound recorders or reproducers

TDRE2 High-skill: Parts and components for electrical and electronic
goods (SITC 759 + 764 + 776)

- 759 Parts, accessories for machines of groups 751, 752
- 764 Telecommunication equipment, n.e.s.; & parts, n.e.s.
- 776 Cathode valves & tubes

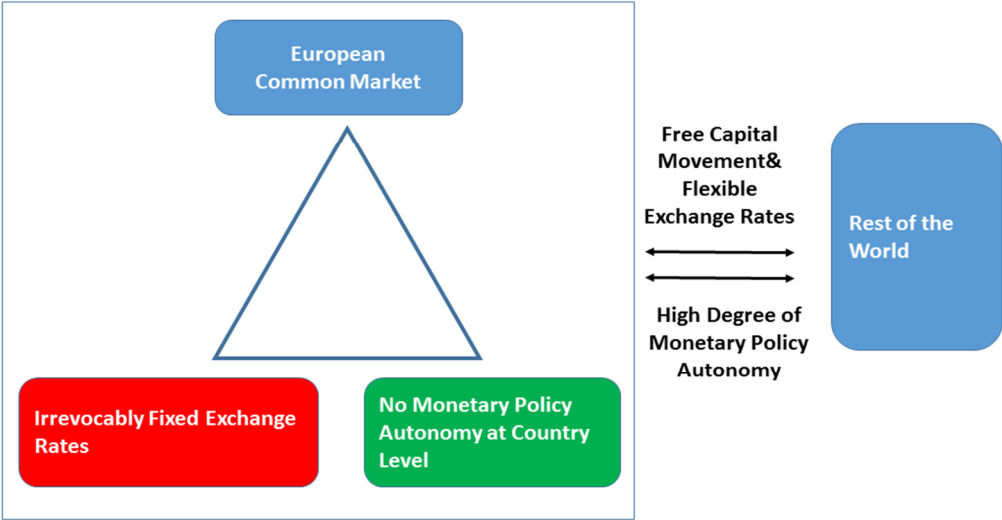
TDRE3 High-skill: Other, excluding electronics

- 511 Hydrocarbons, n.e.s., & halogenated, nitr. derivative
- 512 Alcohols, phenols, halogenat., sulfonat., nitrat. der.
- 513 Carboxylic acids, anhydrides, halides, per.; derivati.
- 514 Nitrogen-function compounds

- 515 Organo-inorganic, heterocycl. compounds, nucl. acids
- 516 Other organic chemicals
- 522 Inorganic chemical elements, oxides & halogen salts
- 523 Metallic salts & peroxysalts, of inorganic acids
- 524 Other inorganic chemicals
- 525 Radio-actives and associated materials
- 531 Synth. organic colouring matter & colouring lakes
- 532 Dyeing & tanning extracts, synth. tanning materials
- 533 Pigments, paints, varnishes and related materials
- 541 Medicinal and pharmaceutical products, excluding 542
- 542 Medicaments (incl. veterinary medicaments)
- 551 Essential oils, perfume & flavour materials
- 553 Perfumery, cosmetics or toilet prepar. (excluding soaps)
- 554 Soaps, cleansing and polishing preparations
- 562 Fertilizers (other than those of group 272)
- 571 Polymers of ethylene, in primary forms
- 572 Polymers of styrene, in primary forms
- 573 Polymers of vinyl chloride or halogenated olefins
- 574 Polyethers, epoxide resins; polycarbonat., polyesters
- 575 Other plastics, in primary forms
- 579 Waste, parings, and scrap, of plastics
- 581 Tubes, pipes and hoses of plastics
- 582 Plates, sheets, films, foil & strip, of plastics

- 583 Monofilaments, of plastics, cross-section > 1mm
- 591 Insectides & similar products, for retail sale
- 592 Starche, wheat gluten; albuminoidal substances; glues
- 593 Explosives and pyrotechnic products
- 597 Prepared addit. for miner. oils; lubricat., de-icing
- 598 Miscellaneous chemical products, n.e.s.
- 792 Aircraft & associated equipment; spacecraft, etc.
- 871 Optical instruments & apparatus, n.e.s.
- 872 Instruments & appliances, n.e.s., for medical, etc.
- 873 Meters & counters, n.e.s.
- 874 Measuring, analysing & controlling apparatus, n.e.s.
- 881 Photographic apparatus & equipment, n.e.s.
- 882 Cinematographic & photographic supplies
- 883 Cinematograph films, exposed & developed
- 884 Optical goods, n.e.s.
- 885 Watches & clocks
- 891 Arms & ammunition
- 892 Printed matter
- 896 Works of art, collectors' pieces & antiques
- 897 Jewellery & articles of precious material, n.e.s.
- 898 Musical instruments, parts; records, tapes & similar

Appendix 2- Optimum Currency Area Model



Source: Padoa-Schioppa, 1994

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