

DOKUZ EYLÜL UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF ENGLISH ECONOMICS PROGRAM
MASTER’S THESIS

**ANALYSIS OF TURKISH TEXTILE TRADE:
GRAVITY THEOREM APPROACH**

Volkan TETİK

Supervisor
Associate Professor Dr. Burçak Müge VURAL

İZMİR – 2019

THESIS APPROVAL



DECLARATION

I hereby declare that this doctoral thesis titled as “Analysis of Turkish Textile Trade: Gravity Theorem Approach” has been written by myself in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honour.

Date

02/06/2019

VOLKAN TETİK

SIGNATURE



ABSTRACT

Master's Thesis

Analysis of Turkish Textile Trade:

Gravity Theorem Approach

Volkan TETİK

Dokuz Eylül University

Graduate School of Sciences

Department of English Economics Program

Nowadays, international trade is covering more important place. Countries and firms are engaging in international trade more in order to get higher benefit and make more profit. In this concept, the aim of this paper is to study the relationship between export and distance. In this paper, distance of importing countries to Turkey, 193 importing countries' GDPs, populations, also USD / TL exchange rate, presence of Custom Unions (dummy variable) and export of Turkey's textile products in three aggregate products, textile fibre (SITC 26), yarn and fabric (SITC 65) and articles of clothing & apparel accessories (SITC 84) to these countries are taken into account between 2007 and 2017 for this objective. Data are obtained from TURKSTAT web page. The Gravity Model is employed to investigate impact of distance to bilateral trade. The results lend support to the idea that distance has a decreasing effect on textile trade of Turkey. As the distance increases, countries are less willing to have a trade. In addition to this, as the wealth, population, depreciating Turkish Lira, common Custom Union membership have accelerating effect on textile export of Turkey.

Keywords: Gravity Theory, Textile, Trade Flows, Customs Union

ÖZET

Yüksek Lisans Tezi

Türkiye'nin Tekstil İhracatı Analizi:

Çekim Teoremi Yaklaşımı

Volkan TETİK

Dokuz Eylül Üniversitesi

Sosyal Bilimler Enstitüsü

İngilizce İktisat Anabilim Dalı

İngilizce İktisat Programı

Son yıllarda, uluslararası ticaret günden güne daha da önemli hale gelmektedir. Ülkeler ve firmalar üretimden ve ticaretten daha fazla gelir ve fayda elde etmek için uluslararası ticaret faaliyetlerine daha fazla entegre olmaktadır. Bu doğrultuda, çalışmanın amacı ihracat ve mesafe arasındaki ilişkiyi incelemektir. Çalışmada bu ilişkiyi değerlendirmek amacıyla, bağımlı değişken olarak ithalatçı ülkelerin Türkiye ile mesafesi, 193 ülkenin gayrisafi milli hasıla verileri, nüfus verileri, USD / TL döviz kuru, ortak Gümrük Birliklerine üyelik (kukla değişken olarak) ve Türkiye'nin tekstil ihracatındaki üç alt kırılım olan dokuma elyafı ve bunların atıkları (SITC 26), iplik ve kumaş (SITC 65) ve giyim eşyası ile bunların aksesuarları (SITC 84) verileri 2007-2017 yılları aralığında dahil edilmiştir olup veriler TÜİK web sitesinden elde edilmiştir. Çalışmada ilişkiyi ölçmek amacıyla yöntem olarak Çekim Modeli kullanılmıştır. Elde edilen sonuçlara göre mesafe verisi Türkiye tekstil ihracatını olumsuz etkilemektedir. Ülkelerin Türkiye'ye uzaklığı arttıkça ticaret yapma eğimlerinin azaldığı tespit edilmiştir. Bunun yanı sıra gayrisafi yurtiçi hasıla, nüfus, TL'nin değerinin azalması, ortak Gümrük Birliği üyeliği değişkenlerinin Türkiye tekstil ihracatını artırıcı etkileri olduğu görülmüştür.

Anahtar Kelimeler: Çekim Teorisi, Tekstil, Ticaret Akışları, Gümrük Birliği

**ANALYSIS OF TURKISH TEXTILE TRADE:
GRAVITY THEOREM APPROACH**

CONTENTS

THESIS APPROVAL PAGE	ii
DECLARATION	iii
ABSTRACT	iv
ÖZET	v
CONTENTS	vi
LIST OF TABLES	x
LIST OF GRAPHS	xii
INTRODUCTION	1

FIRST SECTION

**GENERAL ECONOMIC SITUATION AND INTERNATIONAL TRADE
TRADE INDICATORS**

1.1	ECONOMIC SITUATION OF THE WORLD	3
1.1.1	Interest Rates	4
1.1.2	Gross Domestic Product	5
1.1.3	Inflation	7
1.1.4	Unemployment	8
1.2	TRADE VOLUME OF WORLD	9
1.3	OVERVIEW OF TURKISH ECONOMY	14
1.3.1	Inflation	15
1.3.2	Employment	16
1.3.3	International Trade of Turkey	18
1.3.4	Trade with Neighbour Countries	22
1.3.5	Top Trade Partners of Turkey	24

SECOND SECTION

STRUCTURE OF TURKEY’S TEXTILE SECTOR

2.1	GENERAL VIEW OF TURKISH TEXTILE	26
2.2	IMPORTANCE OF COTTON	27
2.3	SWOT ANALYSIS OF TURKISH TEXTILE SECTOR	29
2.4	TEXTILE AND CLOTHING SECTOR PRODUCTION INDICES	31
2.5	CAPACITY UTILIZATION RATE	32
2.6	EMPLOYMENT	33
2.7	IMPORT DEPENDENCY IN TEXTILE AND CLOTHING SECTOR	35
2.7.1	Turkey's Textile and Clothing Sectors Import / Supply Ratio	37
2.8	TEXTILE AND CLOTHING SECTOR’S EXPORT PERFORMANCE OF TURKEY	38
2.8.1	Contribution of Textile and Clothing Export to Turkey’s GDP	38
2.8.2	Textile And Apparel’s Share In Aggregate Export Of Turkey	39
2.9	PERFORMANCE OF TEXTILE IN RECENT YEARS	39
2.9.1	Textile Export Performance of Turkey by Country Groups	40
2.9.2	The Most Important Trade Partners of Textile	41
2.9.3	Export of Textile by Sub-Product Group	42
2.9.4	Textile Import Performance of Turkey	43
2.10	APPAREL AND CLOTHING	43
2.10.1	Apparel Export Performance of Turkey by Country Groups	44
2.10.2	The Most Important Trade Partners of Clothing	45
2.10.3	Export of Apparel by Sub-Product Group	47
2.10.4	Turkey’s Highest Apparel Import by Country	48

THIRD SECTION

DETERMINANTS OF INTERNATIONAL TRADE

3.1	WHY DO COUNTRIES NEED INTERNATIONAL TRADE?	48
3.2	THE MODELS OF INTERNATIONAL TRADE	51
3.2.1	Standard Theory of International Trade	52

3.2.2	Trade Based on Economies of Scale	53
3.2.3	Trade Based on Technological Differences	54
3.2.4	Trade Based on Product Differentiation	55
3.3	DETERMINANTS OF TRADE	57
3.3.1	Distance	58
3.3.2	Common Language	59
3.3.3	Common Border	60
3.3.4	Population	62
3.3.5	Exchange Rate	64
3.3.6	Barriers to Trade	65
3.3.7	GDP	66
3.3.8	Competition Policies and Comparative Goods' Prices	68
3.3.9	Political Issues	69
3.3.10	Currency Unions	70
3.3.11	Economic Crisis	72
3.3.12	Free Trade Area – Regional Trade Agreements	74
3.3.13	Export Incentives	76
3.3.14	Foreign Direct Investment	79

FOURTH SECTION

LITERATURE REVIEW

4.1	HISTORICAL BACKGROUND OF GRAVITY THEORY	82
4.2	RECENT STUDIES	84

FIFTH SECTION

EMPIRICAL STUDY

5.2	INFRASTRUCTURE OF GRAVITY THEORY	91
5.3	MODEL AND METHOD	91
5.3	VARIABLES OF STUDY AND EXPECTED EFFECTS ON INDEPENDENT VARIABLE	93
5.4	RESULTS AND INTERPRETATION OF MODEL	95

CONCLUSION

98

REFERENCES

101



LIST OF TABLES

Table 1: Recent Interest Rates of USA	p.4
Table 2: Interest Rates During Housing Crisis	p.4
Table 3: GDP Growth Rate of Countries	p.5
Table 4: GDP Per Capita of Countries	p.6
Table 5: Inflation Rate by Country	p.7
Table 6: Unemployment Rate of Countries	p.8
Table 7: Export by Countries	p.9
Table 8: Import by Countries	p.10
Table 9: Top 10 Exporters of Apparel Clothing in 2017	p.11
Table 10: Top 10 Importers of Apparel Clothing in 2017	p.12
Table 11: Top 10 Exporters of Textile in 2017	p.13
Table 12: Top 10 Importers of Textile in 2017	p.13
Table 13: GDP Per Capita of Turkey	p.15
Table 14: Inflation Rate of Turkey by Years	p.15
Table 15: Unemployment of Turkey by Years	p.17
Table 16: Employment By Sectors of Turkey	p.18
Table 17: International Trade Data of Turkey	p.19
Table 18: Export by Sectors of Turkey	p.20
Table 19: Import by Sectors of Turkey	p.21
Table 20: Import by Product Group of Turkey	p.22
Table 21: Turkey's Trade with Neighbour Countries	p.23
Table 22: Turkey's Volume & Balance of Trade	p.24
Table 23: Top Trade Partners of Turkey (Import)	p.25
Table 24: Top Trade Partners of Turkey (Export)	p.26
Table 25: Cotton Production & Consumption of Turkey	p.27
Table 26: Turkey's Export and Import of Cotton	p.28
Table 27: Production Indices by Sector of Turkey	p.32
Table 28: Turkey's Capacity Utilization by Sectors	p.32
Table 29: Turkey's Industrial Labor Input Indices	p.33
Table 30: Labor Input Indices of Textile Sector in Turkey	p.34

Table 31: Labor Input Indices of Clothing Sector in Turkey	p.34
Table 32: Export / Import Ratio of Clothing Sector in Turkey	p.35
Table 33: Export / Import Ratio of Textile Sector in Turkey	p.36
Table 34: Contribution of Textile Export to GDP of Turkey	p.39
Table 35: Textile and Apparel Share in Total Export of Turkey	p.39
Table 36: Turkey's Textile Export by Country Groups	p.41
Table 37: Turkey's Highest Textile Export by Country	p.41
Table 38: Turkey's Highest Textile Import by Country	p.43
Table 39: Turkey's Apparel Export by Country Groups	p.44
Table 40: Apparel Export of Turkey by Country	p.45
Table 41: Turkey's Apparel Import by Country	p.48
Table 42: Value of TL in Terms of Other Currencies	p.64
Table 43: Regional Trade Agreements of Turkey	p.74
Table 44: Trade with FTA Countries of Turkey in 2017	p.75
Table 45: Turkey's Trade with Free Trade Agreement Countries	p.76
Table 46: FDI inflows of Turkey	p.80
Table 47: Panel Unit Root Test Results	p.93
Table 48: Empirical Outcome of Study	p.95
Table 49: Heckman 2 – Step Coefficient Estimates	p.97

LIST OF GRAPHS

Graph 1: Top Traded Goods of World	p.10
Graph 2: Textile Export Performance of Turkey By Years	p.38
Graph 3: Textile Export Share of Neighbour Countries	p.62
Graph 4: Turkey's Imports With Respect to Population	p.63
Graph 5: Turkey's Export With Respect to Population	p.63
Graph 6: Turkey's Export in Recent Years	p.65
Graph 7: GDP and Trade Volume of Turkey	p.67
Graph 8: Percentage of FDI Net Inflows in GDP (Turkey)	p.80



INTRODUCTION

International trade has been increasing drastically due to rising globalization and deepening integration of the world economies. Rise in international economic activities create new borders, new trade movements, proliferated free trade areas, enhanced international agreements, and so on. Besides, it is obvious that trade increases the welfare of trading partners. Therefore, international trade remains of vital importance for the development process and growth of a country.

There are many reasons for doing international trade. In the history of trade, countries have export and import movement due to geographical lack of natural resources, lack of labor force and cost issues. Another reason for making international trade is that domestic supply may not be sufficient to meet domestic demand. Countries sometimes fail to meet domestic demand due to lack of domestic production; they meet their needs through import. According to international trade theories, countries should export the products that they specialize and produce at low cost, and they import the other required products which domestic production is inefficient.

National economies have to rely on innovation in order to integrate themselves to the world economy and increase their export competitiveness in high value added production. With the advanced technology and reliance on innovation, developing countries switch from manpower to machinery in production process. Employment of high technology production, then, allow them to produce faster and higher quality goods to achieve higher income level and greater standards of living. Thus, industrial development, and technological improvements are corner stones to achieve economic development.

Textile and apparel sector displays significant importance in any economy especially for the developing countries, and classified as a sensitive industry with its sensitivity to prices due to similar products all over the world. Moreover, the sector highly requires natural raw materials such as cotton. In addition, it helps countries to enhance sustainable growth by increasing demand with increasing population of the world. Moreover, textile sector is very important for all countries especially for those who have vast population (which means cheaper labor compared to others), large natural resources -because it is labor-intensive sector- so it needs many workers

therefore it provides employment to large population. Furthermore, it reduces the current account deficit due to high level of export income. In aggregate world trade, EU countries and Turkey composed of almost 30 percent of textile and apparel export in 2017. They achieve this high rate for several years in the history.

Turkey is one of the most important textile and apparel products' exporter of the world. Turkey is ranked fifth among world exporters in textile sector with a share of 3.9 percent of the world exports and ranked sixth among world exporters in apparel sector, with a share of 3.3 percent of world exports in apparel. China, EU, US, and India are the other major exporters of textile and apparel in global economy.

Textile sector accounts for a substantial share in Turkish GDP. Statistics demonstrate that the share of textiles sector in aggregate employment is approximately 5 percent. Industry sector makes approximately 20 percent of Turkish GDP, and the textile sector generates more than 3 percent of Turkey's GDP in 2017.

Turkey holds strong position in textile and apparel in world trading. The country always has trade surplus in case of these sector. Despite the Export / Import ratio is decreasing in recent years, it is 6.32 in textile sector and 1.67 in apparel sector in 2017. Major textile and apparel sectors trade partners of Turkey are Germany, Italy, Spain and Bulgaria. USA is the most important trade partner out of Europe. Top ten trading partners creates 59% of total textile and apparel export of Turkey.

The Gravity Model has been employed in the study that has been used in large studies in the economic literature and is a popular theory in this field. According to the Gravity Model, the trade volume between two countries increases as the national income of the two countries. When the distance between the two countries increases, trade volume decreases. Increasing the distance makes bilateral trade harder. The reason for this situation is thought to be as transportation costs. There are many variables can be included to equation such as common language, common border, population, currency which affect the mutual trade flows out of the national income and distance variables.

The aim of this research is to examine the determinants of textile and apparel trade between Turkey and its trading partners, since it is considered as one of the promising and gradually growing sectors. The Gravity Model is employed in

estimation of trade potential (level) of Turkey. Countries' GDPs, GDP per capita, existence of border, common language, distances to Turkey, exchange rate and export of Turkey's textile products in three aggregate products, fibre (SITC 26), yarn and fabric (SITC 65) and clothing & apparel (SITC 84) to these countries are taken into account between 2007 and 2017 for this objective. The "Gravity Model" has been employed to investigate impact of distance to bilateral trade. The research question of the dissertation can be stated as follows: 'What are the determinants of Turkish exports of textile sector?'

Study has employed the Heckman Selection Method in order to determine the effect of dependent variables on export of Turkey and includes 193 importing countries' (from Turkey) between the years 2007 to 2017.

The dissertation is structured as follows: The first section of the dissertation is devoted to general economic situation and international trade indicators of world leading economies and Turkey. The second section discusses structure of Turkey's textile sector, gives important information about contribution of textile and apparel sector to macroeconomic variables of country. The third section explains the determinants of international trade and the way determinants affect international trade. Then in the following section, literature review and empirical study has been made in order to prove the effects of determinants in scientific way. In the final section of the study, empirical results are interpreted, also the suggestions in this subject are presented.

FIRST SECTION

GENERAL ECONOMIC SITUATION AND INTERNATIONAL TRADE TRADE INDICATORS

2.1 ECONOMIC SITUATION OF THE WORLD

In 2007, world faced the problem of mortgage crisis which began in US and spread all over the world. It leads to bankruptcy of great investment banks, decrease in global GDP, global trade, and general welfare. It affected all the world, some countries' economy had greater damage, some had less, but all of them had.

1.1.1. Interest Rates

After 2008, countries began to increase liquidity in order to get rid of global economic crisis, especially USA.

Table 1: Recent Interest Rates of USA

Year	Interest Rates
2007- September 18	4.75%
2007- October 31	4.50%
2007 - December 11	4.25%
2008 - January 22	3.50%
2008 - January 30	3.00%
2008 - March 18	2.25%
2008 - April 30	2.00%
2008 - October 8	1.50%
2008 - October 29	1.00%
2008 - December 16	0.25%
2015 - December 17	0.50%
2016 - December 14	0.75%
2017 - March 15	1.00%
2017- June 14	1.25%
2017 - December 13	1.50%

Resource: FED

After the crisis, FED decreased the interest rates unprecedentedly, gradually and very fast. In 13 months, the interest rates fell so as to enhance economic activities and provide economic boom via increasing production in the country. The new and long lasting interest rate was 0.25 percent at the end of 2008 up to 17 December 2016. During seven years, the interest rates was stable in USA.

Table 2: Interest Rates During Housing Crisis

Country	Interest Rates (2007)	Interest Rates (2008)
Europe Central Bank	4.25	2.50
Bank of England	5.50	2.00
Bank of Canada	2.00	1.50
Bank of Japan	0.50	0.30

Resource: Central Banks of Countries

In addition to US, other major countries also decreased the interest rates in order to fight global economic crisis. This expansionary monetary policy increased the economic activities, and became the engine of new growth path of all world.

1.1.2. Gross Domestic Product

This situation leads to expansion in economies and increase in the GDP level of all countries.

Table 3: GDP Growth Rate of Countries

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Brazil	6,06	5,09	-0,13	7,54	3,99	1,93	3,01	0,51	-3,55	-3,47	0,98
China	14,23	9,65	9,40	10,64	9,54	7,86	7,76	7,30	6,90	6,70	6,90
EU	3,08	0,48	-4,35	2,10	1,71	-0,42	0,26	1,74	2,32	1,96	2,44
H. Income	2,65	0,35	-3,42	2,99	1,88	1,25	1,39	2,02	2,34	1,66	2,23
India	9,80	3,89	8,48	10,26	6,64	5,46	6,39	7,41	8,15	7,11	6,62
Japan	1,65	-1,09	-5,42	4,19	-0,12	1,50	2,00	0,37	1,35	0,94	1,71
L. Income	6,11	4,93	5,28	6,73	4,53	6,31	5,75	5,70	1,78	2,48	5,69
M. Income	8,67	5,71	2,47	7,45	6,15	5,23	5,16	4,53	3,93	4,21	4,91
OECD	2,51	0,19	-3,55	2,87	1,80	1,25	1,42	2,08	2,44	1,73	2,38
Russia	8,54	5,25	-7,82	4,50	5,28	3,66	1,79	0,74	-2,83	-0,22	1,55
Turkey	5,03	0,85	-4,70	8,49	11,11	4,79	8,49	5,17	6,09	3,18	7,42
UK	2,36	-0,47	-4,19	1,69	1,45	1,48	2,05	3,05	2,35	1,94	1,79
USA	1,78	-0,29	-2,78	2,53	1,60	2,22	1,68	2,57	2,86	1,49	2,27
World	4,23	1,82	-1,73	4,31	3,18	2,51	2,61	2,86	2,86	2,51	3,15

Resource: World Bank

The housing crisis began in the 2007, and the effects were seen in the following years. As it's seen on the table, in 2007 the growth rate of the world was 4.23 percent. However the following years were devastating for almost all countries. The global crisis hit the developed countries most. Some developed countries had negative growth rate such as United Kingdom, United States, Japan. In addition to these countries, group of EU countries also had the negative growth rate.

After 2010, expansionary monetary policies finally demonstrated the results. In 2010, all developed and developing countries had positive growth rate thanks to increasing production, domestic demand and international trade.

According to the World Bank data, the global growth rate has showed the strong performance in recent years. After global crisis, the growth rate was always above 2.5 percent. Especially in 2017, the growth rate is quite high compared to the previous 5 years. Besides, the expected growth rate of the world in 2018 was percent 3.9 according to the IMF World Economic Outlook in April, 2018.

In the 2016, petroleum crisis had effect on the growth rate of many countries. However, in 2017, high income countries' growth rate is also above 2 percent and many other countries' were increased compared to previous year in 2017 with the increasing demand and production.

The second biggest economy of the world, China, has a sustainable growth rate thanks to global demand to domestic goods with cheap prices. In recent years, the growth rate of China has been two times higher than world average.

Table 4: GDP Per Capita of Countries (Current, USD)

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Brazil	7.314	8.788	8.553	11.224	13.167	12.291	12.217	12.027	8.750	8.639	9.821
China	2.695	3.471	3.838	4.561	5.634	6.338	7.078	7.684	8.069	8.117	8.827
EU	35.594	38.136	33.979	33.677	36.409	34.235	35.588	36.670	32.207	32.260	33.715
UK	50.134	46.768	38.262	38.893	41.412	41.791	42.724	46.783	44.306	40.412	39.720
H. income	37.283	39.326	36.582	38.138	41.018	40.813	41.009	41.597	39.137	39.675	41.211
India	1.018	991	1.090	1.346	1.462	1.447	1.452	1.576	1.606	1.717	1.940
Japan	35.275	39.339	40.855	44.508	48.168	48.603	40.454	38.109	34.568	38.972	38.428
L. income	490	579	592	629	695	734	780	817	762	703	750
M. income	2.799	3.319	3.205	3.876	4.525	4.775	5.003	5.134	4.792	4.766	5.169
OECD	35.300	37.082	34.442	35.848	38.328	38.023	38.236	38.776	36.395	36.863	38.149
Russia	9.101	11.635	8.563	10.675	14.351	15.435	16.007	14.126	9.329	8.748	10.743
Turkey	9.710	10.851	9.036	10.672	11.341	11.720	12.543	12.127	10.985	10.863	10.541
USA	48.062	48.401	47.002	48.375	49.794	51.451	52.782	54.697	56.444	57.589	59.532
World	8.653	9.375	8.780	9.514	10.449	10.559	10.724	10.883	10.172	10.201	10.714

Resource: World Bank

One of the BRIC countries, Russia had a severe recession in 2015 and had - 2.83 percent growth rate, but the effect has lowered in 2016, the growth rate was still negative but less, -0.22 percent. In 2017, finally Russia had positive 1.5 percent growth rate thanks to increasing petroleum prices. The second official meeting of OPEC countries has done in 2016, November in Vienna. The organization decided to decrease supply of petroleum from 33.7 million barrel to 32.5 million barrel. This caused the increase in petroleum prices, therefore GDP growth of Russia accelerated in 2017.

In 2017, most of the countries' GDP per capita level increased compared to previous years. Turkey, United Kingdom and Japan are the exceptions among the countries. United States has the highest GDP per capita in the world. It has five times higher GDP per capita than world average, and it is 76 percent higher than EU average, and 55 percent higher than OECD average. UK, Germany and Japan are the other highest countries. Despite great growth rate and economic power of China, they have relatively lower GDP Per capita than other countries. It had 8.827 USD in 2017, and this is even below the world ratio. India is also seen as emerging country and seen as one of the great economic power of the future world, the GDP Per Capita of country is close to low income countries.

1.1.3. Inflation

Sustainable low inflation always is a target for central banks. Some countries reach this target, but it is not easy to have it. World average was at the top level in 2008, at the beginning of the global crises. Then it has been begun to decrease gradually up to now.

Japan is an outstanding sample among all countries, because they experienced deflation five times in last ten years. In 2017, they had 0.47 percent inflation, it is four times less than world average.

Table 5: Inflation Rate by Country

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Brazil	3,64	5,68	4,89	5,04	6,64	5,40	6,20	6,33	9,03	8,74	3,45
China	4,82	5,93	-0,73	3,18	5,55	2,62	2,62	1,92	1,44	2,00	1,59
EU	2,48	4,16	0,93	1,67	3,31	2,72	1,39	0,22	-0,05	0,22	1,58
UK	2,31	3,60	2,18	3,30	4,46	2,80	2,57	1,47	0,05	0,64	2,69
India	6,37	8,35	10,88	11,99	8,86	9,31	10,91	6,66	4,91	4,95	3,33
Japan	0,06	1,38	-1,35	-0,72	-0,27	-0,05	0,35	2,76	0,79	-0,12	0,47
OECD	2,46	4,07	0,93	1,80	3,34	2,47	1,42	0,59	0,20	0,44	1,82
Russia	9,01	14,11	11,65	6,85	8,44	5,07	6,75	7,82	15,53	7,04	3,68
Turkey	8,76	10,44	6,25	8,57	6,47	8,89	7,49	8,85	7,67	7,78	11,14
USA	2,85	3,84	-0,36	1,64	3,16	2,07	1,46	1,62	0,12	1,26	2,13
Venezuela	N/A	N/A	27,08	28,19	26,09	21,07	40,64	62,17	121,74	254,95	-
World	4,80	8,96	2,92	3,36	4,84	3,72	2,59	2,35	1,44	1,47	2,18

Resource: World Bank

Other low inflation country is China with the 1.59 percent in 2017, they have lower inflation than last year, it was 2 percent in 2016. Besides China, European Union, United Kingdom have less than 2 percent inflation.

On the other hand, there is an exceptional instance to high inflation, Venezuela. After 2015, the inflation begin to rise more than 100 percent. In 2016, the inflation rate was 255 percent. According to the announcement of Venezuela Parliament, the inflation rate was 13779 percent. This leads to famine, internal turmoil, spoil in country.

In 2016, the stable expansionary monetary policy which was implemented by the European Central Bank was finally worked. Consumer price inflation, which was negative in 2015 in the Eurozone, rose to 0.22 percent in 2016 and to 1.59 percent in 2017 with a relatively high increase. Among the regional economies, inflation in Germany remained at the level of 1.6 percent last year, while in France it increased by 0.5 points to 1.2 percent, in Italy by 0.2 points to 0.7 percent, in Greece Increased by 0.7 points to 1.0 percent, while Spain fell by 0.5 points to 1.1 percent.

1.1.4. Unemployment

During the global crisis period, global economy slowed down, and this reduces the employment. The countries that effected global crisis also have inflation, unemployment, low level of income etc.

Table 6: Unemployment Rate of Countries

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Brazil	8,09	7,63	8,28	7,26	6,69	7,19	6,99	6,67	8,44	11,61	13,32
China	3,76	4,36	4,29	4,20	4,34	4,47	4,54	4,59	4,61	4,65	4,68
EU	7,12	6,95	8,87	9,51	9,59	10,41	10,81	10,20	9,38	8,53	7,62
UK	5,26	5,62	7,54	7,79	8,04	7,89	7,53	6,11	5,30	4,81	4,33
H. income	5,67	5,91	7,97	8,22	7,89	7,92	7,83	7,24	6,63	6,23	5,68
India	4,06	4,12	3,75	3,54	3,53	3,62	3,46	3,41	3,49	3,51	3,52
Japan	3,85	3,98	5,08	5,07	4,55	4,35	4,03	3,58	3,33	3,13	2,83
L. income	5,93	5,98	5,79	5,94	5,99	5,82	5,71	5,64	5,68	5,69	5,70
M. income	5,13	5,27	5,42	5,08	4,98	4,99	4,99	4,96	5,12	5,34	5,41
OECD	5,59	5,92	8,10	8,32	7,95	7,94	7,88	7,35	6,76	6,32	5,78
Russia	6,10	6,32	8,42	7,37	6,54	5,44	5,46	5,16	5,57	5,54	5,20
Turkey	8,87	9,71	12,55	10,66	8,80	8,15	8,73	9,88	10,24	10,84	11,26
USA	4,62	5,78	9,25	9,63	8,95	8,07	7,38	6,17	5,28	4,87	4,36
World	5,29	5,45	5,92	5,73	5,60	5,60	5,57	5,44	5,45	5,53	5,49

Resource: World Bank

As expected, 2008 crisis affected many indicators including unemployment rate. It increased unemployment rate of world from 5,29 percent in 2007, to 5,92 percent in 2009. After 2009, with the economic precaution policies it began to decrease gradually each year. Although all policies, the world average is still above the pre-crisis rate.

In the developed region and countries like EU, UK and USA are the most effected countries from the crisis in case of unemployment rate. In EU, it rised from 6,95 percent to 8,87 percent in 2009 then increased to 9,51 percent in 2010. In the UK, increasing rates continued up to 2011, the rate was 8,04 percent. In 2010 in the USA, unemployment rate increased up to 9,63 percent. Among them, USA and UK's unemployment rate was below pre-crisis level in 2017. Nevertheless, European Union still can't reach that level yet.

Among the BRIC countries, which are seen as emerging and promising, Brazil has the highest unemployment rate in 2017. Others have relatively low and

sustainable unemployment rate. Additionally, Russia is decreasing unemployment rate gradually in recent years.

1.2 TRADE VOLUME OF WORLD

Although there are some trade restrictions among countries, as the world integrated more every day, trade volume is increasing parallel to it. Trade surplus may be target for countries, however it is not easy to achieve it, because the population of countries and world is increasing permanently, the needs are vary and rise. Therefore, countries have to import many goods and services that they are not able to produce or they do not prefer to produce it due to comparative advantage of importing it instead of producing it.

Table 7: Export by Countries (Current, Million USD)

Country	2014	2015	2016	2017
Brazil	264.063	223.869	217.753	251.721
China	2.462.902	2.360.152	2.197.922	2.422.911
EU	8.042.258	7.197.123	7.234.532	7.949.351
India	485.583	428.630	430.433	488.087
Japan	862.973	784.710	811.524	875.292
OECD	14.225.594	12.846.634	12.792.086	13.910.235
Russia	562.550	393.116	332.396	410.792
Turkey	220.871	199.010	187.966	210.162
UK	854.135	790.173	749.113	801.814
USA	2.375.904	2.263.907	2.208.071	2.331.600
World	23.935.496	21.257.833	20.790.436	22.844.870

Resource: World Bank

USA exports goods and services around 2.3 trillion USD for last each of four years. On the other hand they import 2.9 trillion USD worth of goods and services in 2017. They run high trade deficit around 6 billion USD in 2017. Government wants to put some import restrictions to decrease it but it might causes trade war in the world. As they decreases quotas, and increases tariffs and import duties, other countries like China, increase the restrictions as well.

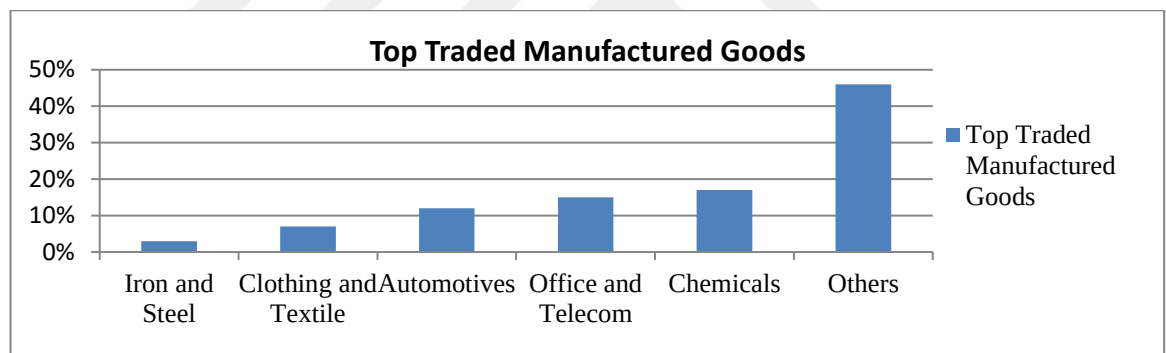
On the other hand European Union had trade surplus recent years around 6-7 billion USD in last years. In 2017, EU countries exported 7.9 trillion USD worth goods and services and they only imported approximately 7.2 trillion USD worth goods and services. Germany has current account surplus 8 percent of it's GDP, and they are one of the top countries who has current account surplus.

Table 8: Import by Countries (Current, Million USD)

Country	2014	2015	2016	2017
Brazil	318.799	243.145	203.163	221.543
China	2.241.602	2.002.282	1.942.185	2.212.182
EU	7.511.194	6.602.025	6.652.948	7.297.867
UK	914.702	839.698	804.206	838.473
India	553.553	491.880	472.013	561.449
Japan	991.579	807.987	771.080	837.572
OECD	14.177.322	12.678.797	12.588.214	13.703.441
Russia	428.898	281.986	266.187	326.906
Turkey	257.789	222.910	213.595	249.167
USA	2.866.238	2.764.353	2.712.865	2.900.039
World	23.219.631	20.632.119	20.158.773	22.223.567

Resource: World Bank

Japan had trade deficit in 2014 and 2015. After this year, the situation has changed and they began to have trade surplus. In 2016, they had about 40 billion USD trade surplus, and surplus continued for 2017, and they again had around 38 billion USD worth trade surplus. Japan has current account surplus 4 percent of it's GDP.

Graph 1: Top Traded Goods of World

Resource: World Bank

In 2017, 414 billion USD worth of iron and steel were exported in the world. China is the leader of iron and steel export in the world. They exported around 56 billion USD worth of iron and steel. China is followed by Japan, Germany, South Korea and Russia. Top 5 exporters have more than 38 percent of iron and steel trade with worth of 160 billion USD in 2017. Turkey has 9.5 billion worth of iron and steel export in the same year.

In 2017, Germany, Japan and USA are the top three exporters of automotive products of the world. Germany exports worth of 261 billion USD, Japan exports worth of 150 billion USD and USA export worth of 135 billion USD. Top three

countries have more than 40 percent of world's trade. Turkey export worth of 23.8 billion USD automotive products.

Asian countries are on the top in case of office and telecom equipments export. China is the leader of the sector with worth of around 575 billion USD. China is followed by Hong Kong with worth of 280 billion USD. South Korea and USA are export nearly worth of 145 billion USD each. Turkey export around worth of 2 billion USD office and telecom equipments in 2017.

In case of chemical products exports, west European countries have a good performance with China and USA. Germany is the leader of the market of export with worth of 234 billion USD in 2017. USA, China, Belgium and Netherlands are other top exporters in 2017. Turkey has 8.6 billion worth of export of chemical products in 2017 in the world.

Textile covers an important part of world trade. Approximately 7 percent of the world is trade composed of textile and clothing trade in 2017. Income from textile export of Turkey is around 27 billion USD. This refers to 17.3 percent of total export of Turkey in 2017. China is the leader of the textile and clothing export of the world. It exports 258 billion USD worth of textile goods in 2017, and this refers to 11.1 percent of China's total trade in 2017. As another important textile exporter, India's ratio of exports to total is 7 percent in 2017.

Table 9: Top 10 Exporters of Apparel & Clothing in 2017 (Billion USD and percentage)

Countries	Value	Share in World Export		Annual Percentage Change		
	2017	2010	2017	2015	2016	2017
China	158	36.7	34.9	-6	-9	0
EU	130	28.4	28.6	-12	4	11
Bangladesh	29	4.2	6.5	-8	8	2
Vietnam	27	2.9	5.9	9	12	9
India	18	3.2	4.1	3	-2	2
Turkey	15	3.6	3.3	-9	0	0
Hong Kong	14	N/A	N/A	-10	-15	-8
Indonesia	8	1.9	1.8	-1	-2	10
Cambodia	7	0.9	1.6	11	12	8
USA	6	1.3	1.2	0	-8	1

Resource: World Trade Statistical Review 2018

According to the newly released World Trade Statistical Review 2018 by the World Trade Organization (WTO), the current dollar value of world textiles (SITC 65) and apparel (SITC 84) exports totaled \$296.1 billion and \$454.5 billion respectively in 2017, increased by 4.2 percent and 2.8 percent from a year

earlier. This is the first time since 2015 that the value of world textile and apparel exports enjoyed a growth. (<https://shenglufashion.com/2018/08/16/wto-reports-world-textile-and-apparel-trade-in-2017/>, accessed at 18.01.2019)

In 2017, in case of apparel, the share of Turkey is relatively lower compared to previous years with 3.3 percent of world clothing export. Turkey has the sixth place with 15 billion USD value of export. China is the leader of clothing export with 158 billion USD; also, China holds more than 1/3 of whole clothing export of the world. The second biggest exporter of clothing is European Union with more than quarter of world trade. Bangladesh, Vietnam, India are other important countries respectively.

Table 10: Top 10 Importers of Apparel & Clothing in 2017 (Billion USD and percentage)

Countries	Value	Share in World Import		Annual Percentage Change		
	2017	2010	2017	2015	2016	2017
EU	187	45.2	38.5	-9	2	1
USA	88	22.1	18.2	4	-6	-3
Japan	28	7.3	5.8	-8	-2	1
Hong Kong	12	N/A	N/A	-8	-11	-6
Canada	10	2.2	2.1	-2	-3	6
S. Korea	9	1.2	1.9	1	1	8
Russia	7	2	1.5	-34	3	26
China	7	0.7	1.5	7	-2	11
Switzerland	7	1.4	1.4	-8	6	13
Australia	7	1.3	1.4	1	-3	4

Resource: World Trade Statistical Review 2018

European Union and the USA is at the highest place of import of clothing in 2017. European Union imports 187 billion USD worth of clothing and it has 38 percent of world import. Despite the import of USA decreased in 2016 and 2017, it still is on the second place with 88 billion USD worth of imported goods.

The increasing diversification of textile imports is closely linked to the shifting pattern of world apparel manufacturing. Over the past decade, garment production has been moving from developed to developing countries. Meanwhile, most developing countries rely heavily on imported textile inputs due to lack of local manufacturing capacity, which explains why demand from these apparel-exporting countries has been growing particularly fast. (https://www.just-style.com/analysis/changing-trends-in-world-textile-and-apparel-trade_id134353.aspx, accessed at 07.01.2019)

Table 11: Top 10 Exporters of Textile in 2017 (Billion USD and percentage)

Countries	Value	Share in World Export		Annual Percentage Change		
	2017	2010	2017	2015	2016	2017
China	110	30.5	37.1	-2	-4	5
EU	69	27	23.4	-14	1	6
India	17	5.1	5.8	-6	-6	6
USA	14	4.8	4.6	-3	-7	5
Turkey	11	3.6	3.9	-12	0	5
S. Korea	10	4.4	3.3	-11	-6	-2
Taiwan	9	3.9	3.1	-6	-7	3
Pakistan	8	3.1	2.7	-9	-7	4
Hong Kong	8	N/A	N/A	-7	-13	-4
Vietnam	7	1.2	2.5	6	12	18

Resource: World Trade Statistical Review 2018

China has the top place in the textile trade of the world with 37.1 percent in 2017. It is followed by European Union and India respectively. These three countries keep the control of approximately 66 percent of whole textile trade and the share is even higher than previous years. Turkey has the fifth position after these vast countries.

Table 12: Top 10 Importers of Textile in 2017 (Billion USD and percentage)

Countries	Value	Share in World Import		Annual Percentage Change		
	2017	2010	2017	2015	2016	2017
EU	74	27.9	23.3	-12	1	-1
USA	28	8.8	8.9	5	-3	-2
China	17	6.6	5.5	-6	-12	4
Vietnam	14	2.6	4.3	6	1	5
Bangladesh	9	1.7	3	21	7	7
Japan	8	2.7	2.6	-8	0	3
Hong Kong	7	N/A	N/A	-9	-13	-4
Turkey	7	2.5	2.2	-12	-2	12
Mexico	6	1.9	2	2	-4	1
Indonesia	6	1.6	1.9	-2	3	4

Resource: World Trade Statistical Review 2018

In 2017, European Union, USA and China has the top three places respectively. EU and USA shares decreased compared to previous year. However, China increased the import of textile 4 percent. Turkey exports worth of 7 billion USD and there is a 12 percent increase compared to previous year.

In recent years, Vietnam has caught an outstanding trend in international market. The country achieved 18 percent rise in their export of textile in 2017 and kept the tenth place of the world. Moreover, they are the fourth biggest apparel exporter of the world with worth of 27 billion USD, and the country has 9 percent

growth of export in 2017. Besides these, the country is also a great importer of textile and apparel products of the world.

It is important to recognize that China is playing an increasingly critical role as a textile supplier for many apparel-exporting countries in Asia. Measured by value, 47 percent of Bangladesh's textile imports came from China in 2017, up from 39 percent in 2005. We observe similar trends in Cambodia (up from 30 percent to 65 percent), Vietnam (up from 23 percent to 50 percent), Pakistan (up from 32 percent to 71 percent), Malaysia (up from 25 percent to 54 percent), Indonesia (up from 28 percent to 46 percent), Philippines (up from 19 percent to 41 percent) and Sri Lanka (up from 15 percent to 39 percent) over the same period. (<https://shenglufashion.com/2018/08/16/wto-reports-world-textile-and-apparel-trade-in-2017/>, accessed at 18.01.2019). China is heavily growing and shifting from labor-intensive jobs to high skilled technological jobs. They are producing high tech products such as cell phones, computers with too important brands. As they move toward textile, other developing Asian countries are willing to take place of them in international market in textile and apparel production. Since countries like Bangladesh, Cambodia and Vietnam have cheaper labor force; they are attractive for companies who are looking for less cost and expenditure. These reasons can be the explanatory of rising of the countries in international market.

1.3 OVERVIEW OF TURKISH ECONOMY

In 2007, before the global crisis, Turkey's growth rate was 5.03 percent. When the crisis hit the world, the positive growth replaced with 0.84 percent in 2008, and negative growth rate which is -4.70 percent in 2009. Turkey has suffered more than world average, because the world growth rate in 2009 was -1.73 percent. After that, world and Turkey begin to have positive growth rate again. While Turkey suffered more than the world average during crisis years, Turkey also demonstrated better performance after crisis than the other countries. In 2011, the growth rate was at the peak level with 11,11 percent. In 2016, Turkey showed relatively lower growth rate owing to political issues and military coup attempt. In 2017, growth rate was doubled compared the previous year, it was 7,41 percent.

On one hand Turkey achieve positive and high growth rate, on the other hand GDP per capita was decreasing. In 2009, GDP Per Capita was at lowest level in last 11 years, it was 8.980 USD. It increased up to 2013, then it begin to decrease gradually. It was 12.480 USD in 2013; in 2017, it was 10.602 USD.

The main reason of diminishing GDP per capita in terms of USD is depreciating performance of Turkish Lira. After 2009, GDP Per Capita has started to rise up to now in terms of TL. Moreover, within last 10 years, the growth of GDP per capita was always more than 10 percent. Under other conditions, in case of USD, GDP Per capita only rised twice more than 10 percent in last ten years. As a further matter, it was decreasing in last 4 years owing to depreciation of TL.

Table 13: GDP Per Capita of Turkey (Current Prices)

Year	Mid-year population	TL	Change rate	USD	Change rate
2007	70.158.000	12.550	10,2	9.656	22,1
2008	71.052.000	14.001	11,6	10.931	13,2
2009	72.039.000	13.870	-0,9	8.980	-17,8
2010	73.142.000	15.860	14,3	10.560	17,6
2011	74.224.000	18.788	18,5	11.205	6,1
2012	75.176.000	20.880	11,1	11.588	3,4
2013	76.148.000	23.766	13,8	12.480	7,7
2014	77.182.000	26.489	11,5	12.112	-2,9
2015	78.218.000	29.899	12,9	11.019	-9,0
2016	79.278.000	32.904	10,0	10.883	-1,2
2017	80.313.000	38.680	17,6	10.602	-2,6

Resource: Turkstat

1.3.1 Inflation

As another main indicator of economy, inflation is also quite high for 2017 in Turkey. It was 11.14 percent and it is quite higher than Central Bank's target. The target was 5 percent for 2017. The inflation rate is also much higher than 2016's, which was 7.78 percent.

Table 14: Inflation Rate of Turkey by Years

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Rate	10.44	6.25	8.57	6.47	8.89	7.49	8.85	7.67	7.78	11.14

Resource: Turkstat

The main reason is again shown as the decreasing value of TL against other currencies, since Turkey is an import dependent country in many sectors. This situation increases the prices – in terms of TL – of imported goods, and this rebound

to domestic market prices. Since 2013, the Turkish lira has been depreciating against the dollar with double digits. Moreover Turkey has a high import dependency pushes general prices up, so high inflation is inevitable for country.

Inflation started with single-digit figures in 2017 with an increase of 9.22 percent. While the rise in food prices in February was 10,13 percent due to the relatively high level of energy prices and the cumulative depreciation of the Turkish lira, it increased to double digits for the first time after April 2012. In March and April, food prices continued to rise and reached 11.87 percent, the highest level in the first four months. In the following three months, with a gradual course due to the fall in clothing and food prices, it declined to the single digit with 9.79 percent in July, while the lowest level in the whole year. In the following months, with the effect of the increase in cost-side pressures and the increase in food prices, it started to rise again and reached the highest level of 2003-based series with 12.20 percent level reached in November. Decreased by 1.06 percentage points month-on-month in December, closing the year at 11.14 percent. (TOBB Economic Report, 2017)

1.3.2 Employment

Unemployment is a continuous problem of Turkey for a long period of time. The country runs structural unemployment. Unemployment problem in Turkey is the result of inability to scroll to the desired level of industrialization, agrarian society to take certain measures of weight in nature, can not be carried out at sufficient levels of investment will provide employment for rapidly growing young population due to its structural features. (Kanca, 2012:4)

In fact, Turkey's unemployment problem is structural in nature so serious and can not be resolved through unilateral macro policies. The main reasons behind the structural unemployment problem are labor force participation, the link between education and labor market, the general structure of the market and the sectoral transformation of employment. (Ministry of Development, 2014).

In addition to the problems in the labor market in Turkey, as a result of the faster increase of population than the increase employment opportunities in the country causes the inability to create new employment opportunities. Especially in

the last few years, the increase in the number of refugees in the country has been shaping the labor market with the dissolution and migration from rural to urban areas. In addition, high informal employment, high youth unemployment rate, low labor age level and lack of comprehensive policies with unemployment can be added to existing problems. (Bekiroğlu, 2010: 146).

Although there are many socioeconomic factors that determine labor force participation, the most important of these factors is undoubtedly the level of education. Education contributes to the human capital and stimulates the dynamics of social, cultural and political development, as well as ensuring the growth of economies. Therefore, in order to utilize development dynamics Turkey must provide gender equality both in education and employment with government policies. (Rankin and Aytaç, 2006:27).

As unemployment in Turkey, particularly in the young age group focuses on women as a gender. In addition, the majority of the unemployed are unqualified. In addition to this, unemployment is very uneven in terms of geographical regions, while employment is mostly concentrated in western regions and employment is decreasing towards east. This will bring new problems, such as regional disparities, with unemployment. (Apaydın, 2018:162)

Table 15: Unemployment of Turkey By Years

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Rate	8,87	9,71	12,55	10,66	8,80	8,15	8,73	9,88	10,24	10,84	11,26

Resource: Turkstat

In the process of development, countries move from agriculture to industry – which have relatively higher value added- to increase welfare. Turkey has the similar process, as time passes, country moves from agriculture to industry, then services sector. The share of services sector is increasing year by year, on the other hand the share of agriculture sector labor force is decreasing. This has effects on textile sector, because as country moves towards agriculture production, this causes the decrease in production of raw materials for every sector, and textile as well. As production of raw materials is not sufficient enough to meet domestic textile production, country must import these raw materials.

Table 16: Employment By Sectors of Turkey (Percentage)

Years	Agriculture	Industry	Construction	Services
2005	25,5	21,6	5,6	47,3
2006	23,3	21,9	6,0	48,8
2007	22,5	21,8	6,1	49,6
2008	22,4	22,0	6,0	49,5
2009	23,1	20,3	6,3	50,4
2010	23,3	21,1	6,6	49,1
2011	23,3	20,8	7,2	48,7
2012	22,1	20,5	7,2	50,2
2013	21,2	20,7	7,2	50,9
2014	21,1	20,5	7,4	51,0
2015	20,6	20,0	7,2	52,2
2016	19,5	19,5	7,3	53,7
2017	19,3	19,1	7,6	54,0

Resource: Turkstat

In 2017, the number of people employed in the agricultural sector increased by 3.0 percent to 5.46 million, while the number of those employed in the industrial sector increased by 2.7 percent to 7.48 million people, while the number of people employed in the services sector increased by 4.3 percent which rose to 15.25 million people. Thus, total employment increased by 3.6 percent to 28.19 million people.

In 2017, the share of the agricultural sector in total employment decreased by 0.1 percentage points to 19.4 percent, the share of industry sector decreased by 0.3 points to 26.5 percent, the share of services sector increased by 0.4 percentage points to 54 percent. The services sector contributed the most to employment by providing additional employment to 629.000 people, with the highest contribution from the wholesale and retail trade sub-sector and the administrative and support services sector. Employment increased by 159 thousand in the agricultural sector and approximately 200.000 in the industrial sector by a limited increase. While additional employment was provided to 54 thousand people in the manufacturing sector from the industrial sub-sector, the construction sector provided additional employment around 100.000 people to the sector.

1.3.3 International Trade of Turkey

There was a decreasing trend in import of Turkey until 2017. In 2014, import of Turkey is a bit more than 242 billion, in 2015 it was around 207 billion, in 2016

198.6 billion. Finally, in 2017 it increased by 17.7 percent and reach 233.8 billion. The reason for increasing is that growing economies' needs are rising as well. There is a fact that our export goods mainly are based on imported intermediary goods were also effective in increase imports. Therefore, in order to expand export level, producers must import intermediary goods.

Exports of Turkey, as in import, has negative growth for 2015 and 2016. Then it boosted in 2017. It increased from 142.5 billion to approximately 157 billion USD in 2017. Fast depreciating currency in 2017 can be the reason for the increase.

Table 17: International Trade Data of Turkey

	Exports (*1000) USD			Imports (*1000) USD	
	Value	Change		Value	Change
Years		(%)			(%)
2007	107.271.750	25,4		170.062.715	21,8
2008	132.027.196	23,1		201.963.574	18,8
2009	102.142.613	-22,6		140.928.421	-30,2
2010	113.883.219	11,5		185.544.332	31,7
2011	134.906.869	18,5		240.841.676	29,8
2012	152.461.737	13,0		236.545.141	-1,8
2013	151.802.637	-0,4		251.661.250	6,4
2014	157.610.158	3,8		242.177.117	-3,8
2015	143.838.871	-8,7		207.234.359	-14,4
2016	142.529.584	-0,9		198.618.235	-4,2
2017	156.992.940	10,1		233.799.651	17,7

Resource: Turkstat

Volume of Foreign Trade has decreased from 351 billion to 341 billion in 2016. Then it increased to 390,7 billion in 2017. The export import ratio lowered from 2016 to 2017, it was 67,1 percent in last year. In 2017, political disagreements with Russia lead to decrease in tourism income of Turkey. Moreover, in order to export more, Turkey needs intermediary goods and due to lack of resources and raw materials, country has to import these goods.

In the manufacturing industry, the high import of imported inputs in certain sectors, especially energy, causes the imports of intermediate goods to be high. Where the raw materials and intermediate goods used in the production stages are procured is important. Meeting the inputs used from domestic producers will ensure that the added value is kept within the country, and will contribute to increase the competitiveness with investments to be made in these sectors. Otherwise, the production of the inputs used from abroad will result in the transfer of the added

value to be made abroad. This situation will not only negatively affect the foreign trade and but also affect the current account balance, it will weaken the international competitiveness of the firms producing both intermediate and intermediate goods. (Economic and Social Researches Department, 2016:8)

Table 18: Export by Sectors of Turkey (Thousand USD)

Year	SITC	Sector	Export
2017	78	Road vehicles (including air-cushion vehicles)	23.469.375
	84	Articles of apparel and clothing accessories	15.087.708
	65	Textile yarn, fabrics, made-up articles	11.601.983
	67	Iron and steel	9.538.208
	77	Electrical machineries, apparatus and appliances	8.775.427

Year	SITC	Sector	Export
2016	78	Road vehicles (including air-cushion vehicles)	19.272.518
	84	Articles of apparel and clothing accessories	15.047.490
	65	Textile yarn, fabrics, made-up articles	11.095.184
	77	Electrical machineries, apparatus and appliances	8.325.199
	67	Iron and steel	7.250.787

Year	SITC	Sector	Export
2015	78	Road vehicles (including air-cushion vehicles)	16.870.974
	84	Articles of apparel and clothing accessories	15.118.481
	65	Textile yarn, fabrics, made-up articles	11.168.916
	77	Electrical machineries, apparatus and appliances	8.516.992
	67	Iron and steel	7.890.123

Resource: Turkstat

In the recent years, according to Standart International Trade Codes Classification (SITC), export of road vehicles are at the top of Turkey's exporting goods with 23.4 billion USD worth, it creates 15 percent of Turkey's export in 2017. Iron and steel, electrical machines are other top exporting goods of Turkey. Country export worth of 17 billion USD iron and steel in last three years. Value of electrical machineries import is about 26 billion USD worth.

In 2017, Turkey exported worth of 23.4 billion. 2nd and 3rd places are held by textile related products (SITC 65 and SITC 84) total worth of export for two goods are more than 26 billion USD.

Top five sectors of export are composed of approximately 44 percent of aggregate export of Turkey in 2017.

Table 19: Import by Sectors of Turkey (Thousand USD)

Year	SITC	Sector	Import
2017	78	Road vehicles (including air-cushion vehicles)	17.042.600
	97	Gold, non-monetary (excluding gold ores and concentrates)	16.577.311
	77	Electrical machineries, apparatus and appliance	12.958.415
	67	Iron and steel	11.456.482
	74	General industrial machineries and equipments	10.063.817

Year	SITC	Total	Import
2016	78	Road vehicles (including air-cushion vehicles)	17.389.966
	77	Electrical machineries, apparatus and appliances	10.959.068
	74	General industrial machineries and equipments	10.024.219
	67	Iron and steel	9.469.182
	57	Plastics in primary forms	8.699.621

Year	SITC	Sector	Import
2015	78	Road vehicles (including air-cushion vehicles)	17.065.126
	67	Iron and steel	11.394.368
	33	Petroleum, petroleum products and related materials	9.555.769
	57	Plastics in primary forms	9.395.572
	74	General industrial machineries and equipments	9.305.919

Resource: Turkstat

As in export, road vehicles (SITC 78) takes the top place of importing goods in recent years for Turkey. The country has imported more than 17 billion USD worth of it each of last three years. It almost held 9 percent of Turkey's import alone. Country imported 32.5 billion USD worth of Iron and steel, 18 billion USD worth of plastic in primary forms and 24 billion USD worth of electrical machineries are another important import items of Turkey. In 2017, top five importing items composed of 30 percent of Turkey's aggregate import.

Petroleum import is another important item due to lack of natural resources of Turkey. In 2015, petroleum related products are in the top five-item list with worth of 9.55 billion USD worth.

Turkey's economy is an economy that is in the development process. Sectoral development is important in development targets of the countries, which are in the process of development. The industrial sector has a great importance in the development of a country and gaining international competitive power. The industrial sector in terms of countries and the manufacturing industry sector, which has the highest share in this sector, is one of the important determinants of welfare level and development. (Kundak and Aydoğuş, 2018:252)

Table 20: Import by Product Group of Turkey

	Consumption Goods	Intermediate goods
Year	USD (*1000)	USD (*1000)
2017	28.487.529	171.461.765
2016	27.947.076	134.315.401
2015	28.586.784	143.316.885
2014	29.006.394	176.721.669
2013	30.415.894	183.811.325
2012	26.699.252	174.930.331
2011	29.692.268	173.140.243
2010	24.734.930	131.445.426
2009	19.289.707	99.509.821
2008	21.489.236	151.747.101
2007	18.694.022	123.639.631
2006	16.116.330	99.604.660

Resource: Turkstat

Since Turkey suffers from lack of input in many sectors, country has to import these raw materials. This situation contributes to the foreign trade deficit of Turkey, because the import of intermediate goods are quite high for Turkish economy. In 2017, Turkey imported 171.4 billion worth of intermediate goods and this means that import of intermediate goods has increased around 27 percent compared to 2016. Import of intermediary goods creates 73 percent of total import in 2017. The share is above 65 percent since 2009 for Turkey.

1.3.4 Trade with Neighbouring Countries

Today, when we look at the world wide, we see that regional integration and hence trade with neighboring countries are developing rapidly and countries follow a policy in this direction. (<http://www.mfa.gov.tr/komsu-ve-cevre-ulkeler-ile-ticaretigelistirme-stratejisi.tr.mfa>, accessed at 27.01.2019). This situation has created strategies for Turkey as well in the eyes of Government to increase trade with neighboring countries and continues to work in this context.

“Strategy of Developing the Trade with Neighbour and Surrounding Countries” was launched in 2000. "Neighboring Countries" concept whereas countries with borders with Turkey, "Surrounding Countries" concept with Turkey's recent history includes countries with cultural and geographical ties.

(https://ticaret.gov.tr/data/5b921eb013b87613646656b8/Performans_Programi.pdf, accessed at 27.01.2019)

Regional trade, and therefore trade with neighboring countries, has an important place in the trade volumes of developed countries. When the trade relations of these countries with the neighboring countries are examined, it is seen that the intra-trade trade of the European Union countries is 70%, while in Asian countries and North America, intra-regional trade is at 40% level. In the foreign trade of many developed countries in the world, the share of the countries in their regions has an important place. If Turkey's trade relations with over \$ 250 billion annual import demand of neighboring countries, which are available in sufficient quantities. (<http://www.mfa.gov.tr/komsu-ve-cevre-ulkeler-ile-ticareti-gelistirme-stratejisi.tr.mfa>, accessed at 27.01.2019).

Despite political issues, Turkey has significant trade relations with the neighbor countries. In the recent years, 10 percent of international trade volume of Turkey composed of neighbor countries. In addition, the rank of neighbor countries in terms of trade of volume among all world countries is quite high.

Table 21: Turkey's Trade with Neighbour Countries

Year	Country	Export	Import	Trade Volume	Rank at World
2017	Iran	3.259.270.095	7.492.104.018	10.751.374.113	9
	Iraq	9.054.612.317	1.527.572.935	10.582.185.252	10
	Bulgaria	2.803.182.333	2.773.126.951	5.576.309.284	19
	Greece	1.662.638.490	1.833.068.237	3.495.706.727	26
	Azerbaijan	1.356.999.400	350.869.670	1.707.869.070	44
	Syria	1.363.165.167	70.560.814	1.433.725.981	50
	Georgia	1.208.645.416	215.276.241	1.423.921.657	51
	Armenia	12.578	2.144.919	2.157.497	200

Year	Country	Export	Import	Trade Volume	Rank at World
2016	Iran	4.966.175.518	4.699.776.693	9.665.952.211	9
	Iraq	7.636.669.605	836.297.676	8.472.967.281	11
	Bulgaria	2.383.499.696	2.142.523.181	4.526.022.877	21
	Greece	1.427.205.999	1.187.057.570	2.614.263.569	28
	Azerbaijan	1.285.127.038	278.131.382	1.563.258.420	43
	Georgia	1.176.633.711	211.679.804	1.388.313.515	45
	Syria	1.321.981.350	65.388.846	1.387.370.196	46
	Armenia	1.122	1.386.001	1.387.123	205

Year	Country	Export	Import	Trade Volume	Rank at World
2015	Iran	3.663.759.780	6.096.254.224	9.760.014.004	9
	Iraq	8.549.966.625	296.505.275	8.846.471.900	11
	Bulgaria	1.675.927.931	2.254.179.613	3.930.107.544	24
	Greece	1.400.566.421	1.860.935.195	3.261.501.616	26
	Azerbaijan	1.898.519.654	232.375.981	2.130.895.635	33
	Syria	1.522.031.769	51.506.053	1.573.537.822	44
	Georgia	1.108.739.867	223.106.987	1.331.846.854	48
	Armenia	0	987.907	987.907	215

Resource: Turkstat

Iran is the most important partner country to trade for Turkey in recent years. Iraq and Bulgaria are other important partners. These three countries are in top 20 countries in 2017. Volume of trade with Iran in last three years is more than 30 billion USD, trade with Iraq is more than 28 billion USD and trade with Bulgaria around 14 billion USD. Contrarily, trade with neighbour countries increased 18.2% in 2017 compared to 2016.

Table 22: Turkey's Volume & Balance of Trade

Years	Balance of Foreign Trade (*1000 USD) Value	Volume of Foreign Trade (*1000 USD) Value	Export/Import Value (percent)
2007	-62.790.965	277.334.464	63,1
2008	-69.936.378	333.990.770	65,4
2009	-38.785.809	243.071.034	72,5
2010	-71.661.113	299.427.551	61,4
2011	-105.934.807	375.748.545	56,0
2012	-84.083.404	389.006.877	64,5
2013	-99.858.613	403.463.887	60,3
2014	-84.566.959	399.787.275	65,1
2015	-63.395.487	351.073.230	69,4
2016	-56.088.651	341.147.819	71,8
2017	-76.806.711	390.792.592	67,1

Resource: Turkstat

1.3.5 Top Trade Partners of Turkey

In recent years, China is a crucial import partner of Turkey. In 2017, it takes first place of Turkey's import ranking with the worth of 23.37 billion goods and it has the 10 percent share of total import of Turkey. However, import from China has decreased 8 percent in 2017 compared to previous year. Germany ranked second with 21.3 billion USD and 9 percent of total imports, while imports from Germany

decreased slightly compared to 2016. Russia ranked third with 19.5 billion USD and 8.3 percent of total imports.

Table 23: Top Trade Partners of Turkey (Import) (Current, Thousand Dollar)

Country	2017	2016	2015
China	23.370.619	25.441.432	24.873.456
Germany	21.301.869	21.474.989	21.351.884
Russia	19.514.093	15.162.386	20.401.756
USA	11.951.744	10.867.793	11.141.461
Italy	11.304.715	10.218.386	10.639.041
France	8.070.896	7.364.715	7.597.686
Iran	7.492.104	4.699.776	6.096.254
Switzerland	6.899.988	2.502.960	2.445.863
South Korea	6.608.873	6.384.242	7.057.438
UK	6.548.620	5.320.236	5.541.276

Resource: Turkstat

Although imports declined in 2016 due to political problems, it showed strong performance and increased by about 30 percent in 2017. USA and Italy are the other important import partners of Turkey. These countries have been taking 4th and 5th place in recent years. Turkey imports more than 10 billion worth of goods each of recent years from both Italy and USA. In 2017, the share of the top ten countries in imports was approximately 53 percent.

Among the top ten countries with the highest exports, Germany ranked first with 15.12 billion USD and accounted for approximately 10 percent of total exports, while exports to this country increased by 8 percent compared to 2016. While Britain accounted for 6 percent of total exports with 9.6 billion USD, exports to the UK decreased by about 18 percent compared to 2016. The United Arab Emirates ranked third with \$ 9.18 billion, accounting for approximately 6 percent of total exports, and became the country with the highest increase in our exports with a 70 percent increase compared to the previous year. Iraq is another important trade partner and neighbor country of Turkey. It took 4th place in 2017 with 9 billion worth of export. As in import, USA has the 5th place in case of export in 2017 with slightly increasing performance. In 2017, 51 percent of the total exports were made to the countries in the top ten.

Table 24: Top Trade Partners of Turkey (Export) (Current, Thousand Dollar)

Country	2017	2016	2015
Germany	15.118.909	13.998.653	13.417.033
UK	9.603.188	11.685.790	10.556.393
UAE	9.184.156	5.406.993	4.681.255
Iraq	9.054.612	7.636.669	8.549.966
USA	8.654.267	6.623.346	6.395.841
Italy	8.473.470	7.580.836	6.887.398
France	6.584.199	6.022.485	5.845.032
Spain	6.302.134	4.988.483	4.742.269
Holland	3.864.485	3.589.431	3.154.867
Israel	3.407.436	2.955.544	2.698.138

Resource: Turkstat

SECOND SECTION

STRUCTURE OF TURKEY'S TEXTILE SECTOR

2.11 GENERAL VIEW OF TURKISH TEXTILE

Textile industry is a sector which plays an important role in the economic development process of developing countries and it is one of the sectors where industrialization process started. Nowadays, this sector plays a similar role in the economic development of developing countries with cheap labor force. Textile has a crucial place in Turkey's economy in case of employment, export, production, GDP and so on. Since export of textile and clothing sectors generates an important share of GDP in Turkey's economy, development in this sector would make multiplier effect on the whole economy. Since textile trade has important contributions to income, the sustainability of national and international competitiveness in this sector is of great importance. The structures of industrial sectors change over time in terms of international competition conditions, technological development and consumption structure. Countries and firms must act in accordance with this change in determining their competitive strategies to survive in the market.

2.12 IMPORTANCE OF COTTON

Turkish textile industry is an indispensable sector with the volume of employment created by the labor-intensive workforce, the added value it provides, the amount of foreign currency that textile exports bring to the country's economy. The strategic raw material of our textile industry, which is the locomotive sector of our country, is cotton. (General Directorate of Cooperatives, 2017:1).

The textile production at the bottom of the textile and apparel sector's production chain, which is vital for our country's economy, is cotton production. The fact that our country has produced a significant amount and quality of cotton in the past years has played a major role in the developing of the sector. Since a large part of the cotton produced in the world is still consumed in cotton producing countries and our country meets the cotton need of the sector with the importation way, we are in danger of losing our chance to compete against our competitors in the sector. (General Directorate of Cooperatives, 2017:3)

Due to favorable ecology of the few countries in the world cotton production, close to 80 percent of world production is carried out by a small number of countries in which Turkey is located (General Directorate of Cooperatives, 2017:3). On the other hand, since demand to cotton is increasing faster than cotton production in Turkey, import of cotton is increasing year by year.

Table 25: Cotton Production & Consumption of Turkey (Thousand Tonnes)

Season	Production	Consumption	Difference	Coverage Ratio
2013/14	877	1.400	-523	62.64
2014/15	846	1.486	-640	56.93
2015/16	738	1.500	-762	49.20
2016/17	756	1.455	-699	51.96
2017/18*	882	1.481	-599	59.55
Average	820	1.464	-645	56.06

Resource: Turkstat, (*)Assumption

A large portion of the apparels produced in Turkey are made of cotton and derivatives. Approximately 65 percent of the apparel sector's production is exported. Again, about 80 percent of the products which are exported are made of cotton. In addition, our country exports 79.8 percent of apparel and textile exports and 49.4 percent of its exports of textile and raw materials to the EU27 countries. The biggest advantage of the sector is that we export to EU countries (second

supplier after China) is the fast supply of Turkey. The production of cotton close to our consumption will contribute to our supply speed and will contribute to the increase in the share of EU markets, especially where the supply speed is important. (<http://www.mkatextile.com/turkiyede-pamugun-tekstil-sektoru-acisindan-onemi.php>, accessed at 01.02.2019)

Table 26: Turkey's Export and Import of Cotton (Current, Million USD)

	Export		Import	
	Thousand Tonnes	Million USD	Thousand Tonnes	Million USD
Year	Quantity	Value	Quantity	Value
2013	48	100	869	1.681
2014	46	88	913	1.750
2015	48	76	803	1.233
2016	76	124	821	1.238
2017	59	115	914	1.676
2016-17 Change (%)	-22	-7	-11	35

Resource: Turkstat

Turkey imported 1.7 billion USD worth of cotton in 2017 and USA takes the first place with 44 percent share among all countries. 60 percent of the imports are made from the 3 countries of the USA, Greece and Brazil. These countries are followed by Turkmenistan, Austria and Burkina Faso. On the other hand, the production of our major cotton suppliers is largely supported by subsidies, and in the cotton imports from the US, GSM loans are highly effective. (General Directorate of Cooperatives, 2017 Cotton Report)

As a result, the importance of increasing the cotton production of our country is critical for the success of the sector that occupies a very important place in production and employment in our country. Besides, while we consider about export values, employment level and added value to GDP of textile, it is a cornerstone of country's economy. If the country seeks to increase the benefit a sector, it should decrease the costs. Cotton is the main input of textile. Therefore, to decrease the costs and increase the income, Turkey must increase the efficiency and production of cotton.

2.13 SWOT ANALYSIS OF TURKISH TEXTILE SECTOR

In this part of the study, SWOT analysis of Turkish textile sector will be examined. As in all sectors, there are some advantages and disadvantages of textile sector.

Strengths of Sector can be ranked as follows;

- * Mainly relying on domestic industry,
- * Cheap labor compared to other countries (excluding China)
- * Good quality input and raw materials,
- * Suitable for cotton production,
- * Knowledge and Experience,
- * High Quality in Production,
- * Geographical Location, Proximity to Markets.

Turkey's textile sector is one of the leading of the world and it has many advantages and strengths. Sector also has shown the strong export performance for many years. Southern part of the country is suitable for main input of textile which is cotton. In addition to this, country is located in very important place in the world. It connects two continents and closer to developed European countries therefore can export these goods cheaper by avoiding higher transportation costs.

Besides strengths, there are some weaknesses of country's textile sector, these may be ranked as follows;

- * Insufficient number of skilled workforce,
- * Falling competitiveness due to insufficient level of education in enterprises,
- * Lack of national strategy,
- * Energy input costs are higher than world standards,
- * Small number of small companies,
- * Active and Adequate Marketing and Promotion,
- * Prevalence of Informality,
- * Economic and Political Instability.

Especially high input costs damages the sector a lot. Inadequacy in cotton production, quality decline in production and increasing dependency on imports are the main weaknesses. Artificial and synthetic fiber supply is also dependent on

foreign countries. Another weakness is the reduction of the wool source. (İstanbul Chamber of Industry, 2014:41)

High production costs (energy, labor, financing, taxes) are the main weaknesses in the production area (Istanbul Chamber of Industry, 2014:41). Especially in the last year, due to depreciating national currency, input prices rose sharply. This increased the financing costs, and thus was reflected in the prices. Increasing interest rates put in a bad situation especially to small and medium sized entrepreneurs of textile sector. Many companies were unable to conduct their cash flow in a healthy manner. Some faced the bankruptcy.

Economic and political instability and political conflicts among countries are another situation which makes trade harder. Maintaining the good relationship is one of the key issue to increase exports and developing the sector via this income.

Opportunities of sector can be ranked as follows;

- * Quality raw material sources,
- * High internal market potential,
- * Young population,
- * Our country has a strategic position in terms of transportation,
- * Fast Production Capacity,
- * E-Commerce Opportunities,
- * Support Programs such as “Turquality”,

Besides these, numerous manufacturers and exporters to be able to meet the high standards of production and Turkey is a very advanced in this regard when compared with competitor countries. The fast-growing domestic market, the rise in the domestic market, the perception of brand and modern retail, and accordingly expanding demand is another important opportunity of the sector. Turkey and Turkish goods increased in surrounding countries and regions in popularity. While the apparel consumption and needs of the environment and the countries in the region are increasing, the possibilities of meeting these intermediate needs (yarn / fabric, sub-industry, etc.) need to be limited. With the opportunity to expand with the Turkish brands in the developed markets, the acquisition of European brands in particular and cooperation and partnership opportunities with European producers. Turkey's transformation into a regional shopping center and regional fashion center

to be in this opportunity, depending not be decisive in regional fashion events and fashion trends. The continuation of European brands and buyers are often small and gradually increasing demands of the fast-party products with european buyers tend to get higher quality goods from Turkey with with a certain margin.(İstanbul Chamber of Industry,2014:41).

Finally the threats of the sector are;

- * High Loan Rates,
- * High production costs,
- *China,
- * Limited Yield in Cotton Production,
- * Damping owing to High Competition.

In the last years, China strengthened it's position in market. Prices are too low to compete. As consumers can obtain cheaper goods, they turned to imported goods partly. This affected domestic producers. In addition, depreciating currency and increasing interest rates hit the sector. The efficiency of cotton production can not be increased in recent years. This is another important issue of sector. As sector can not meet whole demand of cotton in domestic market, producers are looking for ways to meet their demand. Therefore, they turned to imported raw materials.

2.14 TEXTILE AND CLOTHING SECTOR PRODUCTION INDICES

The purpose of the establishment and publication of the Industrial Production Index is to see the progress of the manufacturing industry in time, to monitor the changes between the periods, to follow the conjunctival development in the economy.(Mete and Kostakoğlu, 2011:108)

Textile and clothing industry production indices in Turkey show similar performance with the industrial production index in recent years. According to 2015 base year, industrial production increased by 3.4 percent in 2016, textile production index increased by 1.5 percent and increased by 3.5 percent above the apparel industry production index. In 2017, the textile and apparel production index lagged behind the industrial production index, but still performed well. Production index in textile sector has increased by 8 percent and production index has increased by 9%. High production index in these sectors will increase the competitiveness of exports

due to the importance of exports in these sectors. Bringing with it plenty of flexibility in production rates will make strong price competition to Turkey in international market.

Table 27: Production Indices by Sector of Turkey

Year	Textile	Apparel & Clothing	Total Industrial Sector
2015	100	100	100
2016	101,5	103,5	103,4
2017	107,8	108,6	112,6

Resource: Turkstat

The textile and apparel production index did not show a remarkable increase between the years 2015-2016. In connection with this, exports of total textile products decreased by approximately USD 160 million. On the other hand, it has increased by approximately 585 million USD in 2017 in line with the strong performance of the production index.

2.15 CAPACITY UTILIZATION RATE

While evaluating the export performance of the clothing and apparel industry in the year, it is beneficial to take into account the developments in the capacity utilization rate. Republic of Turkey Central Bank of Turkey (CBT) is published the recent "Manufacturing Capacity Utilization Rate" and according to the information in the table, rate was 78.1 percent in December 2016, the manufacturing industry capacity utilization rate and increased to 79 percent at the end of 2017. The capacity utilization rate in the clothing and apparel industry increased from 78.6 percent in December 2016 to 81.3 percent in December 2017. The sectoral capacity utilization rate increased by 3.4 percent compared to December 2016.

Table 28: Turkey's Capacity Utilization by Sectors

Years	Industry	Change %	Textile	Change %	Clothing	Change %
2008	78.1	-4.5	75.7	-7.1	80.2	-4.1
2009	65	-16.8	67.5	-10.8	67.3	-16.1
2010	75.6	16.3	80.1	18.7	78	15.9
2011	75.4	-0.3	76.6	-4.4	76.4	-2.1
2012	74.2	-1.6	78	1.8	77.8	1.8
2013	74.6	0.5	79.3	1.7	77.4	-0.5
2014	74.4	-0.3	80	0.9	77.8	0.5
2015	74.7	0.4	76.5	-4.4	76.6	-1.5
2016	77.4	3.6	77.7	-7.7	78.5	2.4
2017	78.5	1.2	81.1	4.3	81.3	3.3

Resource: Turkstat

According to data released by the Central Bank of the Republic of Turkey, in 2017 the average value is calculated in the manufacturing industry capacity utilization rate of 78.5.

The capacity utilization rate of the textile sector, which meets the raw material needs of the clothing and apparel industry, was 77.8 in December 2016 and was 81.1 percent in December 2017. The capacity utilization rate of the textile sector increased by 4.3 percent in December 2017 compared to the December of the previous year. In the last month of the year, the increase in the capacity utilization rate in the clothing and apparel sector was 3.4%, the rate of increase of 1.2 percent was higher than the recorded manufacturing industry and lower than the rate of textile sector which was 4.3%.

In December 2017, the capacity utilization rate of our textile products production decreased by 0.3 percent compared to the previous month (2017 November) and increased by 4.3 percent compared to December 2016. According to the Turkey Statistical Institute data, textile products in 2016, our manufacturing production index increased by 1.2 percent compared to the 2015 average.

2.16 EMPLOYMENT

As the base year of 2010, we examine the industrial employment index data received after 2010 for Turkey, industrial employment index is in an upward trend until 2015, while in 2016 and 2017, we see that it is slightly lower than in previous years. Employment indices for the textile and clothing sector, which are linked to the industrial employment index, are presented below.

Table 29: Turkey's Industrial Labor Input Indices (2010=100)

Sector	Year	Employment Index	Hours Worked Index	Salaries Index
	2008	105,8	107,4	88,0
	2009	95,7	95,7	86,3
	2010	100,0	100,0	100,0
	2011	106,5	106,2	115,7
	2012	111,6	110,4	133,8
	2013	115,6	112,8	153,1
	2014	118,8	114,5	176,8
	2015	119,1	113,6	201,0
	2016	117,6	111,6	233,0
	2017	117,8	111,7	262,3

Resource: Turkstat

After 2010, the employment index in the textile sector reached a rapid rise in 2011, reaching 106 in 2012 and 115 in 2012. After 2014, it had a decline but after 2016, it started to recover again. In addition, working hours followed a parallel course with the employment index. The most remarkable point in the table is the salary index. After 2010, it increased with an impressive acceleration and reached 313.8 in 2017.

Table 30: Labor Input Indices of Textile Sector

Sector	Year	Employment Index	Hours Worked Index	Salaries Index
Textile	2007	119,3	120,1	92,5
	2008	109,6	110,4	90,8
	2009	94,1	93,8	82,4
	2010	100,0	100,0	100,0
	2011	106,0	105,5	116,2
	2012	115,0	113,7	143,1
	2013	122,3	119,8	174,5
	2014	125,8	122,7	206,7
	2015	122,6	117,9	229,5
	2016	121,7	116,4	280,1
	2017	122,5	116,6	313,8

Resource: Turkstat

The index of employment in the clothing sector did not rise as rapidly as in the textile sector the upward trend continued until 2013, then in 2014 it started to decline. In 2017, it is at the same level as 2010 which is base year. When we look at the salary index, we can see a significant increase after 2010. The index reached 255.8 in 2017.

Table 31: Labor Input Indices of Clothing Sector in Turkey

Sector	Year	Employment Index	Hours Worked Index	Salaries Index
Clothing & Apparel	2007	116,5	117,0	85,6
	2008	114,1	114,0	92,3
	2009	98,1	97,1	85,4
	2010	100,0	100,0	100,0
	2011	104,5	103,6	116,4
	2012	107,9	106,7	136,4
	2013	111,1	108,0	157,5
	2014	111,1	105,6	182,2
	2015	109,6	102,9	204,0
	2016	104,1	98,0	236,8
	2017	100,2	94,6	255,8

Resource: Turkstat

As a result, the textile and apparel sector plays an important role in the total industrial employment and general employment, makes a great contribution to Turkey's economy. In the wages section, while the increase in the apparel sector in the industrial sector remained below the general average, the textile sector appears to be well above the average. It will be inevitable that these data will be progressed in a positive way by increasing the contributions and incentives to the textile and clothing sector.

2.17IMPORT DEPENDENCY OF TEXTILE AND CLOTHING SECTOR

In this section of the study, the data such as the ratio of exports to imports and the ratio of import to supply are used to examine the import dependency in the textile and clothing sector. For this purpose, tables containing relevant data have been formed. After that, import dependency in textile and apparel sector was studied.

When Table 32 is examined, there are countries with a ratio of import coverage of apparel exports that are 100 percent or more and that are net exporters in this area. Considering the developments after 1992, it is observed that export / import ratio of clothing exports to all countries except Vietnam is on a downward trend. The export / import ratio of clothing in Italy was over 285 percent in 1992 and then the ratio decreased gradually and in 2010 the ratio decreased to 138 percent and then in 2017, it rises above 140 In Turkey, the clothing exports / import coverage ratio is too high at the beginning of the 1990s, and in later years it was in 2800 percent in 2002, then it has fallen to 800 percent due to economic crisis, while in 2017 appears to be percent 632 level. In 2002, the ratio of exports to imports, which increased again due to the increased exchange rate, started to decrease due to the appreciation of the Turkish lira since 2003. When we come to 2013, it is seen that the ratio of garment exports to imports decreased to 490%. In Vietnam, in contrast to other countries, the export import rate of clothing sector has shown a steady upward trend. The clothing sector's export / import ratio, increased to 900 percent in 2017. In short, while all countries are losing power in the clothing sector, Vietnam is getting stonger in sector. Although the export / import ratio in China, which has the lowest foreign

dependency in the clothing sector, has been declining over the years, it is the sector leader in 2017 with 2180%.

Table 32: Export / Import Ratio of Clothing Sector in Turkey

Country	1992	1997	2002	2007	2012	2013	2014	2015	2016	2017
China	38,05	28,47	30,46	58,46	35,30	33,25	30,36	26,57	24,71	21,80
Italy	2,85	2,80	1,93	1,46	1,40	1,50	1,47	1,38	1,40	1,45
Portugal	4,93	3,89	2,42	1,55	1,53	1,53	1,48	1,42	1,48	1,45
Turkey	144,10	28,74	28,47	8,86	5,34	4,90	5,16	5,01	5,33	6,32
Vietnam	N/A	1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00

Resource: WTO Databank

When Table 32 is analyzed, there are countries that are in net exporters position in textile trade, with a coverage ratio of 100 percent or more, of clothing exports excluding Vietnam. The most remarkable point in the table is, of course, the enormous development of China year by year. In addition to China, the performance of Vietnam exports in the beginning of the 1990s, which is 20%, is also important, because it reached 50 percent in 2017. Portugal has become more powerful than previous years by reducing its dependence from year to year. In other countries, which are the pioneers of the clothing sector, import dependency increases year by year. In Italy, the ratio of export to import intextile increased to over 200 percent in 2002 and then the ratio decreased gradually. Ratio of Turkey's textile exports in 1992 is up over 229 percent and then it is seen that the coverage ratio fell gradually. In China, on the contrary to all countries, the ratio of textile exports to imports was 114 percent in 1992 and then this rate increased and exceeded 600 percent in 2017. In short, many countries are losing power in the textile sector and China has strengthened in this sector. China, in the textile sector in the clothing sector is showing the performance of a candidate to approach the power.

Table 33: Export / Import Ratio of Textile Sector in Turkey

Country	1992	1997	2002	2007	2012	2013	2014	2015	2016	2017
China	1,14	1,13	1,57	3,37	4,82	4,94	5,54	5,75	6,26	6,36
Italy	1,80	2,00	2,01	1,77	1,64	1,58	1,55	1,52	1,49	1,47
Portugal	0,74	0,86	1,11	0,97	1,05	1,01	1,02	1,03	1,01	1,02
Turkey	2,29	1,44	1,49	1,49	1,72	1,79	1,76	1,76	1,79	1,67
Vietnam	N/A	0,20	0,20	0,26	0,43	0,43	0,44	0,44	0,46	0,45

Resource: WTO Databank

2.7.1 Turkey's Textile and Clothing Sectors Import / Supply Ratio

Import / supply ratio, shows that imports in the total amount of goods being supplied. Şişman and Bağcı (2014) examined the import / supply ratios of textile and clothing sector calculated by using the input and output tables published by Turkstat. According to the studies, when the developments in import supply ratios are examined, it is seen that the share of imports in total supply increased with the effect of the economic policies implemented after 1979. This rise indicates that import dependency has increased. After 2001 crises, imports of these sectors begin to decrease due to depreciation in TL. In the following years, with the increase in the value of TL, imports increased rapidly. In this context, they have shown the overvalued Turkish Lira as one of the most important reasons for foreign dependence. Because of the appreciation of the Turkish lira, the demand for imported goods, which was relatively cheap, increased, which in turn increased the rate of imports.

The import dependency ratio shows the ratio of domestic consumption to imports in a sector. When the import dependency ratio is 1, it means that imports are made up to domestic consumption, that part of domestic consumption is imported when it is less than 1, and when it is greater than 1, all of domestic consumption and also a part of exports are imported. As a result, import dependency has increased in both sectors, but import dependency in clothing and textile sector has increased significantly. Imports of clothing have increased faster and more severely. (Şişman et al., 2014:38)

Another important indicator is export / supply ratio to depict import dependency, because it shows the contribution of import to export. Şişman et al. (2014) found that export / supply has followed a fluctuating course between 1990 – 2002. They claimed that fluctuating exchange ratio and competition has a great effect on it.

As a result, textile and clothing sector of Turkey is getting more dependent to import year by year thanks to some reasons. Overvalued national currency, insufficient incentives, insufficient production, cheaper imported goods and underground economy are important reasons.

2.18 TEXTILE AND CLOTHING SECTOR'S EXPORT PERFORMANCE OF TURKEY

Textile sector has shown always strong performance in Turkey as it is one of the most important export item of country. In 2007, it was 22.2 billion USD worth. After this year, global crisis hit also this sectors and it decreased to 19 billion USD in 2009. Then it begin to recover and increase sharply. In 2014, it brought it's performance to the top among recent years. It was 32 percent higher than 2007 performance. In 2015, it decreased, after it begin to recover again.

Graph 2: Textile Export Performance of Turkey By Years (SITC 26, 65, 84)



Resource: Turkstat

2.8.1 Contribution of Textile and Clothing Export to Turkey's GDP

Textile and apparel sector export is one of Turkey's most important export item. In this direction, the contribution of the country to export and the GDP of the country is very important. Turkey providing the apparel industry average of 14-15 billion USD net foreign currency inflow to the economy every year, it is one of the most important sectors that contribute to the development of the national economy and export production. In 2017, the clothing and apparel sector ranked 2nd in overall exports and the textile sector was 3rd. Export of these sectors composed of 3 percent of country's GDP. Detailed total export data and share in GDP are given in the table below.

Table 34: Contribution of Textile Export to GDP of Turkey (USD, Current)

Year	GDP	Export of Textile and Clothing	Share in GDP
2007	675.770.112.825	22.234.874.206	3.3%
2008	764.335.657.318	22.517.363.324	3%
2009	644.639.902.581	19.078.183.387	3%
2010	771.901.768.698	21.708.779.565	3%
2011	832.523.681.194	24.835.514.917	3%
2012	873.982.246.102	25.464.779.921	2.9%
2013	950.579.413.279	27.673.551.772	2.9%
2014	934.185.915.467	29.480.205.135	3.1%
2015	859.796.872.794	26.463.916.252	3.1%
2016	863.721.647.959	26.301.253.716	3%
2017	851.102.411.118	26.886.405.105	3.2%

Resource: Turkstat

2.8.2 Textile And Apparel's Share In Aggregate Export Of Turkey

Table 35: Textile and Apparel Share in Total Export of Turkey (Current, millions USD)

Year	Total Export	Apparel Export	Share In Total Export	Textile Export	Share In Total Export
2007	107.271	15.563	14.5%	6.363	5.95%
2008	132.027	15.234	11.5%	6.640	5%
2009	102.142	12.854	12.6%	5.374	5.3%
2010	113.883	14.205	12.5%	6.352	5.6%
2011	134.906	15.648	11.6%	7.707	5.7%
2012	152.560	15.753	10.3%	7.749	5.1%
2013	151.812	17.158	11.3%	8.370	5.5%
2014	157.610	18.484	11.7%	8.535	5.4%
2015	143.934	16.954	11.8%	9.843	6.8%
2016	142.529	16.956	11.9%	9.825	6.9%
2017	157.006	17.045	10.9%	10.112	6.4%

Resource: ITKIB

Export of textile and apparel products have an increasing performance year by year in Turkey. These two instruments composed of roughly 17-18 percent of Turkey's total export in recent years.

2.19 PERFORMANCE OF TEXTILE IN RECENT YEARS

In January 2017, textile exports started with a 2.3 percent increase. In February, our textile exports increased by 3.4 percent to approximately 786 million USD. In March, our textile exports increased by 8 percent and reached approximately 930 million USD. In April, our textile exports decreased by 4.9 percent to 813 million USD. In May, our exports increased by 0.1 percent to US 835

million USD, down by 7.5 percent in June to 820 million USD, increasing by 17.9 percent in July to 774 million USD, increasing by 5.7 percent in August to 892 million USD, In October, it increased by 7.3 percent to approximately 924 million USD, increasing by 4.5 percent in November to approximately 906 million USD; In December, it increased by 8.1 percent to USD 871 million. (ITKIB, 2018: 2)

In 2017, the export of the textile sector increased by 3 percent compared to the previous year. In this period, the share of total industrial exports was realized as 8.3 percent with 10.1 billion USD.

In December 2017, the share of total textile and raw materials sector exports in our overall exports was 6.5%.

2.9.1 Textile Export Performance of Turkey by Country Groups

In December 2017, exports of textiles and raw materials to the EU (28) countries and exports to EU (28) countries increased by 5.4 percent in December to \$ 422 million. In January-December 2017, exports to the EU (28) countries were recorded as 5.3 billion USD.

In December, the second country group with the highest total textile and raw materials exports was the Middle East countries. Exports to this region increased by 0.6 percent in December to about 119 million USD and in January - December 2017, approximately 1.2 billion USD.

In December, the group with the highest increase in exports of textiles and raw materials was the former Eastern Bloc Countries with a 26.6 percent increase, while in December there was no country group that experienced a decline in our exports.

In the January - December period of 2017, the group with the highest increase in exports of textiles and raw materials was the former Eastern Block Countries with a 14.1 percent increase, while there was no country group where our exports declined.

Table 36: Turkey's Textile Export by Country Groups

(Current 1000*USD)	2016	2017	Change %	Share %
EU 28 Total	5.255.428	5.338.042	1.6	52.8
Middle East Countries	1.188.076	1.188.613	0	11.8
African Countries	876.279	911.469	4	9
American Continent Countries	732.345	752.129	2.7	7.4
Old Eastern Block Countries	740.261	844.442	14.1	8.4
Asian Countries	533.899	541.884	1.5	5.4
Turkic Countries	245.170	247.884	1.1	2.5
Free Trade Area	179.312	215.564	20.2	2.1
Scandinavian Countries	69.453	72.604	4.5	0.7
Total Textile Export	9.820.275	10.112.447	3	100

Resource:ITKIB

2.9.2 The Most Important Trade Partners of Textile

In 2017, when Turkey's textile and raw material exports prominent in countries evaluated, it appears that Germany is our most important export market.

Table 37: Turkey's Highest Textile Export by Country

(Current 1000*USD)	2016	2017	Change %	Share %
Germany	831.751	866.979	4.2	8.6
Italy	828.003	865.763	4.6	8.6
Bulgaria	628.998	651.994	3.7	6.4
USA	557.465	582.170	4.4	5.8
Iran	460.302	469.609	2	4.6
England	390.533	404.573	3.6	4
Spain	333.508	327.511	-1.8	3.2
Holland	314.605	318.298	1.2	3.1
Poland	309.199	317.939	2.8	3.1
Romania	302.707	281.767	-6.9	2.8
Total of Top Ten	4.957.071	5.086.602	2.6	50.3
Other Countries	4.863.203	5.026.045	3.3	49.7
EU 28 Total	5.255.428	5.338.042	1.6	52.8
TOTAL	9.820.275	10.112.447	3	100

Resource:ITKIB

Exports of textile and raw materials to Germany amounted to approximately 82 million USD in December 2017 with an increase of 24 percent. In the January - December period of 2017, our exports were recorded as 867 million USD with an increase of 4.2 percent.

In 2017, Italy was the second country to export the most textile and raw materials. Exports of textiles and raw materials to Italy in December 2017 increased by 8.7 percent and reached to approximately 57 million USD. In 2017, our exports of

textiles and raw materials to Germany increased by 4.6 percent compared to the same period of the previous year and amounted to approximately 866 million USD.

Bulgaria became the third most important export market for textile and raw materials. Exports to Bulgaria fell by 19 percent in December 2017 to 41 million USD. In January - December 2017, our exports of textiles and raw materials increased by 3.7 percent to approximately 652 million USD.

Our fourth and fifth largest export markets were USA and Iran, respectively. Exports of textile and raw materials to the USA increased by 4.4 percent in December. Iran's export to our country in December increased by 9.5 percent compared to the same month of the previous year and was recognized as 53 million USD. Exports of our sector to Iran increased by 2 percent in the January - December period of 2017 compared to the same period of 2016 and amounted to approximately 470 million USD.

2017 in terms of quantity and raw materials in the textile sector in Turkey grew by 0.4 percent and have reached about 2.2 million tons of exports.

When in 2017 Turkey's textile and raw material exports amount assessed on the basis, it is seen that the most important export market with total exports of textiles and raw materials fell by 1.2 percent in Italy amounted to 183 thousand tons. Our exports to Germany, our second largest export market for textiles and raw materials in terms of quantity, increased by 5.6 percent in 2017.

2.9.3 Export of Textile by Sub-Product Group

When we examine our textile and raw materials export in 2017, it is seen that the most important product group is woven fabric. Exports of woven fabrics, which account for 24.3 percent of our textile and raw materials exports, decreased by 1.5 percent compared to the previous year and amounted to about \$ 2.5 billion.

2.9.4 Textile Import Performance of Turkey

Besides export, Turkey also has an important import volume in world economy in textile sector. Country has the seventh place in 2017 among all countries with almost worth of 7 billion USD. Here is the list of country that Turkey imports at most:

Table 38: Turkey's Highest Textile Import by Country

Country	2016	2017	Change %	Share %
China	1.532.747.386	1.668.224.329	8,8	24,4
India	627.097.062	764.833.203	22,0	11,2
Indonesia	558.430.895	519.457.174	-7,0	7,6
Italy	414.431.012	423.959.033	2,3	6,2
Egypt	288.075.543	365.053.255	26,7	5,3
Bangladesh	203.760.990	286.142.568	40,4	4,2
Germany	222.836.712	231.991.833	4,1	3,4
Turkmenistan	187.239.597	184.812.358	-1,3	2,7
Vietnam	195.722.040	171.722.864	-12,3	2,5
USA	43.430.038	46.761.808	7,7	0,7
Total of Top 10	4.273.771.275	4.662.958.425	9,1	68,2

Resource: Turkstat

Top ten countries composed of more than 68 percent of total textile import of Turkey. Asian countries are the most important trade partner of Turkey in case of textile import. China has far first in the ranking. India, Indonesia and Italy are other top countries of textile import.

2.20 APPAREL AND CLOTHING

According to the data released by the Turkey Exporters Assembly, Turkey in 2017, worth 17 billion USD from exports of apparel and clothing are made. Compared to 2016, exports increased by 0.5 percent in dollar terms. Clothing and apparel sector is the second most important sector with the 10.9 percent share in 2017, followed the automotive industry.

Turkey's overall export in 2017 was 156.8 billion USD, an increase of 10.4%. Industrial exports increased by 12.8 percent to \$ 121.4 billion. In this context, clothing and apparel industry has reached a 0.5 percent rate of increase in both

exports and exports of the industry is understood to show a lower export performance. In 2017, the share in Turkey's total exports of clothing and apparel exports from 11.9 percent to 10.9%, while the share of industrial exports declined from 15.8 percent to 14%.

On the other hand, within the framework of the statistics for 2016, clothing and apparel sector together with the textile industry in general exports totaled 25.1 billion USD (17 billion USD + 8.1 billion USD = 25.1 billion USD) and the second sector with the highest exports while the automotive sector was the sector with the highest export volume with 28.5 billion USD.

2.10.1 Apparel Export Performance of Turkey by Country Groups

As of 2017 across major groups of countries and Turkey's apparel distribution and share of apparel exports, with the rate of change is given in the table below.

Table 39: Turkey's Apparel Export by Country Groups

(Current 1000*USD)	2016	2017	Change %	Share %
EU 28 Total	11.999.983	12.176.363	1.5	71.4
Middle East Countries	1.997.315	1.917.762	-4	11.3
Old Eastern Block Countries	753.052	808.115	7.3	4.7
American Continent Countries	643.695	675.046	4.9	4
African Countries	668.480	612.660	-8.4	3.6
Turkic Countries	373.865	340.789	-8.8	2
Asian Countries	235.936	254.016	7.7	1.5
Other European Countries	210.096	189.467	-9.8	1.1
Free Trade Area	73.560	70.867	-3.7	0.4
Total Textile Export	16.956.074	17.045.360	0.5	100

Resource:ITKIB

European Union is again the most important trade partner of the sector. Compared the 2016, performance increased by 1.5 percent in 2017 and reached approximately 12.2 billion USD. It creates 71 percent of total export performance of sector.

Despite Middle Eastern countries has the second place in 2017, the volume has decreased by 4 percent compared to previous year. Volume of export is 1.9 billion USD.

Many country groups has decreased trade of the sector with Turkey and this is understood by aggregate change in 2017. It increased only 0.5 percent. European

countries which is not member of EU has decreased importing of these goods almost 10 percent.

2.10.2 The Most Important Trade Partners of Clothing

In the 2017 general clothing and apparel exported from Turkey, most important countries are Germany, Spain and the UK respectively. In 2017, exports to Germany increased by 1.9 percent to US 3.2 billion USD, while Spain increased 19.8 percent to 2.1 billion USD, and export to UK decreased by 3.4 percent to 2 billion USD. These three countries are followed by Holland with 861 million dollar export in fourth place and France with export value of 843.9 million dollar in fifth. Respectively Iraq, the US, Italy, Poland and Denmark are other important markets of apparel and clothing export. In 2017, total export of clothing and apparel from Turkey to top ten countries are worth of 11.6 billion USD. The share of these ten countries in aggregate export is 68.3%.

Table 40: Apparel Export of Turkey by Country

(Current 1000*USD)	2016	2017	Change %	Share %
Germany	3.167.603	3.229.361	1.9	18.9
Spain	1.748.558	2.094.410	19.8	12.3
England	2.026.987	1.957.241	-3.4	11.5
Holland	782.483	861.047	10	5.1
France	847.400	843.878	-0.4	5
Iraq	564.082	715.057	26.8	4.2
USA	535.986	560.653	4.6	3.3
Italy	617.676	560.394	-9.3	3.3
Poland	574.526	434.203	-24.4	2.5
Denmark	425.160	392.828	-7.6	2.3
Total of Top Ten	11.290.462	11.649.072	3.2	68.3

Resource:ITKIB

In 2017, export of clothing and apparel products to 28 EU countries from Turkey worth 12.2 billion USD. Accordingly, share of 28 EU countries in general export of clothing and apparel products is 71.4%. Exports to EU countries increased by 1.5 percent in 2017. This increase in exports to EU countries is above the sectoral export growth of 0.5%.

At the end of 2017, Germany maintained the position of the EU with the most exported clothing and apparel products. In 2017, the largest economy of the EU 28, Germany, grew by 1.9 percent to 3.2 billion USD in clothing and apparel exports

Germany has 18.9 percent share of clothing and apparel goods export of Turkey among all countries. Spain is the second largest market with an increase of 19.8 percent and a export value of 2.1 billion USD, and the UK is the third largest market with a decline of 3.4 percent and 2 billion USD.

The Netherlands, France, Italy and Poland are other leading EU markets.

Export of clothing and apparel to Group of Middle Eastern Countries such as Iraq, Saudi Arabia, Israel, Iran, and United Arab Emirates in 2017 decreased by 4 percent compared to 2016. Previous year the value was 2 billion USD, on the other hand in 2017 the value decreased to 1.9 billion USD. This group of countries with declining share of Turkey's total clothing and apparel exports declined from 11.8 percent to 11.3%.

Among Middle Eastern Countries in Turkey's most important partners in clothing and apparel exports respectively Iraq, Israel, Saudi Arabia, United Arab Emirates and Iran. Iraq is the sixth most important trade partner in clothing and apparel sector. In 2017, exports to Iraq increased by 26.8 percent and reached to 715.1 million USD from 564.1 million USD. Exports to Israel increased by 7.4 percent from 304.7 million USD to 327.1 million USD. Exports to Saudi Arabia, the third largest exporting partner among Middle Eastern country, decreased by 9.3 percent to 287.1 million USD from 316.5 million USD.

Export to African countries reached the worth of 612.7 million USD in clothing and apparel sector. However, exports decreased by 8.4 percent compared to 2016.

In 2017 Turkey's most important clothing and apparel export partners among African countries are Algeria, Libya and Morocco, respectively. Exports to Algeria was 202.3 million USD, decreased by 2.1 percent compared to 2016. In addition, exports to Libya amounted to 106.2 million USD with an increase of 1.4 percent. Exports to Morocco, which increased by 35.2 percent, were recorded as 95.9 million USD. Algeria has the share of Turkey's total exports of apparel and clothing 1.2 percent, while the share of Libya's share was 0.6 percent and 0.6 percent in Morocco.

In 2017, export of apparel and clothing of American continent grouping countries such as United States, Canada, Mexico, Colombia, Chile, Brazil, Panama from Turkey increased increased by 4.9 percent and from 643.7 million to 675

million USD. USA is the most important trade partner among these countries. Exports to the US increased by 4.6 percent to 560.7 million USD. The share of USA in the clothing and apparel exports of Turkey is 3.3 percent. The second largest export country of the country was Canada, with an increase of 6.9 percent to US 64.4 million USD.

Kyrgyzstan, Kazakhstan, Azerbaijan, Turkmenistan, Tajikistan, Uzbekistan, Turkish Republics takes place as the country group, worth 340.8 million USD in 2017 from Turkey clothing and apparel have been exported. Barely, exports decreased by 8.8 percent compared to 2016 to Turkish countries.

Kyrgyzstan is the most important trade partner among these countries for Turkey in 2017. Export to Kyrgyzstan from Turkey increased by 36.6 percent and reached the worth 153.7 million USD. Kyrgyzstan's share of, Turkey's total exports of clothing and apparel is 0.9 percent.

Top ten countries composed of almost 65 percent of total apparel import of Turkey. Asian countries are the most important trade partner of Turkey in case of textile import. China has the first place in the ranking. Bangladesh is follower; Italy is the most important partner among European countries.

2.10.3 Export of Apparel by Sub-Product Group

Knitted garments, woven apparel and other clothing items are the three main product groups clothing and apparel sector and it is necessary to take into consideration these three basic product groups when evaluating the export performance of the sector. The three main groups of products share in clothing and apparel exports Turkey total weight and thus are different. (ITKIB Reports, 2018:7)

Turkey's apparel and clothing exports in the product group is mainly knitted garments products. In 2017, the share of knitted apparel products in clothing and apparel exports was 52.1 percent, the share of woven apparel products was 35 percent and the share of clothing items was 11.8%. (ITKIB Reports, 2018:7)

2.10.4 Turkey's Highest Apparel Import by Country

Table 41: Turkey's Apparel Import by Country

Country	2016	2017	Change %	Share %
China	841.486.058	606.278.629	-28,0	25,4
Bangladesh	652.897.953	419.740.436	-35,7	17,6
Italy	145.608.409	145.196.233	-0,3	6,1
Egypt	125.991.141	138.766.940	10,1	5,8
Vietnam	77.739.013	84.809.104	9,1	3,5
India	102.842.728	77.772.494	-24,4	3,3
Indonesia	35.424.958	34.889.162	-1,5	1,5
Germany	28.190.193	33.244.585	17,9	1,4
USA	14.416.155	11.351.935	-21,3	0,5
Turkmenistan	429.345	14.392	-96,6	0,0
Total of Top 10	2.025.025.953	1.552.049.518	-23,4	64,9

Resource: Turkstat

Apparel sector has also has a substantial import value in recent years for Turkey. Country imports more than worth of 5 billion USD within last two years.

THIRD SECTION

DETERMINANTS OF INTERNATIONAL TRADE

3.1 WHY DO COUNTRIES NEED INTERNATIONAL TRADE?

A country can not meet the production requirements of all kinds of goods and services. Therefore, as time passes and as the world getting integrated, countries begin to search new markets to satisfy their own demand. The main reason of international trade is to satisfy the needs of countries. Thanks to foreign trade, countries have the opportunity to provide goods, services and capital that are not available or sufficient in themselves, which has a higher quality and cheaper in other countries. In this way, foreign trade contributes to the welfare of the countries. In the history of economics, people brought the explanation and developed the theories about the questions, “Why do countries needs international trade, how can the countries trade efficiently to improve welfare?”

Merchantilists believed that the best way to increase the welfare of a country is accumulating gold and silver. They always supported the export to gain more gold and silver and they followed export incentive economic policies. After a certain point the idea can not survive due to globalization and economic liberalization then the classical theories arised.

According to Adam Smith's Absolute Advantage Theory, a country imports only if it can not produce the goods in domestic market or they produce it with higher costs then other countries. Absolute advantage is the ability of a country to produce a good or service at a lower cost per unit than another entity that produces the same good or service. Therefore, if a country produces all goods and services cheaper than others, then country does not need international trade.

As a result of Smith's theory of absolute advantage, if a country has the absolute advantage in both goods, it will not be possible for foreign trade to gain both countries and foreign trade will not be made. Ricardo, however, shows that foreign trade is possible even in such a situation. According to Ricardo, although a country has the absolute advantage of both goods, if the costs of the two countries are different from each other, foreign trade can still make money for both countries and foreign trade. Ricardo claimed that efficiency of labor is the key issue of international trade. If a country can produce a certain good cheaper in a two goods world, it should specialize on that goods and import other goods. This leads to improve welfare of both countries. Comparative Advantage Theory of Ricardo is an important cornerstone of international trade theories. It created the base of following theories.

Heckscher – Ohlin Model is an extended and improved version of Comparative Theory. The model emphasizes on the exportation of goods requiring factors of production that a country has in abundance. It also emphasizes the importation of goods that a nation cannot produce as efficiently. Factor endowment is the key point of the theory. In a two-country world, one is capital intensive and another is labor-intensive country. Each country should focus on the abundant factor of production to increase general welfare and they should export it. Finally, countries are supposed to export materials and resources of which they have an excess, while proportionately importing those goods they need.

Comparative advantage theory and Heckscher – Ohlin model is important and base of the international trade, however, they are not able to explain modern economic situation in all aspects. According to Utkulu (2005), recently, the structure of the market in international trade, imperfect competition, increasing return, intra-industry specialization and gain from trade, economies of scale, goods differentiation, change in the structure of trade, technology factor and innovation in the field of structural changes continuously so that the interpretation of comparative advantage of foreign trade has become impossible to explain with these basic models. Ricardo or Heckscher-Ohlin models could not explain completely the situations of external balance, perfect competition, constant efficiency, full employment etc. Therefore, in the last fifty years, new international trade theories have been growing in the literature.

The literature on “new” foreign trade theories has also added mechanisms and assumptions to theoretically explain the current new international trade situation. Different versions of this new model included market structure differences, increased returns, intra-industry specialization and trade gains, economies of scale, goods differentiation, changes in the structure of trade, technology factor, and innovation as key explanators of earnings from foreign trade.(Utkulu,2005:19)

Leontief was the first economist to test H-O Theorem empirically. Leontief found that while the United States is a capital abundant country, the ratio of capital / labor intensity in exports is low compared to imports. This situation, which is contrary to the Factor Endowment Theory, is called “Leontief Paradox”. After Leontief Paradox, new trade theories has began to emerge.

New trade theories has explained the missing points of classical trade theories;

Keesing and Kenen that are founder of Skilled-Labor Theory claims that, the country, which is rich in skilled labor, specializes in the production of goods that are dependent on this factor and makes the trade of those goods. On the other hand, countries with low-skilled labor abundantly have superiority in the production of goods with unqualified labor.

Linder (1961) argued that the preference hypothesis is that the trade of non-homogeneous industrial goods with the similarity hypothesis depends on the similarity of tastes and preferences between countries, ie the demand conditions.

Relative income level was mentioned as the main factor in determining tastes and preferences. According to the theory, in general, firms in the country produce the goods demanded by the majority of the people and the market is large. As the production is done, the expertise in these products will increase. It will also be possible to export to countries with similar tastes and preferences.

On the other hand, the demand of minorities with low or high income with different tastes and preferences will be met by imports from countries that have similar preferences.

In case of overlapping of these demands, trade of industrial products will be concentrated among countries with particularly similar preferences and income levels.

In addition to new and classical theories of international trade, economists developed ideas about reasons of increasing international trade among countries and economic unions. In the following part, reasons of trade will be explained by help of theories then the ideas will be supported by factors that affect international trade.

3.2 THE MODELS OF INTERNATIONAL TRADE

Countries may trade due to several reasons such as lack of domestic production or increasing the variety of supplied goods to increase the welfare of consumers. There are some different reasons for lack of domestic production. Insufficiency to provide technological improvement in production, lack of natural resources, or lack of labor force might be the reasons. In addition, if countries can import the goods and services less than domestic prices, they mostly prefer to import it instead of producing it in domestic market.

Initial attempts by the Classics to explain international trade flows rest on the comparative advantage arguments, and standard theory of international trade. However, modern extensions of the theory bring new insights to the literature. According to these new trade theories; existence of economies of scale, product

differentiation, and dynamic changes in technology are among the other determinants of international trade flows. Each of these determinants of international trade flows are examined under this section.

3.2.1. Standard Theory of International Trade

Since people behave rational on most of their preferences, they ordinarily prefer cheaper goods among substitute goods. Since not all countries are endowed with equal factor abundancy, have the same opportunity to access cheaper inputs, labor or other factors of production, each country exhibits different costs of production for different goods.

According to Ricardo's Comparative Advantage Theory, if a country has an ability to produce a good or a group of goods at a lower opportunity cost, it should specialize on that good(s) and devote her resources to produce those good(s). Similarly, other countries specialise in production of the other goods that they possess comparative advantage, and export those goods. Consequently, countries end up with variety of goods at a lower cost and price. For instance, as Turkey has abundancy in terms of labor force, and since the textile sector does not need highly improved technological progress, country is quite strong in international markets.

On the other hand, not always countries are involved in production of their static comparative advantage goods. Often, they try to shift their comparative advantage towards high value added goods. This requires import of inputs. Imported input dependency in production is considered as one of the main reasons of foreign trade deficit in the literature. In Turkey, high share of intermediary and investment goods import rate (86% by 2015) is considered as a sign of imported input dependency, and it is evaluated as one of the main reasons for Turkey's foreign trade deficit. (Akyurek and Terzioğlu, 2017).

Akyurek and Terzioğlu (2017), investigated import dependency of Denizli textile and apparel sector by field survey method. According to the results, the average share of total imports in raw materials is calculated as 63 % in cotton, 55 % in yarn, and 30 % in fiber. Dyestuff, chemical bleaches and other inputs (such as buttons, zippers) have been evaluated as intermediate goods, and it has been understood that there is no use of imported input in this group. In the machinery and

equipment group, it is determined that the yarn and ready-to-wear machines are all imported and in average 72,5 % of the fabric-making machines are imported. This ratio is quite high and as the Turkish Lira depreciates, input costs are increasing. Therefore, prices in domestic market are rising, and demand is decreasing. In order to sustain the high export performance in textile sector, government applies investment incentives to reach aimed abundancy of raw materials for textile sector.

In 2018, government has an incentive budget worth of 99,5 million USD for textile sector with the different share to six production regions. It is expected that these incentives lead to increases in domestic production in Turkey, so that the country becomes competitive in global markets.

The Heckscher-Ohlin theory, like the earlier theories of international trade, assumed that the production techniques were given and fixed. Such an assumption can be reasonable only in a static system. In actual world's realities, there can be no place for such an assumption. The technical changes have quite significant effects on production and trade. A technological change may be expressed in new methods of producing existing goods or in the production of new varieties of goods.(<http://www.economicdiscussion.net>, accessed at 16.02.2019)

3.2.2. Trade Based on Economies of Scale

According to Economies of Scale Theory, countries with a large domestic market have reduced costs in production by utilizing economies of scale. These countries export the goods in which economies of scale are effective and import other goods. On the contrary, countries that have a narrow domestic market can benefit from economies of scale by producing in export markets. Thus, countries specialize in a limited range of products that enable them to produce goods more effectively through economies of scale and trade with each other to consume all kinds of goods. (http://www.basarmevzuat.com/dergi/2004-09/a/05.htm#_ftn8 , accessed at 14.02.2019)

Trade between countries need not depend on country differences under the assumption of economies of scale. Economies of scale explains the reasons of trade among countries with similar level of economic situation. Actually, it is reasonable that countries could be identical in all respects and yet find it advantageous to trade.

For this reason, economies of scale models are often used to explain trade among countries like the United States, Japan, and the European Union. For the most part, these countries, and other developed countries, have similar technologies, similar factor endowments, and to some extent similar tastes and preferences. In the classical models of international trade (e.g., Ricardian, H-O), these countries would have little reason to engage in trade. However, trade between the developed countries creates a significant share of world trade. Economies of scale can be an answer for this type of trade.

3.2.3. Trade Based on Technological Differences

During the economic history, innovation keeps firms and countries alive. It is crucial to increase profit and having an important share of a specific market. Before other firms and countries become competent in these products, that firm or country get huge part of market as a leader. This situation is explained by Technology Gap Theory by Posner.

According to Posner's Technology Gap Theory; An important part of trade between industrialized countries depends on the development of new products and production processes. Innovative companies in industrialized countries gain temporary monopoly power in the world markets due to the product and production processes in question. This temporary monopoly continues until the expiry of the copyright and patent terms. Thus, in the context of Technology Gap Theory, industrialized countries are initially exporters of these products. Later, due to the elimination of monopoly forces and the imitation of technology, these products are produced by developing countries with superiorities in terms of labor and natural resources. Thus, when the competitive advantage passes to developing countries, the countries in question start importing new products and production processes to the industrialized countries. (http://www.basarmevzuat.com/dergi/2004-09/a/05.htm#_ftn8, accessed at 14.02.2019). New trade theories have been developed cumulatively and connected to each other. The missing points were developed and the theories were brought closer to perfection.

Based on Posner's theory, Raymond Vernon founded the product life cycle theory in 1966. Vernon's model explained that newly produced goods are initially

produced and exported by innovative country, but after a certain point, country becomes the net importer of that goods.

Product life cycle divides the life cycle of this new product into three stages. In the first stage, which is the new product stage, the product is produced and consumed only in the home country. The second stage of the life cycle is called the maturing product stage. In this stage, some general standards for the product and its characteristics begin to emerge, and mass production techniques begin to be adopted. Via standardization in the production process, costs begin to decrease and economies of scale start to be realized. This feature contrasts with H-O Model and Ricardo, whose theories assumed constant returns to scale. In addition, demand from foreign country for the product grows, but it is associated particularly with other developed countries, since the product is suitable for high-income demands. This rise in foreign demand leads to a trade pattern whereby home country exports the product to other high-income countries. Other developments also occur in the maturing product stage. Once home country firms are selling to other high-income countries, they may begin to assess the possibilities of producing abroad in addition to producing in the home country to decrease costs. If the cost picture is favorable, then home country firms will begin to invest in production facilities in the other developed countries. If this happens, export displacement of home country produced output occurs. The final stage is the standardized product stage. By this time in the product's life cycle, the characteristics of the product itself and of the production process are familiar to all countries and firms; the product is well known to consumers and the production process to producers. Vernon hypothesized that production might shift to the developing countries. Labor costs again play a very important role, and the developed countries are looking for ways to introducing other new products. Thus, the trade pattern is that the home country other developed countries may import the product from the developing countries. (http://www.wright.edu/~tdung/product_cycle.htm, accessed at 17.02.2019)

3.2.4. Trade Based on Product Differentiation

Countries or firms have to differentiate their goods according to tastes and preferences of consumers. Producers must explore the ways to improve their goods,

and must provide the most efficient conditions to their workers in order to sustain their high competitiveness in textile sector.

Imperfect competition markets, where the full competition market conditions do not operate partially or fully, are the most common types of market in real life. The distinction between perfect competition and imperfect competition markets is mostly based on the most important condition of perfect competition. In other words, if the price in a commodity market can be determined or changed by one or more of the buyers and / or sellers, then the market is an imperfect competition market.

The buyer or seller, who has the power to influence prices in imperfect competition markets, has the chance to maximize his or her well-being. For example, in monopoly markets, this power is in the hands of the seller, while the quantity and price can be changed by the buyer in monopson market and the advantage is favorable to the consumer. In the monopolistic competition market, seller can act in monopoly by creating their own customer groups with applications such as advertising applications and product differentiation.

Under imperfect competition among single-product firms, the impact of new-product introductions on pricing incentives is clear. The new product lowers the market power of existing products, lowering the overall level of prices. This is one of the classical benefits of competition.

With multiproduct firms, the story changes slightly. Introduction of a new product by one firm lowers the market power of all other firms. This applies to all the other firms' products in varying degrees, depending on the demand elasticities and cross elasticities. A new product in an imperfectly competitive industry makes demand curves at the single-product and single-firm levels flatter, thereby leading to a general lowering of prices.

Intra-industry trade exists since products are differentiated within a sector, consumers has, for most products, a demand for differentiated goods. In addition, consumers are assumed to have a love for variety or a favourite variety behaviour, meaning that a consumer is assumed to prefer to choose between more varieties than less. (Lindqvist, 2006:7)

The model demonstrates not only that intra-industry trade may arise but also that national welfare can be improved as a result of international trade. One reason

for the improvement in welfare is that individual firms produce larger quantities, which, because of economies of scale in production, leads to a reduction in unit production costs. This means there is an improvement in productive efficiency. The second reason welfare improves is that consumers are able to choose from a greater variety of available products with trade as opposed to autarky. (<https://saylordotorg.github.io>, accessed at 18.02.2019)

As a result of these, firms can be specialized in specific area of a product, they can utilize from increasing return. Therefore, they have opportunity to lower price to sell total revenue. That's why consumer can get goods at a cheaper price.

Technology, product innovations, R & D, consumer preferences, and structure of demand, brand, pre-sales, and post-sales services, marketing strategies, intra-industry trade, trade between similar countries, multinational companies, and intra-firm trade are becoming increasingly important. (Utkulu, 2005: 8). All of these issues are enhancing intra-trade and international trade among countries. As costs are decreasing, firms and countries tend to trade; this situation is affecting international trade. Innovations have decreasing effect on prices since substitute goods increases the options of consumers and producers needs to compete. Many countries specialized on specific product and focus on it. Therefore another countries which are has comparative disadvantage of this product may prefer to import it.

Textile sector does not have too sophisticated goods; therefore if a producer finds the way to attract customers, they get the gain in the market. As all sectors in an economy circle, textile sector's producers must be innovative in order not to be disappeared.

3.3. DETERMINANTS OF INTERNATIONAL TRADE

A country's trade potential is monitored at the macroeconomic level, by assessing the import demand and export capacity. Factors such as cultural similarity or geographical distance are among the economic determinants of export potentials. Gross national product, population and geographical distance are the other macroeconomically strong predictors of foreign trade potential (Helmets and Pasteels, 2005: 1).

The Gravity Theorem is used in many academic studies to reveal the importance of several potential determinants of international trade flows. Tinbergen (1962) and Linnemann (1966) were the first to mention many factors affecting trade flows, and initiated the application of gravity analysis on international economics. According to them, there are several determinants of international trade flows in between countries. These are the level of economic activity and income of the countries, the measure of trade barriers, transport costs, trade policies, uncertainties, cultural differences, geographical characteristics and consumer preferences. These determinants of international trade flows are often included as variables in the gravity equations to assess the relevance of each factor in explanation of trade flows. This section provides an overview of each of these factors as determinants of international trade flows.

3.3.1. Distance

Transportation costs generate important parts of trade. Therefore, as the distance increases between countries, costs are increasing and domestic countries prefer to produce in the domestic market because it provides lower costs and lower final prices. This situation decreases the trade volume among countries. Differentiated and compulsory goods can be thought as out of this generalization. High tech goods that are not produced domestic country must imported, if country can be competitive in case of prices and quality, internal goods would be preferred by domestic consumers in Turkey, because consumers have the incentive to choose to consume national goods. Besides distance; transportation ways, infrastructure of transportation roads are important factors.

Why does distance matter so much? Economists have major four explanations (Head, 2003: 6)

- 1- Distance is a proxy for transport costs. Hummels (2001) has argued that shipping costs (freight charges and marine insurance) can go a long way towards explaining why distance matters.

- 2- Distance indicates the time elapsed during shipment. For perishable goods the probability of surviving intact is a decreasing function of time in transit. Perishability may be interpreted quite broadly to include the following risks:
 - a. Damage or loss of the good due to bad weather conditions or mishandling (e.g. ship sinks in a storm).
 - b. Decomposition and spoiling of organic materials (e.g. maggot infestation).
 - c. Loss of the market (the intended purchaser becomes unwilling or unable to make payment).
- 3- Synchronization costs. When factories combine multiple inputs in the production process, they need those inputs to arrive in time, otherwise bottlenecks emerge. One possibility is to use warehouses to keep inventories of each input, but this approach suffers from various drawbacks (land costs, technological obsolescence, fashion changes, and low pressures for quality control). Sourcing inputs from nearby locations lowers synchronization costs.
- 4- Communication costs. According to Krugman (year?), distance “proxies for the possibilities of personal contact between managers, customers, and so on; that much of the business activity depend on the ability to exchange more information of a less formal kind, than can be sent over a wire.”
- 5- Transaction costs. Distance may also be correlated with the costs of searching for trading opportunities and the establishment of trust between potential trading partners.
- 6- “Cultural distance.” It may also be that greater geographic distances are correlated with larger cultural differences. Cultural differences can impede trade in many ways, such as inhibiting communication, generating misunderstandings, clashes in negotiation styles, etc.

3.3.2. Common Language

Countries that speak the same language have better communication and relationship in history most of the time. If so, we would expect that countries that speak the same language would trade more. The evidence strongly confirms this

proposition. Two countries that speak the same language will trade twice to three times as much as pairs that do not share a common language (Head, 2003:9).

Common language effect may partly be explained by the fact that sharing the same historical ties may have caused the two countries to share the same language. Indeed, measures of colonial links also are positively correlated with trade. Including them as controls reduces the language effect somewhat, yet the effect remains quite strong (Head, 2003: 10)

3.3.3. Common Border

Common border provides advantages in case of closer proximity and transportation costs and better economic relationship between countries. This situation is expected to accelerate the mutual trade between neighbour countries. However, there is another idea that common border prevents the trade between neighbour countries. This situation called as “Border Effect”. (Vanagas, 2013:5) International trade between neighbour countries are affected by tariffs, quotas, transportation costs and other expenses that trade partners have to pay in international trade. If country can produce the goods in domestic market, since costs that trade partners have to bear is increasing the overall cost of goods, they prefer to meet the demand in internal market.

The literature has provided with many study that depicts the reducing effect of national borders on the volume of trade. These kind of studies were initiated by McCallum (1995) who, used Canadian provinces and US states-level data in 1988, to demonstrate that trade flows between two Canadian provinces were about 22 times as large as their trade with US states. Also US states trade among themselves 10 times more than trade with Canada.

Chen (2004) explained the border effect with six important reasons. These reasons are given as tariffs, quotas, exchange rate variability, transaction costs, different standards and customs, regulatory differences.

Anderson and van Wincoop (2001) argue that they have resolved the border puzzle, and find that borders reduce bilateral trade levels by reasonable, though substantial levels. They also argue that border effect is inherently large for small countries.

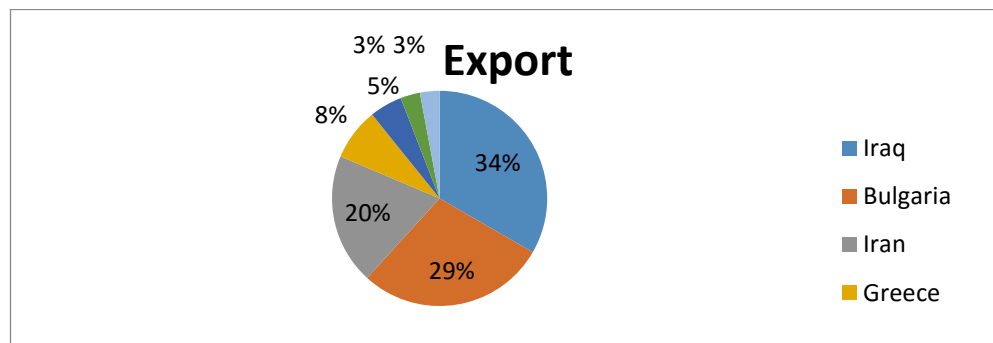
During the history, Turkey had political problems with the neighbour countries in different periods of time. However, especially in recent years, there is an increasing trend in trade volume between Turkey and neighbour countries. Armenia is an outstanding example, because Turkey has almost no trade with this country, although they share a border, and transportation costs are supposed to be low.

In 2017, Turkey met the significant part of her natural gas demand from Iran and Azerbaijan. These two countries supply 50% of Turkey's natural gas consumption.

In 2017, Turkey exported textile products worth 2.99 billion USD to the neighbour countries. Turkey's top textile importing neighbour country is Iraq in recent years. Iraq imported 1 billion USD worth textile products in 2017 and get the top place. Export increased 22% from 2016 to 2017 to Iraq. The country meets the important part of textile goods needs from Turkey. Iraq is followed by Bulgaria, Iran, and Greece. Bulgaria is an another important textile importing country from Turkey. The country imported 859 million USD worth of textile products. Iran is the third most important textile importing country from Turkey in 2017. Textile imports were on the top point in 2016, with the worth of 891 million USD in Iran. It decreased due to political issues to 583 billion USD, however, it is still crucial importing country of textile. Greece imports textile products from Turkey in the range of 210 – 260 million USD for more than 5 years. Political disagreements might be the main reason for this relatively lower export value. The fifth, sixth and seventh places belong to Georgia, Syria and Azerbaijan respectively. Armenia has no imported textile products from Turkey. Armenia is again a remarkable example, because Turkey has no exports of textile to Armenia.

Turkey should increase the textile exports to neighbor countries, because exporting relatively closer distances will provide lower costs and higher benefits.

Graph 3: Textile Export Share of Neighbour Countries



Resource: Turkstat

3.3.4. Population

High population rates are expected to increase the aggregate demand. If there is lack of production of any demanded goods or services in domestic market of a country, import is inevitable for the given market.

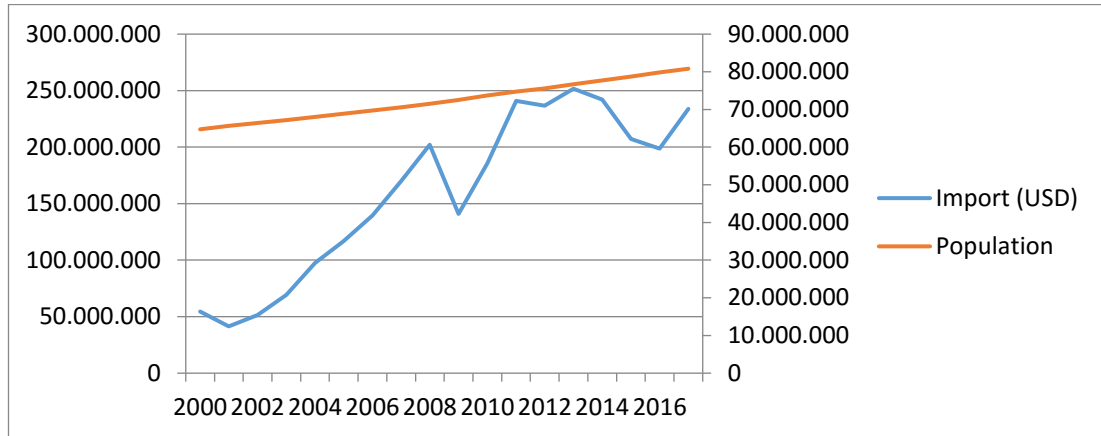
Population is one of the main factors that affect potential demand of the importing country to foreign countries' exporting goods. The tests on the importer's income will shed some light on the relative importance of the importing country's per capita income, and population in generating a purchasing capacity effect. The tests on the exporter's income are aimed at capturing the relative importance of population and per capita income in forming a proxy for productive capacity for the exported goods (Larue and Mutunga, 1993: 64,65).

Larue and Mutunga (1993), used the data of East African Community members and other developed nations like Germany, Japan, Canada etc. between 1973 and 1988 in order to estimate the effect of population on mutual trade. They found that GDP per capita and population has an augmenting impact on market growth. In other words, as population and GDP per capita increase, market grows.

Turkey is a large country with its high population. Since the domestic production can not meet the domestic demand, Turkey is obliged to import some of the demanded goods.

Population of Turkey has been rising around by 1 million each year between 2000-2017. In connection with this, imports are also increasing every year.

Graph 4: Turkey's Imports With Respect to Population

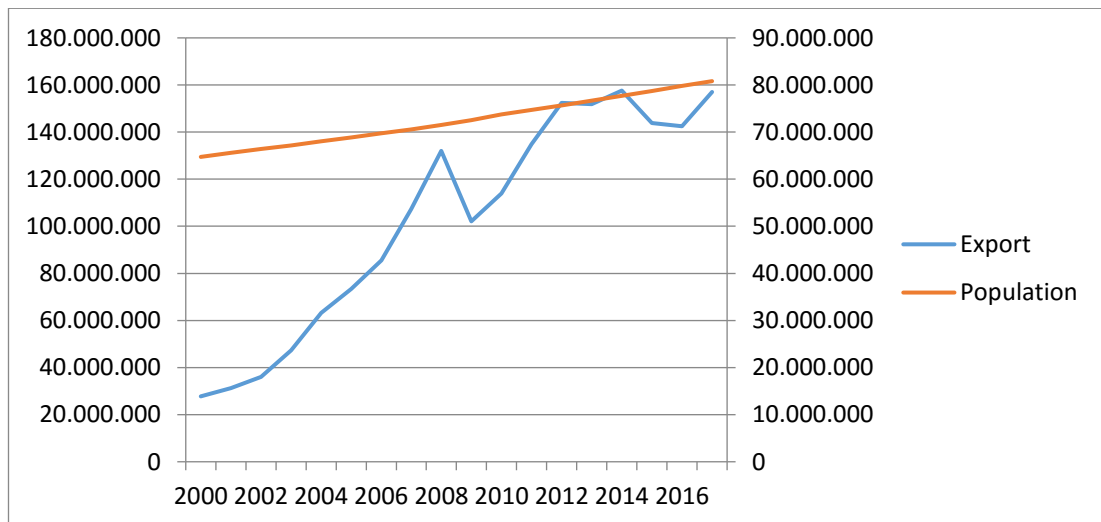


Resource: Turkstat

The Graph 4 illustrates that both population and import have an increasing trend for last 18 years, even though some important oscillations take place. According to the graph, there is a positive relationship between Turkey's imports and the population.

Turkey is a labor-abundant country because of its high population. As the population rises, production is also increasing. Despite some deviations, again there is a positive correlation between exports and population of Turkey, which is shown by the Graph 5:

Graph 5: Turkey's Export With Respect to Population



Resource: Turkstat

3.3.5. Exchange Rate

There are two different ways to evaluate exchange rates. One is nominal exchange rate, which is the number of units of the domestic currency that are needed to purchase foreign currency. Another one is the real exchange rate, which is defined as the ratio of the price level abroad and the domestic price level is converted into domestic currency units via current nominal exchange rate.

Depreciation in the nominal exchange rate makes domestic goods and services cheaper compared to other countries' goods. Relatively lower prices attract foreign demand, and leads to increase in exports of the home country. On the other hand, there might be rise in prices of domestic goods and services due to appreciation in domestic currency, i.e. additional taxes to domestic goods etc. This leads to decrease in exports. All in all, there is a balance between exchange rates and selling in international markets, as prices for domestic goods decrease, or in case of depreciation, demand on the domestic goods and services goes up. As the demand increases to domestic goods and services, due to limited supply, prices increases at the end and it finds the equilibrium point.

Exchange rates affect developing countries at most. Orcutt (1950), suggested that trade flows show strong reactions to permanent and high exchange rates than temporary and minor changes in exchange rate.

Table 42: Value of TL in Terms of Other Currencies

Year	USD/TL	% Change in USD	EUR/TL	% Change in USD
2007	1,30	-9,06	1,78	-1,21
2008	1,29	-0,66	1,90	6,61
2009	1,55	19,66	2,15	13,44
2010	1,50	-3,02	1,99	-7,49
2011	1,67	11,31	2,32	16,74
2012	1,79	7,34	2,30	-0,77
2013	1,90	6,07	2,53	9,58
2014	2,19	15,07	2,91	15,07
2015	2,72	24,32	3,02	3,86
2016	3,02	11,07	3,34	10,65
2017	3,77	20,73	4,12	23,25

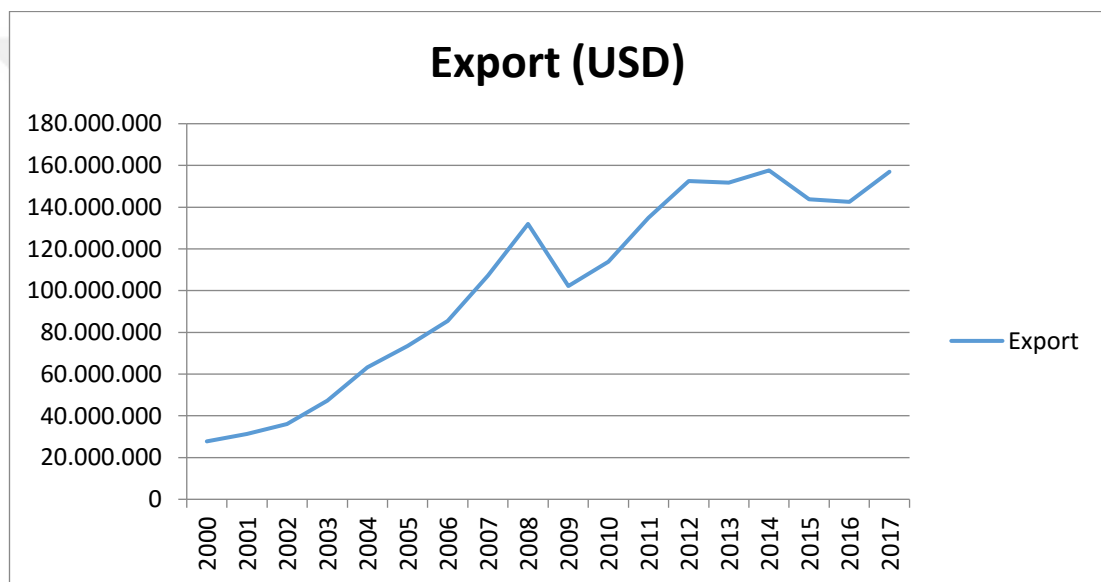
Resource: Turkstat

Vergil (2001) studied on the exports of Turkey to USA, Germany, Italy and France in order to detect whether changes in the real exchange rates affect the trade flows to Turkey to these countries. Vergil used data of 1990 to 2000 and found that

changes in the real exchange rates have negative effect on long-term international trade. In the short term, effects are not found to be significant.

Turkish Lira has depreciated continuously during the last 7 years against USD, and Euro. This situation is also expected to affect trade volume of Turkey. Among the other factors, exchange rate is also of great importance for a country's international trade. The graph 6 illustrates Turkey's exports in USD. As Turkish Lira depreciates in time, exports have an increasing trend as well, except in 2009. In the year 2009, the effect of global crisis has a devastating effect on global trade.

Graph 6: Turkey's Export in Recent Years



Resource: Turkstat

Besides export incentives, government policies and other factors, value of the domestic currency is also important factor of international trade for countries. A country imports only if the imported goods prices are less than domestic goods.

3.3.6. Barriers to Trade

As the world integrated more day by day, countries apply some restrictions on trade to protect their domestic sectors and foster infant industries. Since countries aimed to produce more in domestic market, they put incentives on these sectors and they try to minimize imports on these sector's goods.

Bhagwati (1969) have shown that, under perfectly competitive market conditions, tariffs and quotas yield comparable profit and social welfare effects with the redistribution of income to producers being greater with application of a quota than a tariff. Under imperfectly competitive market conditions, comparable degrees of trade restriction yield greater industry profits and social welfare losses under a quota system than tariff. In short, producers would always favor some form of nontariff trade restrictions to tariffs, while consumers would generally prefer tariffs rather than nontariff trade barriers. (Ray, 1981: 162)

On the other hand, public authorities and large enterprises may establish and defend standards for; market power, restraining competition in favor of domestic firms or cartels and forcing market entry barriers. In other words, they can be used as protectionist means rather than aiming to overcome market failures. However, because of their nature, it is rather impossible to distinguish them as protectionist restraints. Standards do not directly generate tangible costs as do quotas and tariffs. Instead, they influence production techniques, inputs used and so forth, which in turn are reflected in the price of the product. However if a standard or its enforcement is; either purely cost-raising, set at a stronger level than required, discriminatory in application, affect domestic/foreign parties or if it is not the least disruptive among the policy options, then the standard should be removed. (Maskus et. al. 2000:32)

3.3.7. GDP

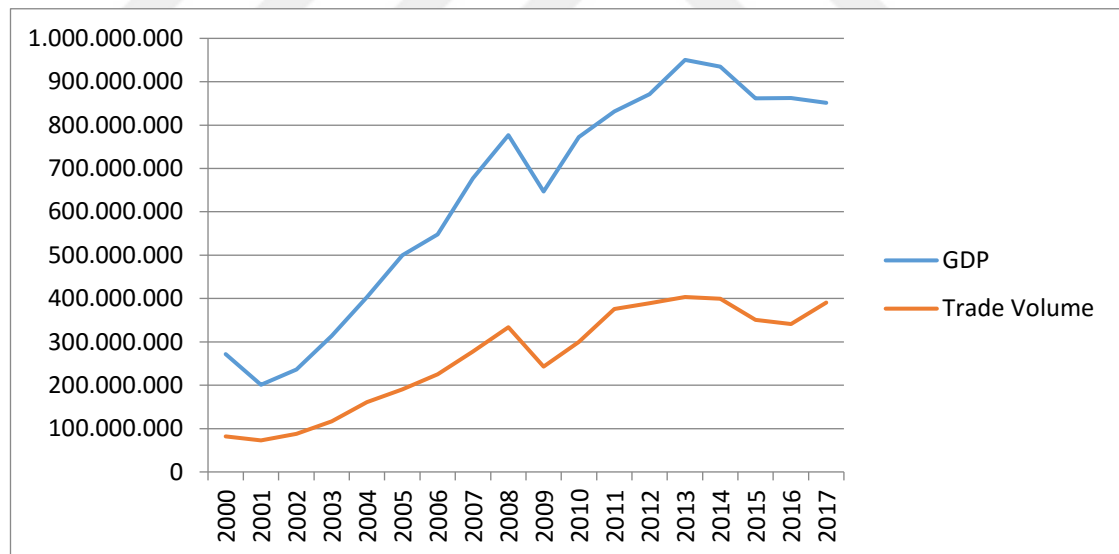
As the country develops and reaches a higher level of growth, the country's demand increase and household want to consume more. Therefore, after a point, domestic production can not be sufficient to meet the domestic demand. Thus, basic macroeconomic theory depicts that a country's imports are positively correlated by its national income. In the case of trade, the levels of GDP in both countries is supposed to positively affect their trade volume.

There is a positive relationship between domestic GDP and the country's imports. The relationship between income and imports is based on two factors: first, the resources needed for production are based on a certain amount of foreign inputs, and the second is that some of the domestic consumption is directed to imported goods. These two main points are directly proportional to the income of the

countries. Another important factor is the income elasticity of import demand. Income elasticity of import demand is the ratio of percentage change in imports to percentage change in income. If the rate of increase in imports is greater than the rate of increase in income, flexibility will be greater than one, and 1% increase in income will result in an increase of more than 1% in imports. If the rate of increase in imports is smaller than the rate of increase in income, the flexibility will be smaller than one and the 1% increase in income will result in an increase in imports by less than 1%. In other words, changes in imports will be less sensitive to changes in income. (Yücel, 2006: 50).

There are other studies that examine this relationship deeper and provide evidence, and explanation in more detail. Linneman (1966), for instance, shows that the growth of the trade volume is stimulated by the growth of national income, but is slowed down as population grows. This suggests that as domestic markets become larger, countries tend to be more self-sufficient.

Graph 7: GDP and Trade Volume of Turkey



Resource: Turkstat

The current values of GDP and trade data of Turkey confirm the Linneman's propositions. Turkey's GDP and trade volume are in a positive relationship with each other. As the GDP increases, trade volume increases as well.

3.3.8. Competition Policies and Comparative Goods' Prices

Under the assumption of rational behavior, demanding parties would prefer cheaper goods among the substitutes. If there were no restrictions, or no extra obligations, such as additional taxes, they would purchase the less expensive one irrespective of whether it is domestic or foreign goods, in case the qualities are almost equal.

Firms may create cartels and other illegal unions to increase their profits in international or domestic trade. There are plenty of restrictions to prevent this situation. One is European competition law, which is the competition law in use within the European Union. The law promotes the maintenance of competition within the European Single Market by regulating anti-competitive conduct by companies to ensure that they do not create cartels and monopolies that would damage the interests of society.

European competition law today derives mostly from articles 101 to 109 of the Treaty on the Functioning of the European Union (TFEU), as well as a series of Regulations and Directives. Four main policy areas include:

- Cartels, or control of collusion and other anti-competitive practices, under article 101 TFEU.
- Market dominance, or preventing the abuse of firms' dominant market positions under article 102 TFEU.
- Mergers, control of proposed mergers, acquisitions and joint ventures involving companies that have a certain, defined amount of turnover in the EU, according to the European Union merger law
- State aid, control of direct and indirect aid given by Member States of the European Union to companies under TFEU article 107.

Owing to economic and political relationships and Custom Union with the EU, Turkey also adopted her legal system to apply a similar competition policy. For this target, the Act on the Protection of Competition No. 4054 came into force on December 1994. In 1997 the Competition Authority was established, and started its

operations. It rapidly adapted the EU legislation on competition with the Turkish legislation.

The purpose of law is explained as follows *“The purpose of this Act is to prevent agreements, decisions and practices preventing, distorting or restricting competition in markets for goods and services, and the abuse of dominance by the undertakings dominant in the market, and to ensure the protection of competition by performing the necessary regulations and supervisions to this end.”*

The scope of law is explained as follows *“This Act covers all agreements, decisions and practices which prevent, distort or restrict competition between any undertakings operating in or affecting markets for goods and services within the borders of the Republic of Turkey; abuse of dominance by dominant undertakings in the market; any kind of legal transactions and behavior having the nature of mergers and acquisitions which may significantly decrease competition; and transactions concerning the measures, observations, regulations and supervisions aimed at the protection of competition.”*

The aim of the legislation is to prohibit illegal activities on trade in order to enhance trade and create sustainable and efficient markets for all sectors. If this is achieved, then the economy is expected to grow faster.

3.3.9. Political Issues (Growth Policies, Political Stability, and Political Conflicts among Countries)

After 2001 crisis in Turkey, country began to recover economy as a whole. After 2002, Turkey aimed to achieve sustainable and fast economic growth and development. In this context, government adopted the 2023 Economic Vision. The vision includes following targets;

1. To become one of the top 10 economies in the world,
2. GDP volume worth 2 billion USD,
3. Exports worth 500 billion USD,
4. Single digit inflation and interest rates.

By the year 2017, the values lag behind the aimed levels and ratios. Export volume is around 158 billion USD, inflation and interest rates are above single digit rates, and GDP is less than half of the target level.

In addition, concerning the international political issues, foreign political developments affect international trade volume negatively. For example in 2016, there was an “AirCraft Crisis” between Turkey and Russia. The Russian aircraft violated Turkish airspace, and did not stop despite warnings, then it has been shot by Turkish Army forces. This led to a crisis between two countries, and Russia banned imports of all kind of food and beverages from Turkey. That situation pushed Turkey to search for new markets to sell the domestic fruit and vegetables, since Russia is an important trade partner to Turkey. After a year, relationships got better and the Russian ban has been removed.

Political stability is another key to the success and stability in international trade. As expected, low levels of instability for the exporting countries are associated with high trade intensity indices. Stable countries tend to be the higher-level exporters when bilateral trade relations are examined. On the other hand, there is very small effect of the instability of the importing nation on the intensity of trade, this variable being an insignificant determinant of trade in all but a couple of instances (Srivastava and Green, 1986: 635).

The former colonial relations between countries is also found to be a significant determinant of the intensity of total trade as well as of trade in each of the product categories. Despite the attainment of independence, the ties of former colonies seem to exert an influence on bilateral trade relations. Such a finding is not surprising since businesses of the former colonists are generally well represented in the previous colonies and, in many cases, since close political ties still exist between nations and their former colonies. (Srivastava and Green, 1986: 635)

3.3.10. Currency Unions

Joining a currency union brings benefits such as a reduction in the transactions costs associated with trading goods and services between countries with different currencies. Countries with close international trade links would potentially benefit greatly from a common currency and are more likely to be members of an

Optimum Currency Area. Thus, the nature and extent of international trade is one criterion for joining an Optimum Currency Area, is it is also the case for the European Monetary Union entry requirements (Frankel and Rose, 1998: 1).

Although there are important cost-reduction effects of using the same currency among countries under the formed currency unions, there are also some disadvantages of this issue. While the cost of trade decreasing, in case of any crisis or a recession, countries have no power to use monetary policy, they can not ease or tighten monetary policy to affect interest rates. Therefore, unions have to be formed among the members, which have similar economic conditions.

Joining European Monetary Union brought some disadvantages for some of its members, for instance. Among those, one of the cited most frequently is foregoing the possibility of lessening business cycle fluctuations through independent counter-cyclic monetary policy. Countries with idiosyncratic business cycles give up a potentially crucial stabilizing tool if they join a currency union. Another criterion for European Monetary Union entry is therefore the cross-country correlation of business cycles. Countries with “symmetric” cycles are more likely to be members of an Optimum Currency Area. Briefly, countries with tight international trade ties and positively correlated business cycles are more likely to join, and utilize the advantages of European Monetary Union, *ceterisparibus*. (Frankel and Rose, 1998: 2)

A currency union is most often thought of a time-consistent monetary policy tool that countries use to achieve low inflation. When the central bank lacks power on a currency, the high inflation resulting from monetary discretion is reduced by means of an extreme monetary regime. Many economists think that the primary effect of currency unions and boards is via reduced inflation, with all its beneficial results. Of course, although lower inflation has many benefits, these regimes also have their costs in terms of macroeconomic stability. These costs may be large if a country adopts the currency of a country whose shocks are poorly correlated with the shocks to the home country, called asymmetric shocks (Frankel and Rose, 2002: 437).

Entry into a currency union may significantly raise international trade linkages (and therefore redeem the benefits foregone by not joining a currency

union). More importantly, tighter international trade ties may significantly affect the nature of national business cycles. Countries that enter a currency union are likely to experience dramatically different business cycles than before. In part, this will necessarily reflect changes in monetary policy; however, this will also result in closer international trade with the other members of the union. From a theoretical viewpoint, closer international trade could result in either tighter or looser correlations of national business cycles. Business cycles could, in principle, become more idiosyncratic. Closer trade ties could result in countries becoming more specialized in the goods in which they have comparative advantage. The countries might then become more sensitive to industry-specific shocks, resulting in more idiosyncratic business cycles. However, if demand shocks predominate, or there are important shocks which are common across countries – or intra-industry trade accounts for most trade – then business cycles may become more similar across countries when countries trade more intra-industry trade accounts for most trade – then business cycles may become more similar across countries when countries trade more (Frankel and Rose, 1998: 2).

3.3.11. Economic Crisis

During the history of world, there are plenty of economic crisis nationwide or worldwide. Economic crisis is a situation in which an economy of a country or world experiences a sudden downturn brought on by an either financial or real sector crisis.

Crises may start in the financial markets in foreign exchange rates, interest rates and inflation rates with the rapid abandonment of foreign short-term funds in many cases, and in real terms the effects of real sector on production and investment level in a short time. Moreover, the crisis in a country affects other countries, especially those in which the country has close economic relations. The reactions of these countries against these effects also cause negativity such as the export contraction in the country where the crisis started and the increasing unease in the international financial markets. The effects of the crisis are spreading to indicators of labor markets, poverty and income distribution.(Koyuncu and Şenses, 2004: 3) An

economy facing an economic crisis will most likely experience falling in income, great shortage of liquidity and rising/falling prices because of inflation/deflation.

There are some disastrous global economic crises in the world during throughout the history. The recent crisis that affect Turkey are 2001 crisis and 2008 crisis.

According to the World Bank data, in 2001 GDP of Turkey fell from 273 billion USD to 200.2 billion USD. Inflation was quite high during these years but in 2001 it was approximately 53%, and unemployment was 8.54%.

In 2007, world faced the problem of mortgage crisis which began in US and spread all over the world. It leads to bankruptcy of great investment banks, decrease in global GDP, global trade, and general welfare. It affected the entire world, some countries' economy had greater damage, some had less, but all of them had. In 2008, there was a global mortgage crisis that affect the entire world.

That crisis also affected all macroeconomic variables of the world. Despite world demonstrated around 4,5% growth in 2006 and 2007, the performance was 1,81% in the world, the growth rate of Turkey was less than 1%. In 2008, Turkey export worth of 102,1 billion USD goods and services. However, in 2009, export of Turkey fell 22,6% compared to previous year. Since the purchasing power of Turkey's trade partners decreased, Turkey faced many difficulties to sell their goods in global market.

Since the economic crisis devastates all economic activity and decreases the purchasing power of consumers, that situation is also decreasing the international trade among countries. The contractionary monetary policy and the increase in the cost of borrowing from banks have adversely affected the acquisitions of firms that currently have problems in cash flow. Exporting firms also reduced production because the production costs increased and exports decreased, and the effects of the crisis were felt more and more.

Crisis has negative impact on Turkey's international trade. Trade volume of Turkey has decreased 27% in a year. Export of Turkey after 2008 crisis has decreased by 30 billion USD and import of Turkey has decreased by 60 billion USD in 2009.

In 2008, world trade volume was 16.2 trillion USD. Crisis also has devastating effect on world trade. In 2009, world trade has decreased 3.6 trillion USD compared to previous year.

3.3.12. Free Trade Area – Regional Trade Agreements

Free Trade Area (FTA), is a regional formation, encompassing a trade block whose member countries sign a free trade agreement. In this case, signatory countries either reduce or abolish trade barriers, import quotas and tariffs among all members. As a result, they increase mutual trade of goods and services. While they apply no customs duties for member countries, they are free to apply their national external tariffs to non-member countries.

Table 43: Regional Trade Agreements of Turkey

Countries	Agreement Date	Date of Validating Agreement
EFTA*	10.12.1991	01.04.1992
Israel	14.03.1996	01.05.1997
Macedonia	07.09.1999	01.09.2000
Bosnia-Herzegovina	03.07.2002	01.07.2003
Morocco	07.04.2004	01.01.2006
Palestine	20.07.2004	01.06.2005
Tunisia	25.11.2004	01.07.2005
Syria	22.12.2004	01.01.2007 (Suspend on 06.12.2011)
Egypt	27.12.2005	01.03.2007
Albania	22.12.2006	01.05.2008
Georgia	21.11.2007	01.11.2008
Montenegro	26.11.2008	01.03.2010
Serbia	01.06.2009	01.09.2010
Chile	14.07.2009	01.03.2011
Jordan	01.12.2009	Signed. Internal approval process is ongoing.
Mauritius	09.09.2011	01.05.2013
South Korea	01.08.2012	01.05.2013
Kosovo	28.09.2013	Signed. Internal approval process is ongoing.
Malaysia	17.04.2014	01.08.2015
Moldovia	11.09.2014	01.11.2016
Faroe Island	16.12.2014	01.10.2017
Singapore	14.11.2016	01.10.2017

Resource: iib.org.tr/sta.kilavuz

Turkey has preferred trade system with the EU. Turkey concluding the separate FTA contract with the countries that has FTA with EU since 22 December 1992 due to signed Act of Customs Union with the EU, which means Turkey also has the same terms and trade conditions with these third party countries.

Table 44: Trade with FTA Countries of Turkey in 2017

Country	Export (USD)	Import(USD)	Trade Volume (USD)
Iceland	199.721.944	32.230.366	231.952.310
Norway	546.713.123	840.345.532	1.387.058.655
Liechtenstein	4.056.998	3.621.091	7.678.089
Switzerland	887.766.119	6.899.988.422	7.787.754.541
Albania	387.115.810	24.166.017	411.281.827
Bosnia-Herzegovina	348.617.796	268.974.398	617.592.194
Faroe Island	264.740	134.403	399.143
Morocco	1.657.717.765	924.061.683	2.581.779.448
Palestine	87.459.779	4.974.689	92.434.468
South Korea	584.114.967	6.608.873.746	7.192.988.713
Georgia	1.208.645.416	215.276.241	1.423.921.657
Israel	3.407.436.059	1.505.113.435	4.912.549.494
Montenegro	60.086.708	24.080.953	84.167.661
Kosovo	270.363.047	8.506.853	278.869.900
Macedonia	360.253.184	101.146.965	461.400.149
Malaysia	286.255.433	3.138.558.280	3.424.813.713
Mauritius	65.163.963	3.782.202	68.946.165
Egypt	2.360.734.145	1.997.503.294	4.358.237.439
Moldovia	284.648.734	180.558.774	465.207.508
Serbia	717.489.474	414.375.156	1.131.864.630
Singapore	678.885.699	400.178.046	1.079.063.745
Syria	1.363.165.167	70.560.814	1.433.725.981
Chile	254.625.676	264.999.615	519.625.291
Tunusia	912.702.766	206.465.898	1.119.168.664
Jordan	682.476.619	112.643.915	795.120.534

Resource: Turkstat

*Norway, Switzerland, Iceland and Liechtenstein are members of EFTA.

Turkey has signed 26 Free Trade Agreements. After the joining of Latvia, Hungary, Estonia, Czech Republic, Slovakia, Poland, Slovenia, Lithuania, Bulgaria and Romania to EU, 10 of these agreements has ended, and EU agreements began to work instead of these. Fourteen agreements are still in force.

Turkey has high volumes of trade with the countries that it has Free Trade Agreements. By the year 2017, Switzerland and South Korea are the top trading partners to Turkey among the other Free Trade Area members. Trade volume exceeds 7 billion USD for trade flows among Turkey and the two countries in total. Turkey imports around 13.5 billion worth of goods and services from these two countries, and exports nearly 1.3 billion USD worth of goods and services. Next two countries are Israel and Egypt. Turkey's net exports to these countries are positive.

Table 45: Turkey's Trade with Free Trade Agreement Countries (Current, USD)

Year	Trade with FTA Countries	Trade with World	Share of FTA
2016	35.645.632.283	338.034.818.855	10,5%
2017	41.867.601.919	390.792.591.648	10,7%

Resource: Turkstat

In this context, regional trade integrations lead to economies of scale, decrease the aggregate costs, and provide resource efficiency, because country's prefer to produce goods that they can export it easier. Membership to a regional trade block also provides competitive economic infrastructure, thus increases the global competition power, and enhances general welfare and the GDP of the country. Furthermore, this increases the mutual investments of both parties.

As a result, when it is studied on general view, free trade agreements not only make trade volume higher, but also political issues are increasing the benefits out of it. After signed the FTA, important bureaucratic people and leading businesspersons are searching for the potential investment sectors and areas in order to increase the benefits (http://www.iib.org.tr/files/downloads/mevzuat/sta_kilavuz.pdf, accessed at 11.01.2019).

3.3.13. Export Incentives

Export incentives are a form of assistance that governments provide to firms or industries within the national economy, in order to help them secure their existence in foreign markets. A government, providing export incentives, often does so in order to keep domestic products competitive in the global market.

Developing countries, such as Turkey, always aimed to increase exports in order to become stronger in the world economy. In line with these targets, Turkey supports exports under all circumstances in order to eliminate economic problems, and increase the welfare of people. These supports provided to exporters aim at providing the Turkish companies with a competitive advantage in the international markets, and to promote Turkish goods abroad. Thus, it is aimed to contribute to the economy of the country through fostering firms by the help of government. (Sarihan et. al. 2017: 756)

In this context, Turkey has a project named as "Turquality". "Turquality" is an ambitious project associated with bringing "Turkey" and "Quality" concepts together. The project is initiated by the Turkish Government, Ministry of Economy,

Turkish Exporters' Assembly (TIM), and Istanbul Textile and Apparel Exporters' Association (ITKIB). The initial legal framework was laid out publicly on January 12th, 2004.

Turquality is basically an accreditation system, which is designed not only for elevating the beneficiary companies to the level of international benchmarks, but also creating awareness on the internationally accepted values like quality and novelty that are actually carried by these brands.

As a “national brand-building program”, Turquality’s goal is to facilitate and support the success of Turkish brands on international arena.

To achieve these ambitious goals, Turquality program will broaden its vision to the wider concept of “quality in brand management” and emphasize its support services component with the inclusion of highly customized strategic coaching and consulting.

To support companies in their brand-building efforts, TURQUALITY® helps them to develop essential capabilities, competences, skills and resources necessary to fulfil such a complex commitment through both group and individual activities.”(https://turquality.com/about-us/what-is-turquality-2?__r=8d5a5eabf4578f9, accessed at 05.02.2019)

Turquality supports firms in following cases;

- 1) Supporting Sectoral Qualified International Fairs,
- 2) Supporting Fair Participations Abroad,
- 3) Employment Support,
- 4) Supporting of Branding of Turkish Products Abroad,
- 5) Design Support,
- 6) Supporting Unit, Brand and Publicity Activities Abroad,
- 7) Supporting the Development of International Competitiveness,
- 8) Supporting Market Research and Market Access,
- 9) Other Incentives.

Turkish government has established a public bank, called Eximbank, so as to support export activities. Eximbank provides special interest rates for exporters. Eximbank offers special interest rates to exporters on the condition that the agreed

amount of trade is done. If firms achieved this goal, foreign currency reserves increase, trade increases, and as a result GDP increases.

In the early 1980s, traditional import substitution policies began being replaced by foreign oriented policies, and thereafter exportation gained a high degree of importance to the Turkish economy. The task of supporting exports within this reorganization process was undertaken by Turk Eximbank, established in 1987. Turk Eximbank was established in 1987 as Turkey's official export credit agency, and began to implement its programs at the beginning of 1988.

Main Objectives of Eximbank are;

As the sole official export credit agency in Turkey, Turk Eximbank plays an especially important role through its policies in support of exports. The Bank's main objectives are:

- Increasing the volume of exports;
- Diversification of export goods and services;
- Developing new export markets;
- Increasing the exporters' share of international trade and providing necessary support for their initiatives;
- Gaining competitiveness and bringing assurance to exporters, overseas contractors and investors on the international markets; and
- Promoting and supporting the production and sale of investment goods for export through overseas investments.

As a means of aiding export development, Turk Eximbank offers specialized financial services to exporters, export-oriented manufacturers, and overseas investors and contractors through a variety of short, medium and long-term cash and non-cash credit, insurance, and guarantee programs.

Since export is an important part of GDP, countries always tend to increase exports via incentives. Countries often perceive themselves as being in competition with each other for profitable international markets. In such a world, export subsidies can appear as attractive policy tools, from a national point of view, because they improve the relative position of a domestic firm in noncooperative rivalries with foreign firms, enabling it to expand its market share and earn greater profits. (Brander and Spencer 1984: 1)

Empirical analyses demonstrate some results on the impact of export subsidies. Coughlin and Cartwright (1987) found that every increase of \$1 in state export assistance expenditures was claimed to result in approximately \$432 increase in exports. Thus, export subsidies stand as important factors to affect international trade flows.

3.3.14. Foreign Direct Investment

A foreign direct investment (FDI) is an investment in the form of a controlling ownership in a business in one country by an entity based in another country. As the world is more integrated, firms, also countries are looking for ways to decrease costs, and improve benefits out of production. This integration of world economies is primarily aimed at removing the barriers to the free movement of goods, in parallel to the free movement of capital (Göver, 2005: 1). Foreign direct investments are thought to be beneficial for both home and host countries.

Inward FDI can play an important role by increasing, and augmenting the supply of funds for foreign investment in the host country. This can be achieved through the production chain when foreign investors purchase locally made inputs, and sell intermediary goods to local enterprises. Furthermore, inward FDI can increase the host country's export capacity, causing the developing country to increase its foreign exchange earnings. FDI can also encourage the creation of new employment areas, increase technology transfer, and boost overall economic growth in host countries (Belloumi, 2014: 2).

The rapid growth in foreign direct investment (FDI) over the last few decades, from 5% of world GDP in 1980 to 10% in 1995 (World Investment Report, 1997), has spurred a large body of literature examining the determinants, and effects of FDI. This rapid increase in FDI has occurred in the context of reductions in barriers to investment throughout the world, and the empirical evidence shows that investment liberalization stimulates FDI flows (Amiti and Wakelin, 2003: 2).

Here is the two important indicator of FDI to Turkey;

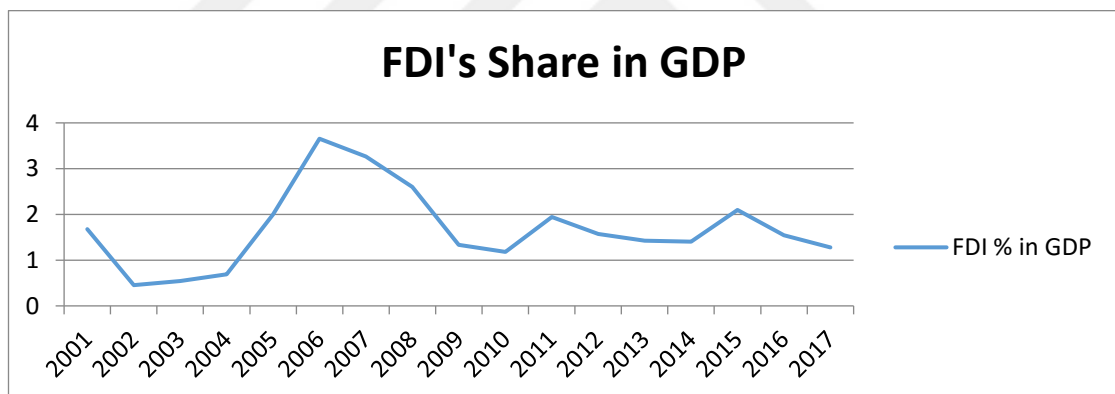
Table 46: FDI inflows of Turkey (Current USD)

Year	Net FDI Inflows	Year	Net FDI Inflows
2006	20.185.000.000	2012	13.744.000.000
2007	22.047.000.000	2013	13.563.000.000
2008	19.851.000.000	2014	13.119.000.000
2009	8.585.000.000	2015	18.002.000.000
2010	9.099.000.000	2016	13.343.000.000
2011	16.182.000.000	2017	10.889.000.000

Resource: Turkstat

FDI provides cheaper sources, investing and buyer countries etc. Studies assert that FDI companies are more likely to import their raw materials from investing country. Göver (2005), found that FDI companies imports exceeds their export between 1996-2002 in Turkey. Countries might attract foreign investors to pulse them to their country. As a developing country, FDI is too important part of growth and development of Turkey.

Graph 8: Percentage of FDI Net Inflows in GDP (Turkey)



Resource: Turkstat

After 2008 and 2009 global housing crisis, it is at the lowest point in 2017. In recent years, Turkey seen not as a stabilized country in terms of political and economic issues. Due to lower credit ratings in recent year, and higher interest rates FDI inflows of Turkey is decreasing.

Firms such as Adidas or Apple are producing their products in countries like China, Indonesia due to cheaper labor. Huge companies are looking ways to decrease their production costs – in case of wages, natural resources etc. This situation is increases the production of investment country, increases the national income and increases the export in case of excess demand in domestic market. On the other hand,

investor firm or country may have the opportunity to import these goods which become cheaper than domestic market especially due to relatively higher wages in developed country. In addition to this, investor would have chance to compete in international market. Inward FDI to Turkey was increasing up to 2008 global crisis, after the crisis FDI sharply decreased in 2009, then it began to increase gradually.

Companies making foreign direct investments are not only free of trade costs by the decision of FDI, but also operate more actively in the local market and adapt to changing market conditions and consumer preferences more easily and quickly. In general, providing the advantage of proximity to the market is shown as one of the important reasons of foreign direct investments. Due to this characteristic, exports are considered substituting investments. The size of the host country's market is increasing for two reasons, the directive of exports of foreign direct investment. The first reason is that the fixed costs per unit output will fall due to the increase in total production volume. The second reason is the decline in intermediate goods prices as a result of the need for a large number of local suppliers in order to produce a large quantity of products and to compete among them.

Vertical integration investments are investments in several countries to produce a commodity as a result of the production process of the final goods produced by multinational companies divided into several stages. The advantages arising from the diversity of natural resources, abundance of raw materials, cheap labor and factor prices play an important role in the vertical integration investments of multinational companies. Besides these factors, the low transportation costs between the host country and the investor country and the free trade of foreign trade are the determinants of the vertical integration investments. An example of a vertical integration investment is the manufacturing of the components of an electronic device offered to the US market in the US, but the assembly of the product in a Southeast Asian country due to the cost advantages. (Göver, 2005: 9).

Vertical integration investments are foreign direct investment, which is the type that has a trade creative effect. A product produced for the investor country market as a vertical investment as a result of the installation in a different country to be exported to the investor country, both the investor country and the host country's foreign trade volume increases (Göver, 2005: 10). Vertical integration investments

can be made not only for the investor country market but also for a regional economic integration market. Foreign direct investments have an increasing effect on trade between countries.

Developed countries export goods that require more skills, while developing countries concentrate on exporting goods that require less skill. This difference between skills can be eliminated through foreign direct investment. Information produced in developed countries with high proportions of human capital might be transferred to developing countries through foreign direct investments. The information transferred to developing countries generally belongs to the company that invests in that country. Nevertheless, knowledge and technology can be achieved through labor training, local government, and links between foreign companies and local companies that provide input to those companies.

In addition, local companies can learn by watching. The presence of foreign companies with superior technology in the economy may also force local companies that do not want to lose their competitive power to invest in the learning process. As a result, the competition of local companies through investments can force foreign companies to bring superior quality, high technology and know-how to the host country (Balasubramanyan, Salisu and Sapsford, 1996: 95). As a result, in efficiency of production, supply might the domestic demand, so the supply can be exported and this situation provides additional trade gain to host country.

FOURTH SECTION

LITERATURE REVIEW

4.1 HISTORICAL BACKGROUND OF GRAVITY THEORY

In 1687, Newton introduced the new law of gravity "Law of Universal Gravitation". According to the law; the gravitational force between the two objects is inversely related to the masses of the objects and the square of the distance between the objects. In the twentieth century, Newton's hypothesis of attraction between bodies began to be used not only in physics but also in social sciences.

Gravity Models have been used in many social sciences so as to describe and model certain behaviors containing some elements of mass and distance, originated by Isaac Newton's law of gravity. The Gravity Model of trade is used in international economics to estimate bilateral trade flows based on the economic size, distance and preferably some other elements such as common language, cultural similarity between a pair of countries. Tinbergen and Pöyhönen were the first economists to perform econometric studies separately on trade flows based on the gravity equation based on only the intuitive justifications in 1960's. Tinbergen (1962), included geographical dimensions in his analysis in which he treated countries as entities having physical location. According to the Gravity Model, bilateral trade between any two countries or cities increases in direct proportion to the population or the economic situation between these points and in inverse proportion to the distance between the points.

Since the Gravity Model has been used to explain the international trade trends, research has been conducted to show that it has been able to derive its theoretical background in order to consolidate its theoretical infrastructure and to enrich its model. In addition to income and distance to the model, other variables that explain the trade flows were added and this new model was called the Augmented Gravity Model. The model includes different explanatory variables such as income per capita, Linder effect that showing the difference of factor distribution among countries, common language, the effect of colonialism, joint border, free trade agreements and dummy variables that show currency units.

In the economics literature, the factors affecting international trade were tested using Gravity Model and Gravity Model increased its popularity among economists with accurate results.

The theory has developed in time as the studies on it increases. Tinbergen (1962) was one of the first who used gravity theory in economics. In his study, while measuring trade values between countries, Inspired by Newton's work, he considered the countries as two points and predicted that trade would decrease as the distance between them widened.

Poyhonen (1963) is the first author to use Gravity Model in foreign trade after Tinbergen. Poyhonen argued that the trade volume could be estimated as a growing

function of trade partners' national income and as a decreasing function of distance between countries. Distance replaced transport cost.

Linnemann (1966), added more variables in the gravity equation and went further toward a theoretical justification in terms of Walrasian Equilibrium model. Therefore Linnemann's model is also called as augmented Gravity Model. Linnemann asserted that, when considering theoretical aspect of gravity theory for trade, 3 main factors should be taken into account: i) total potential supply, or exports of a country to the world market, ii) total potential demand of a country to the world market, iii) those factors that create resistance to trade and so, affect the degree of trade intensity (Deardoff, 1998;9). This situation includes trade barriers and transportation costs. In his study, he found that transportation costs and tariffs affects bilateral trade negatively.

Ball (1967), one of the first economist to use Gravity Model in the study, used the Gravity Model in his study and used the cross-sectional analysis of his empirical study and concluded that the distance ultimately hampered international trade.

4.2 RECENT STUDIES

Distance and the trade is two key variables of gravity theory. Distance is taken into account due to time and transportation costs and it is calculated bird's eye straight line from point/country A to point/country B. Amponsah and Ofori-Boadu (2006) derived a Gravity Model based on import of US in textile to investigate the gravity effect on the sector. they demonstrated that as the distance getting closer, US willing to import more due to decreasing costs of transportation.

In the literature, besides export and import values, GDP, GDP per capita, common language, colonialism, religion, population, common border are mostly taken into account for the Gravity Model studies. In the following paragraphs, there are sample of these type of studies.

Abbas and Waheed (2015) investigated the export performance and potential of Pakistan by using data of major 40 trade partner of country's data between 1991 – 2011. Textile and agricultural products compared 80 % of Pakistan's total merchandise export. The results show that Pakistan's export is positively affected by

its supply capacity and partner country's demand potential as well as market size, whereas bilateral distance shows significant negative impact. Common language has significant positive impact and common border depicts negative effect on export. Free trade area agreements found insignificant. In the study, trade potential of Pakistan is examined as well. The result of export potential shows that the Pakistan has higher export potential with many Asian and European countries. In order to eliminate this under-traded situation, authors recommended some implications. Since Europe is emphasized as the highest potential region for Pakistan's exports, the policy implications of Pakistan needs to improve and diversify its industries targeting market fundamentals of potential economies, and revisit and develop its regional free trade agreements with an idea to improving the trade balance and achieving sustainable economic development to get rid of continual trade deficit.

Dummy variables such as common language, common border are mostly taken into account of gravity equation in order to decide the effect on trade.

Language is another important issue that affects the trade behavior among countries. Language commonality seen not only as speaking issue but also has (sometimes) the historical and cultural commonality. The language commonality of India and the USA brings it unachievable advantage over its many competitors, as the findings of prior industry survey in the US apparel sector have revealed that language barrier (sometimes the language barrier also generates culture barrier) is one of major inhibitors for US apparel global sourcing (Nobrega and Sinha, 2008).

Nowadays, countries are more engaged through trade. Many countries are creating free trade areas and abandoning trade barriers in order to increase the welfare of itself. It is called as liberalization and it is believed that this is beneficial for each part of the trade. Chi (2010) identified the most important economic factors on US textile export by using OLS method. The study has shown a major outcome. NAFTA is one of the most important factor to US export of textile. In the beginning, cooperation with NAFTA is criticized due to idea of unbeatable price advantage against Mexico, and free access of the country's to domestic market. Unlikely, as time passed it is obviously seen that Mexico and Canada have become two largest consuming nations for US textile products.

Economic unions and free trade areas contribute to bilateral trade of member country. Decreasing or abandoning tariffs increase welfare of each side of trade. Sohn (2001) included APEC member country to his study to investigate whether the membership has significant effect on Korea's trade. APEC variable turns out to be highly significant. Since free trade areas are lessening the physical distances owing to agreements, it has directly expanding effect on trade.

Population has two side effect on the trade and production. An increase in importing country's population requires additional goods to consume. This helps exporting country to increase the revenue from export to this country. Another side is production. Rise in the population is also means that increasing labor force. As the resource increases it is getting cheaper and firms can produce the goods at a cheaper price and this situation bring to firm a price advantage in international market

Population is frequently taken into account in order to examine the labor force importance and specialization issue in the studies. In this concept, Liping (2010), studied on textile export performance along with trade restrictions. In the study, it is shown that despite great restrictions of European Union and United States, China's textile sector demonstrates a magnificent performance in case of export, production, quality and technology. In addition, the pressure of this unequal relationship was eased after the entering into WTO. Although the international trade protectionism has never stopped restricting China's textile trade, China's textiles export has shown a steady growth, which is not only benefited from China's efficient and low cost, but also from the long time and tireless efforts in the industrial technology and the international market. Study shown that against the restrictions, China's export performance is increasing year by year. The reasons are shown as cheaper labor force and specialization on textile and apparel sector.

Elasticity of demand is widely used in order to determine the market strategy and amount of supply by producers. Perfect prediction provides a great advantages to companies such as avoiding the over production, pricing terms and so on. Lau and Bilgin (2010) used the Gravity Model to estimate the trade elasticity of China's apparel cottons in the US market for the time between 1989 and 2009, because they asserted that trade elasticity of income and price are important for international economic policy analysis from the Gravity Model, two results are observed. First,

there are a unique long-run equilibrium relationship among the quantity import demand, the import prices of goods and the United States' GDP per capita. Second, import price and income elasticity are significant as expected, conditions of which are significant for performing trade – policy analysis.

Exchange rate is important determinant of trade. As a country's currency appreciates, country willing to import more due to relatively lower price of other country's goods and services. This situation is sometimes criticized, because it is claimed that it is a decreasing domestic product and leads to job losses. Amponsah and Ofori-Boadu (2006) showed that US textile is highly sensitive to relative prices changes. Importer country's depreciating exchange rate as well as relatively cheaper prices to that of the U.S., plays an important role in determining textiles and apparel trade flows to the U.S. market. Decreasing prices in the exporting countries caused them to export more textiles and apparel to the U.S. These results reflect significant import substitution of textiles and apparel during periods of rising prices for textiles and apparel in the U.S. At the end of study, they pointed that this willingness to imported goods leads to huge job losses in US especially in rural areas.

Another issue that economists widely examined is studying on country groups. Economists studies on the issue in order to investigate the effect of country or economic groups' effect on a single country's trade. Do, (2006) examined the bilateral trade between Vietnam and 23 European countries for years 1993 to 2004 by total export of country. In study, it is shown that textile and clothing sector composed of 40 percent of Vietnam's total export, the results are highly related with this sector. Study depicted that economic size and real exchange rate are major determinants of bilateral trade, economic growth of each economies strongly affects trade relationship. Distance and common history found insignificant in the study. Moreover, the potential trade between parties have examined and found that there is still room to growth bilateral trade.

In the recent studies of gravity theory, economists prefer to focus on variables other than distance, because distance is already provided as the cornerstone of the theory with many studies and thesis. Sohn (2001) estimated a Gravity Model to examine the Korea's bilateral trade flows and Trade Conformity Index has examined which is based on H-O Model. Consequently, it is shown that Korea's trade patterns

are based on inter-industry trade rather than on intra-industry and Korea's bilateral flows are expected to increase when its trading partner possesses a complementary structure rather than a competitive one. The positive effects of a regional trading arrangement appear in various forms, one of which is the shortening of economic distance.

In the literature, there are many studies which shows that countries are tend to trade with similar level of GDP or GDP per capita. This close income levels are affecting the consumption behavior of consumers to meet their demands. Hermawan (2011) depicted that Indonesia tend to export with similar level of per capita income. They also claim that Indonesia should vary the export destinations due to under-traded export conditions with some of the sample countries. Countries should encourage international trade to gain more from it by accessing cheaper resources and/or selling the goods to countries which have scarce resources or suffering from low level of production.

Karagöz and Karagöz (2009), Turkey's extended Gravity Model built on the model of identifying factors that impact on global trade. With the estimated coefficients, it has been investigated that the potential of trade with which countries can be increased. As a result of the study, Turkey's estimates of the partner countries with effective positive economic size, population size and distance, it was concluded that the negative to be effective. The historical proximity, cultural intimacy, common border and dummy variables of the Islamic country were found to be positive.

Sustainable development and growth is always one of the main target of all countries. This growth can be achieved through professionalization of some sectors. Either they can minimize the costs and have the cost effective production stages or they can produce high value added technological goods. If the country achieve this aim, then the wealth of nation begin to increase so do GDP per capita. Studies of Chan et. al. (2006) for China, and (2008) for India are two supporters of the idea. It is showed that as the GDP per capita of importer country increases, they are willing to consume more, therefore the countries are importing more from the given countries in the study.

Turkish economists have also interested in the issue of Gravity Theory for Turkey and they conducted some studies on the issue. Tatlıcı and Kızıltan (2011)

interested in the question that “Does the common border affect the mutual trade?” Neighbor countries may prefer to trade with each other due to lower costs of transportation, but the specific issues or countries might be out of this idea.

Tatlıcı and Kızıltan (2011) made a research about Turkey export in case of Gravity Model. They aimed to explain whether it is significant to share common border and Custom Unions. The model included data from 1994 to 2007 for 46 countries. The distance between partner countries and its populations, GDPs, also common borders and Custom Unions are included as dummy variable. Results demonstrated that having a common border and Custom Unions are not significant with the model. They defended that the reason why the Custom Union is insignificant is that Turkey does not supply branded products that European Union countries demand and Turkey’s inability to get into price competition with EU countries. They claimed that common border is insignificant due to political problems with neighbor countries like Greece, Syria, Iraq and Armenia.

Political issues are subject to other studies as well. Especially nowadays, trade wars remind us to importance of diplomatic situation’s importance on trade. Countries can restricted or totally prohibited another country or country group’s export to home country. On the other hand, countries might follow a peaceful politics and enhance trade by this way. Johnston et. al. (2015) applied Gravity Model to predict the relationship between African countries and China in case of manufacturing goods. They claimed that positive political relationship among countries accelerated trade between parties. Visit of Chinese President Jiang Zemin to six African nations in 1996 marked the shift in focus of China’s relationship with Africa away from politics toward economics. Change in both China and Africa motivated the shift. The findings tell us that China’s trade broadly agrees with the predicted trends in standard Gravity Model: trade rises with partner GDP, partner population and common linguistic roots.

Countries are always looking for ways to improve the level of export to other countries. In this concept, studies are conducted in order to assess whether countries export to any country is at full level or there is an under-traded situation. For under-traded situation, economists may propose some solutions in order to improve gain from trade.

Another Turkish economist investigated the potential trade of Turkey and raised the question that “*Are there any way to increase trade to countries which is under potential?*” Ata (2012) studied the Turkey’s export potential by the help of Gravity Model. For this objective, primarily a Gravity Model has been set up using panel data, which consists of bilateral data for 68 countries for the period 1980-2009, and then Turkey’s exports potential to 67 countries, accounting for more than 90 percent of Turkey’s total exports, has been calculated. In accordance with the consequences, Turkey’s export level is under the potential and he proposed some ways to enhance it just like trade more to neighbor countries instead of just focusing on the major European countries. Another finding from this study is that trade between two countries increases related to their GDPs and decreases proportional to the distance between them. While the existence of features such as common language, contiguity, being parts of the same state in the past and using the same currency increases the trade between two countries, the effect of some variables on trade such as the real exchange rate depends on countries’ level of development. The study also demonstrated that low income countries are tend to trade more to neighbour countries than high income countries with the aim avoid high transportation costs.

Textile oriented studies are also conducted in the literature. Özer (2014), studied Turkish textile exportation between 2007 - 2012 with regard to 142 countries’ data. In the results of the analysis, an exportation stimulant effect has been demonstrated between population growth and an increase in demand. An increase that occurs in Turkey’s real exchange rate is estimated to be a development that benefits its textile exportation. In addition, decreasing tariffs that affect world trade negatively towards textile products customs tariffs and quotas reduce Turkey’s competitive power, in contrast to expectations. In addition, it had been found that the dummy variable, the beliefs, affects the textile exportation of Turkey positively. In the results of the analysis, it has been found that increasing market research towards Muslim countries increases Turkey’s textile export.

Ülengin et al. (2015) analyzed the effect of road transport quotas on Turkish foreign trade with EU countries (Turkey as a member of Customs Union but not member of EU), and as a case study textile sector has choosen. 18 EU countries are

selected as sample for the years between 2002-2015. According to the results, quotas significantly alleviates not only Turkish export by road transport and but also mutual trade to between parties. The study demonstrated that quota limitations are not consistent with CU regulations, as it limits trade volume along with road transportation.

FIFTH SECTION

EMPIRICAL STUDY

5.1 INFRASTRUCTURE OF GRAVITY THEORY

The infrastructure of Gravity Models in economic theory is based on classical and new trade theories. In fact, the basis of the Gravity Model is based on Newton's "Law of Gravity". The gravitational force between two bodies is proportional to the masses of the bodies, inversely proportional to the square of the distance between them.

As already mentioned, the introduction of the Gravity Model to explain the foreign trade between countries is based on pioneering work by Tinbergen (1962) and Pöyhönen (1963). Researchers who analyze international trade with the contributions of Tinbergen and Pöyhönen benefited from Gravity Models they developed by making some additions. Linnemann (1966) included the population in the Gravity Model as a measure of country size. Models with populations are also referred to as Extended Gravity Model.

6.2 MODEL AND METHOD

The model to explain Turkey's textile exports to the countries in the world 2007 - 2017 covers the 11-year data set. The model has 193 countries and the total number of observations is 2046. Dependent variable in the Gravity Model is Turkey's textile exports. Independent variables are other countries' national income, the population of importing countries, distance of importing countries' capital city to Ankara, the capital. In addition, dummy variable is Custom Union Agreement of

Turkey with respect to importing countries. Heckman's two-stage estimation method was used to eliminate sample selection bias in econometric application. In the Heckman Sample Selection Method, we conduct 2 equations. In the first step it values depend on whether a country involved a trade with Turkey in a given period. If country has a trade with Turkey it takes the value of “1”, if it does not it is “0”. In the second step, the factors determining the probability of trade volume are put forward and thus the forecasting process is formed.

In the equation shown below; “EXP_{xmt}” represents export volume from country “x” to country “m” in year t, “DIST_{xmt}” represents the distance from exporting country’s capital city to importing country’s capital city, “GDP_{mt}” represents importing countries’ Gross Domestic Product, “EXCHR_{xmt}” represents USD/TL nominal exchange rate, “POP_{mt}” represents importing countries’ population and “CUSTOM_{xmt}” represents presence of Custom Union Agreement between country “x” which is exporting country and country “m”, which is importing country. Therefore the forms of selection equation and outcome equation can be expressed as follows respectively:

$$I. \quad V^* (EXP_{xmt}) = \beta_0 + \beta_1 \ln (DIST_{xmt}) + \beta_2 \ln (GDP_{mt}) + \beta_3 \ln (EXCHR_{xmt}) + \beta_4 \ln (POP_{mt}) + \beta_5 CUSTOM_{xmt} + H_{xmt} + \varepsilon_{xmt}$$

Note: V (value of trade flows) is a binary variable that equals 1 if export of textile from home country to importer is non-zero at time t, is zero otherwise.

$$II. \quad \ln (EXP_{xmt}) = \beta_0 + \beta_1 \ln (DIST_{xmt}) + \beta_2 \ln (GDP_{mt}) + \beta_3 \ln (EXCHR_{xmt}) + \beta_4 \ln (POP_{mt}) + \beta_5 CUSTOM_{xmt} + \varepsilon_{xmt}$$

In the equation created for the model, GDP and distance variables are the basis of the model. In this study, it is analyzed whether these two variables and other variables are significant for the model.

Panel data analysis method was used in the study. Panel data method is defined as bringing together the cross-section observations such as countries, firms and households over a period of time.

The panel data model is estimated by using one of the Pooled Ordinary Least Square or Fixed Effect approaches. In the case where the unit and time effects are homogeneous, the Pooled OLS Method gives effective and consistent estimators, if the error term does not include both effects. The Fixed Effect approach is used when

the slope parameters are the same for all cross-sectional units, where the constant parameter differs between the units.

The performance test of the coefficients of the variable is based on the F statistic test. The null hypothesis (Ho) and the alternative hypothesis (H1) are as follows.

Ho: $\alpha_1 = \alpha_2 = \dots = \alpha_n$ or Ho = Pooled OLS model is valid.

H1: $\alpha_1 \neq \alpha_2 \neq \dots \neq \alpha_n$ or H1 = Fixed Effect model is valid.

The null hypothesis indicates that the effective prediction model is OLS. If the F-statistic is above the table value, it is concluded that the coefficients of the variables are different and the null hypothesis is rejected. The Fixed Effect model is used instead of the OLS model. The main objective of the model is to estimate these different constant coefficients specific to the groups. The main assumption in the OLS model is that the fixed intersection coefficients specific to the groups do not change, in the Fixed Model coefficient changes.

In the study, F test was performed and P-value of F value (3.918) found 0.003, therefore Pooled OLS Method rejected and Fixed Effect Method has employed.

Unit root tests were performed to determine stationarity and the results of unit roots test proved that all variables are stationary. Here is the detailed table:

Table 47: Panel Unit Root Test Results

Variables	<i>lnGDP</i>	<i>lnPOP</i>	<i>lnEXCH</i>	<i>lnEXP</i>
Levin-Lin-Chu statistic	-22.104	-14.650	-11.342	-15.003
P-value	0.0000	0.0000	0.0000	0.0000
ADF Fisher chi-square	322.02	349.30	232.33	268.72
P-value	0.0002	0.0000	0.003	0.0000

Resource: Own estimation of author

6.3 VARIABLES OF STUDY AND EXPECTED EFFECTS

Population: The term refers to importing countries' population in the study. The population variable, which generally refers to the size of the countries, may have a trade increasing effect. Therefore, the coefficient of the population variable is expected to be positive. Data of population were obtained from the website www.worldbank.org.

Export: Represents Turkey's textile and apparel export (SITC 26 + SITC 65 + SITC84) to other countries. The export variable data, which is a dependent variable, can be accessed via the internet address www.tuik.gov.tr. In the model, export has used in terms of current US dollar.

GDP: It defines the national incomes of these countries. GDP refers to importer countries' total import capacity for each. It may be foreseen that as the importing countries' GDP rises, welfare increases with the increasing GDP per capita since the ability to purchasing power of the country increases. Therefore, the coefficient of GDP is expected to be positive. The national income variable data were obtained from the website www.worldbank.org.

Distance: The term expresses the distances of the capitals of the partner countries to Ankara. The distance variable is a measure of transport costs. Therefore, the effect of the coefficient of distance on the trade flow is expected to be negative. The distance is given in kilometers. The distance variable is available at www.distancecalculator.net.

Exchange Rate: Term refers to the value of the US Dollar against Turkish Lira. Increase in the value of the US dollar against TL (the fall of the value of TL) is expected to have a positive effect on Turkey's export flows. Data are obtained from www.tcmb.gov.tr

Custom Union: Custom Union variable is a dummy variable. If a country is a member it takes "1" value, otherwise it is "0".

Historical Trade Frequency: It is calculated the historical frequency of non-zero trade by taking proportion of years that trade has taken place in the five – year moving window.

ε : Represents error term.

5.4 RESULTS AND INTERPRETATION OF MODEL

In this part of the study, the results of tests have been shown and interpreted.

Table 48: Empirical Outcome of Study

Two-Step Heckit, using 2046 observations

Dependent variable: lnExp

Selection Variable: DExp

Outcome Equation					
Variable	Coefficient	St. Error	Z	P-value	Significance
Constant	14.5907	0.891984	16.36	3.84	***
LnDIST	-2.02422	0.0844791	-23.96	7.06	***
LnGDP	0.175883	0.0167165	10.52	6.87	***
LnPOP	0.796517	0.0382718	20.81	3.36	***
LnEXCHR	0.827641	0.184324	4.490	7.12	***
CUSTOM	1.84244	0.186124	9.899	4.20	***
Lambda	-2.65364	0.305168	-8.696	3.45	***
Selection Equation					
Variable	Coefficient	St. Error	Z	P-Value	Significance
Constant	-3.21656	1.81700	-1.770	0.0767	*
LnDIST	-0.0701294	0.185807	-0.3774	0.7059	
LnGDP	0.0189322	0.0263767	0.7178	0.4729	
LnPOP	0.117020	0.0561863	2.083	0.0373	**
LnEXCHR	0.480262	0.289490	1.659	0.0971	*
CUSTOM	-0.0228519	0.397748	-0.05745	0.9542	
H(Exclusion Variable)	4.22739	0.337817	12.51	6.27	***

Resource: Own estimation of author

(*):Statistics or coefficients are significant at $\alpha = 0.10$ significance level.

(**):Statistics or coefficients are significant at $\alpha = 0.05$ significance level.

(***):Statistics or coefficients are significant at $\alpha = 0.01$ significance level.

The coefficient of the “DISTmt” variable, which expresses the distances of Ankara to the capitals of the partner countries, was found to be significant at the $\alpha = 0.01$ significance level and the coefficient received a negative value as expected. The distance variable expressing the transportation costs in the bilateral trade is directly proportional to the distance between the trade partners. As seen in the estimation results distance negatively affect textile and apparel exports of Turkey to importing countries.

Study reached the conclusion that 1% increase in the distance, decreases Turkey's textile and apparel trade to importing countries by 2.02%.

The coefficient of the “GDPmt” variable, which expresses the national incomes of the partner countries, has a positive value at the significance level of $\alpha = 0.01$ and it was found to be significant. In case of increase in the wealth of partner

countries, the ability and possibility to demand imported goods will increase, so trade opportunity of Turkey will increase.

In the study, it is depicted that a 1% increase in the income of partner countries, Turkey's textile and apparel trade will increase by 0.18%.

The coefficient of the "POPmt" variable, which represents the population of the importer countries, was positive and found to be $\alpha = 0.01$. The population variable represents the country size in the Gravity Model. It is possible to say that the demand for exports will be high if the high population countries cannot meet their needs with local resources. Therefore, this situation affects the bilateral trade positively. Therefore, in the globalized world, as the population of importing countries increases, demand for the Turkish textile and apparel products will increase and this leads to an increase in the export of Turkey.

In the study, it is depicted that a 1% increase in the income of partner countries, Turkey's textile and apparel trade will increase by 0.79 %.

The "EXCHRxmt" variable, which indicates the USD / TL exchange rate in the model, was found to be positive as expected and it was found to be significant at $\alpha = 0.01$ significance level. The depreciation of the Turkish Lira against the currencies of the other countries made Turkish goods relatively cheap and increased the demand for these goods in the international market.

In the study, it is depicted that a 1% increase in the income of partner countries, Turkey's textile and apparel trade will increase by 0.82 %.

Another factor used in the Gravity Model, which is a dummy variable, the Customs Union coefficient was positive and significant. In bilateral trade, regional trade agreements have a positive effect. Therefore, the Customs Union variable was found to be significant in this study. As a result of empirical analysis, it is found that, Customs Union has a positive effect on Turkish textile and apparel export.

Historical trade frequency, which is our exclusion variable, is statistically significant and has a positive relationship with respect to the dependent variable in the study.

Common language, GDP and population of Turkey variable are excluded from the study, because they were found insignificant to the model.

Table 49: Heckman 2 – Step Coefficient Estimates

Variables	Selection Equation	Outcome Equation
lnDIST	-3.21656	-2.02422
lnGDP	-0.0701294	0.175883
lnPOP	0.0189322	0.796517
lnEXCHR	0.117020	0.827641
CUSTOMS	0.480262	1.84244
H (Exclusion Variable)	-0.0228519	-
Lambda	4.22739	-2.65364
Importer Fixed Effects	Yes	Yes
Time Fixed Effects	No	No
Number of Observations	2046	
Adjusted R2	0.42	

Resource: Own estimation of author

At the end of empirical study of Turkey's textile export via Gravity Model, another value describing the effect of independent variables on the dependent variable is R^2 . As a result of estimation R^2 value has found as 42 percent. Finally, the F-value (3.918), which indicates the significance of the whole model, was high. All these results coincide with the Gravity Model theory and related literature.

CONCLUSION

In the study, the theoretical foundations of Gravity Model is described and the place of Gravity Model in Turkey's international textile trade has been put forward. In this context, Turkey's textile export is analyzed by using the Gravity Model. The main objective of the study is to test how Turkey's textile exports is affected by the distance between importing countries.

The aim is to contribute the economics literature by observing role of dependent variables impacts on Turkey's textile exportation. In the literature, there are only limited number of study about Turkish textile trade. These studies does not includes current values and great number of countries in data set. Turkey has so far been studied for more countries to be compared to other studies using Gravity Model is the importance of the study. Empirical analysis was applied to 193 countries' and Turkey's data.

In this respect, many countries of world and leading economies' macroeconomic data and trade data between 2007 to 2017 have been shown in the first part of the study. On average, world is experiencing positive growth for many years and after 2008 crisis GDP per capita is always above 10.000 USD. This positive situation also seen in the trade of the world. Additionally, recent situation of Turkish economy has been shown with the help of macroeconomic data such as inflation, trade. Also the most important trade partners of country has been shown. Turkish textile sector has deeply studied in second part of study by showing the SWOT analysis of textile sector, contributions of sector to aggregate economy such as contribution to country's employment, GDP, export income of country, employment situation, production process and production level of textile sector, import level of the sector. Also textile trade has been examined by sub-groups. Production processes, importance of inputs such as cotton, the most and other important contributions of the sector to country's economy also has included. Turkey is among top 10 countries in case of textile and apparel export for the last ten years. On the side of import, EU, USA and China are the most important trade partners of the world. These parts are enriched by adding graphs and tables that proves and demonstrates the situation of Turkey's and world's textile trade. Besides these, the most important textile exporting countries' data has been taken place in the study so

as to compare the values with Turkey's exportation. China is the leader of the world both in textile and apparel in recent years. They sustain great performance for many years thanks to huge population and cheaper prices in international market. They held more than 1/3 of world textile export in last several years. European Union is the second most important group of textile and apparel export. They have averagely 20 percent of world textile and apparel export in last few years. Third part of the study includes determinants of trade by showing the dependent and independent variables that used in the literature of Gravity Model with the explanations and expected effects. On one hand there are variables which are estimating to affect positively the dependent variable such as GDP, FDI, population, currency unions, common language, common border. On the other hand there are dependent variable which are supposed to affect the dependent variable negatively. These variables make it difficult to trade among countries such as long distances, political conflicts, barriers to trade like high tariffs or quotas. Countries apply these barriers in order to protect domestic producer or due to some political disagreements between countries. After that part, in the following section of the study includes the literature review which enriches the study and supports the idea of Gravity Model. In the beginning of the literature review, first, the theoretical foundations of the Gravity Model were mentioned. To measure the effect of distances between countries on foreign trade in 1962, by Jan Tinbergen, the Gravity Model was introduced. According to the Gravity Model, international trade flows are directly proportional to the economic size of the countries and are inversely proportional to the distance between countries. The Gravity Model is a recently popular technique in the economic literature. Theory created by inspiring the Newton's law of universal gravitation which states that every particle attracts every other particle in the universe with a force which is directly proportional to the product of their masses and inversely proportional to the square of the distance between their centers. Over time, the Gravity Model has been improved and new variables have been added.

Furthermore, in the last part, the idea of Gravity Model was supported by empirical analysis. Reasons of foreign trade and factors affecting textile export are explained. Factors influencing foreign trade included factors such as GDP of importing countries, population of importing countries, exchange rate, regional trade

agreements, common border and distance. The effects of these factors on foreign trade have been tried to be put forward. Among these independent variables, GDP of importing country, exchange rate, regional trade arrangements and population of importing country has an augmener effect on Turkish textile export. All these variable found significant 0.01 significance level. Distance variable has negative effect on textile export also it found highly significant, because distance is explained by transportation costs. In order to avoid the high transportation costs, countries may prefer to make less trade as much as they can.

As a result, despite Turkey has a strong position in textile export of the world, country should improve technological production processes in order to keep strong position and sustainability. If country achieves the technological development, it can utilize the natural resources more efficiently, have more efficient production stages, therefore the costs of production decreases and it makes the country more competitive in international market. Moreover country should look for ways to improve the trade relations with EU which is the most important trade partner of Turkey. Nowadays, due to depreciating national currency, country may experience high level of export, but in adverse situation, the results might be though to face and compelling.

REFERENCES

- Aahana, S. (2011). *The Heckscher-Ohlin Theory (With Criticisms.)*
<http://www.economicdiscussion.net/the-heckscher-ohlin-theory/the-heckscher-ohlin-theory-with-criticisms-international-economics/30795>, (16.02.2019).
- Abbas, S. and Waheed, A. (2015). Pakistan's Potential Export Flow: The Gravity Model Approach. *The Journal of Developing Areas*, 49(4): 367-378.
- Akyürek, B. and Terzioğlu, M. (2017). Tekstil ve Hazır Giyim Sektöründe İthal Girdi Bağımlılığı: Denizli Örneği. 5. *Anadolu International Conference in Economics*.
- Amiti, M. and Wakelin, K. (2003). Investment Liberalization and International Trade. *Journal of International Economics*, 61(1): 101-126.
- Amponsah, W. A. and Ofori-Boadu, V. (2006). Determinants of US Textile and Apparel Import Trade. *American Agricultural Economics Association Annual Meeting*.
- Apaydın, F. (2018). Türkiye’de İşsizliğin Karakteristiklerinin Karşılaştırmalı Analizi. *Süleyman Demirel University Journal of Social Sciences Institute*. 1(30): 159-200.
- Ata, S. (2012). Türkiye’nin İhracat Potansiyeli: Çekim Modeli Çerçevesinde Bir İnceleme. *International Conference on Eurasian Economies*.1(1): 276-282.
- Aydın, M., Mert, S., Kaynak, S., Hatipoğlu Ö. (06 March 2018). *TOBB Economic Report* 2017
<https://www.tobb.org.tr/Documents/yayinlar/2018/EkonomikRapor2017.pdf>,
(01.02.2019).
- Balasubramanyam, V. N., Salisu, M., and Sapsford, D. (1996). Foreign Direct Investment And Growth in EP And IS Countries. *The Economic Journal*, 106(434): 92-105.

Ball, R.J., (1967), “Review Of An Econometric Study Of International Trade Flows” *The Economic Journal*. 77(306): 366-368.

Bekiroğlu, C. (2010). *Türkiye’de İşsizlik Sorununun Çözümlemesinde Uygulanan Ekonomi Politikalarının Analizi*. İstanbul: Graduate Faculty of Social Sciences Kadir Has University.

Belloumi, M. (2014). The Relationship Between Trade, FDI And Economic Growth In Tunisia: An Application of The Autoregressive Distributed Lag Model. *Economic Systems*. 38(2): 269-287.

Brander, J. A. and Spencer, B. J. (1985). Export Subsidies And International Market Share Rivalry. *Journal of International Economics*. 18(1-2), 83-100.

Chi, T. (2010). An Empirical Study Of Trade Competitiveness In The US Technical Textile Industry. *Journal of Textile and Apparel, Technology and Management*. 6(4):1-14.

Deardorff, A. (1998). Determinants Of Bilateral Trade: Does Gravity Work In A Neoclassical World?. *University of Chicago Press*. 25995(1): 7-32.

Deviren, N. (01 September 2004). *Yeni Dış Ticaret Teorileri*. http://www.basarmevzuat.com/dergi/2004-09/a/05.htm#_ftn8, (14.02.2019).

Do, T. T. (2006). *A Gravity Model For Trade Between Vietnam and Twenty-Three European Countries. (Unpublished Doctoral Dissertation)*, Vietnam: Graduate Department of Economics and Society National Economics University.

Frankel, J. and Rose, A. (1998). The Endogeneity Of The Optimum Currency Area Criteria. *The Economic Journal*, 108(449): 1009-1025.

Frankel, J. and Rose, A. (2002). An Estimate Of The Effect Of Common Currencies On Trade and Income. *The Quarterly Journal of Economics*. 117(2): 437-466.

Göver, Z. Tuğrul. (2005). Doğrudan Yabancı Yatırımların Uluslararası Ticarete Etkileri: Türkiye Değerlendirmesi. *Undersecretariat of Treasury Research Review Series*. 40(1): 54-67.

Head, K. (2003). Gravity For Beginners. *University of British Columbia*.

Helmets, C., and Pasteels, J. M. (2005). Tradesim (Third Version), A Gravity Model For The Calculation of Trade Potentials For Developing Countries And Economies In Transition. *International Trade Center Working Paper*.

Hermawan, M. (2011). The Determinant and Trade Potential of Export of the Indonesia's Textile Products: A Gravity Model. *Global Economy and Finance Journal*. 4(2): 13-32.

İstanbul Chamber of Industry. (06 June 2014), *Avrupa Birliği'ne Tam Üyelik Sürecinde İstanbul Sanayi Odası Meslek Komiteleri Sektör Stratejileri Geliştirilmesi Projesi*, http://www.iso.org.tr/file/Tekstil_Raporu-385.pdf, (12.12.2018).

İTKİB. (09 January 2018), *Toplam Tekstil ve Hammaddeleri Sektörü 2017 Yılı Aralık Ayı İhracatı Performans Raporu*, <https://www.itkib.org.tr/Home/.../tekstil-İhracat-değerlendirme-notu-aralık-2017>, (10.12.2018).

İTKİB. (16 January 2018), *Hazırlanmış ve Konfeksiyon Sektörü İhracat Performans Değerlendirmesi*, <https://www.ihkib.org.tr/fp-icerik/ia/d/2018/01/16/konfeksiyon-performans-raporu-aralik-2017-201801161703310583-A20E1.pdf>, (11.12.2018).

Johnston, L. A. and Morgan, S. L., and Wang, Y. (2015). The Gravity of China's African Export Promise. *The World Economy*, 38(6): 913-934.

Kanca, O.C.(2012). Türkiye'de İşsizlik ve İktisadi Büyüme Arasındaki Nedenselliğin Ampirik Bir Analizi. *Çukurova University Journal of Social Sciences Institute*. 21(2):1-18.

Karagöz, K. and Karagöz, M. (2009). Türkiye'nin Küresel Ticaret Potansiyeli: Çekim Modeli Yaklaşımı. *Journal of Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler*. 10(2): 127-144.

Kılıçkaya, H. (09 May 2011). *Komşu ve Çevre Ülkeler ile Ticareti Geliştirme Stratejisi*. <http://www.mfa.gov.tr/komsu-ve-cevre-ulkeler-ile-ticareti-gelistirme-stratejisi.tr.mfa>, (27.01.2019).

Kostakoğlu, S. F., and Dibo, M. (2011). Türkiye'de Cari Açık ve Ekonomik Büyüme İlişkisinin VAR Yöntemi ile Analizi. *Anadolu International Conference in Economics* 2(1): 15-17.

Koyuncu, M. and Fikret, Ş. (2004). Kısa Dönem Krizlerin Sosyo-Ekonomik Etkileri: Türkiye. Endonezya ve Arjantin Deneyimleri. *Erc Working Papers In Economics*. 4(3): 82-97.

Kundak, S., Aydoğuş, İ., (2018). Türkiye'de İmalat Sanayinin İthalata Bağımlılığının Analizi, *Gaziantep University Journal of Social Sciences*. 17(1): 252-266.

Larue, B., and Mutunga, J. (1993). The Gravity Equation, Market Size and Black Market Exchange Rates. *International Economic Journal*. 7(2): 61-75.

Lau, C. K. and Bilgin, M. H. (2010). Export Conditions of The Chinese Textile Industry: An Analysis in Comparison With Selected ASEAN Countries. *Textile Research Journal*: 80(19): 2028-2045.

Lau, Y. Y. and Chan, M. H. and Nguyen, H. O. (2017). Assessing the Displacement Effect of Exports With Gravity Trade Model: China's Textile And Clothing Case and OBOR Implications. *Journal of International Logistics and Trade*. 15(1): 19-32.

Lindqvist, R. (2006). *Intra-Industry Trade-An Analysis Of Measurements*. Lund: Graduate Faculty of School of Economics and Management Lund University.

Linnemann, H. (1966). *An Econometric Study of International Trade Flows*: Amsterdam: North-Holland Publish Company.

Liping, W. (2010). Empirical Study on The Effect of Trade Protection on Chinese Textiles Exporting Based on Trade Gravity Model. *Journal of Computers*. 5(8): 1227-1234.

Lu, S. (04 September 2018). *Changing Trends in World Textile and Apparel Trade*. https://www.just-style.com/analysis/changing-trends-in-world-textile-and-apparel-trade_id134353.aspx, (07.01.2019).

Lu, S. (16 August 2018). *Global Apparel & Textile Trade and Sourcing*. <https://shenglufashion.com/2018/08/16/wto-reports-world-textile-and-apparel-trade-in-2017/>, (18.01.2019).

Maskus, E.K., J.S. Wilson and O. Tsunehiro, 2000. Quantifying the Impact of Technical Barriers to Trade: A Framework for Analysis. *World Bank Policy Research Papers no.2512*.

Ministry of Commerce, (2018). *2018 Yılı Performans Programı*. https://ticaret.gov.tr/data/5b921eb013b87613646656b8/Performans_Programi.pdf, (27.01.2019).

Ministry of Customs and Trade (08 January 2018), *2017 Yılı Pamuk Raporu*, <http://koop.gtb.gov.tr/data/5ad06c80ddee7dd8b423eb24/2017%20Pamuk%20Raporu.pdf>, (29.01.2019).

Ministry of Economics. (2004). *What is Turquality?*. https://turquality.com/about-us/what-is-turquality-2?__r=8d5a5eabf4578f9, (05.02.2019).

Nobrega, W. and Sinha, A. (2008). *Riding the Indian Tiger: Understanding India--The World's Fastest Growing Market*.

Özer, O. O. (2014). Türkiye'nin Tekstil Ürünleri İhracatının Belirliyecileri: Çekim Modeli Yaklaşımı. *Journal of Tekstil ve Konfeksiyon*. 24(3): 252-258.

Ray, E. J. (1981). Tariff And Nontariff Barriers To Trade in The United States and Abroad. *The Review of Economics and Statistics*. 63(2): 161-168.

Sarıhan, A. Y., İncaz, S., and Yaprak, B. (2017). Devlet Teşviklerinin Firmaların İhracat Performansına Etkisi: İstanbul İhracatçıları Örneği. *Ataturk University Journal Of Economics & Administrative Sciences*. 31(3): 755-773.

Sohn, C. H. (2001). A Gravity Model Analysis of Korea's Trade Patterns And The Effects Of A Regional Trading Arrangement. *Korea Institute for International Economic Policy Working Paper Series*, 2001-09(1):1-30.

Srivastava, R.K. and Green, R.T. (1986): Determinants of Bilateral Trade Flows. *Journal of Business*. 59(4): 623-640.

Tinbergen, J. (1962). Shaping the World Economy: Suggestions for an International Economic Policy. *New York: The Twentieth Century Fund*. 146-161.

Türkiye İhracatçı Birlikleri. (2010). Serbest Ticaret Anlaşmaları Kılavuzu. http://www.iib.org.tr/files/downloads/mevzuat/sta_kilavuz.pdf, (11.01.2019).

Utkulu, U. (2005). Türkiye'nin Dış Ticareti ve Değişen Mukayeseli Üstünlükler. *Dokuz Eylül University Publications*. 9(1): 46-55.

Rankin, B. H., & Aytaç, I. A. (2006). Gender Inequality in Schooling: The case of Turkey. *Sociology of Education*. 79(1): 25-43.

Şişman, M., and Bağcı, E. (2014). Türkiye Tekstil ve Hazır Giyim Sektöründe İthalat Bağımlılığı. *Marmara University Journal of I.I.B.* 36(1): 29-53.

Tatlıcı, Ö., and Kızıltan, A. (2011). Çekim Modeli: Türkiye'nin İhracatı Üzerine Bir Uygulama. *Journal of Atatürk Üniversitesi İktisadi ve İdari Bilimler*. 10(1): 287-299.

Ülengin, F., Çekyay, B., Palut, P. T., Ülengin, B., Kabak, Ö., Özaydın, Ö., & Ekici, Ş. Ö. (2015). Effects of Quotas on Turkish Foreign Trade: A Gravity Model. *Journal of Transport Policy*. 38(1): 1-7.

Vanagas, M. (2013). Border Effects Among EU Countries: Do National Identity and Cultural Differences Matter?' *International Journal of Undergraduate Research: Warwick: Faculty of Economics University of Warwick*.

Vergil, H. (2001). Exchange Rate Volatility in Turkey and Its Effect On Trade Flows. *Journal of Economic and Social Research*. 4(1): 83-99.

Yücel, F. (2006). Dış Ticaretin Belirleyicileri Üzerine Teorik Bir Yaklaşım. *Journal of Sosyoekonomi*. 2(060203): 49-67.

