THE MINISTRY OF EDUCATION OF THE REPUBLIC OF AZERBAIJAN

AZERBAIJAN STATE UNIVERSITY of ECONOMICS

INTERNATIONAL GRADUATE AND DOCTORATE CENTER

MASTER DISSERTATION

ON THE TOPIC

"Analysis of the economic growth, unemployment and foreign direct investment in Turkey"

Murad Muradli Zakir

BAKU – 2019

THE MINISTRY OF EDUCATION OF THE REPUBLIC OF AZERBAIJAN
AZERBAIJAN STATE UNIVERSITY of ECONOMICS
INTERNATIONAL GRADUATE AND DOCTORATE CENTER

Head of the Center

Assoc. Prof. Dr. Ahmadov Fariz Saleh

"_____" _____ 2019

MASTER DISSERTATION

ON THE TOPIC

"Analysis of the economic growth, unemployment and foreign direct investment in Turkey"

Code and name of Programme: 060403-"Finance"

Specialisation: "Financial Management"

Group: 650

Master
Murad Muradli Zakir

Scientific Supervisor
Assoc. Prof. Rzayev A.Y

Program manager
Assoc. Prof. Seyfullayev I.Z

Head of the Department
Prof. Kelbiyev Y.A

BAKU – 2019

List of Abbreviations

FDI	Foreign Direct Investment
GDP	Gross Domestic Product
ARDL	Autoregressive Distributed Lagged
CUSUM	Cumulative Sum
US	United States
ADF	Augmented Dickey-Fuller
VEC	Vector Error Correction
MENA	Middle East and North Africa
UNCTAD	United Nations Conference on Trade and Development
TUIK	Turkish Statistical Institute
IMF	International Monetary Fund
ILO	International Labor Organization
SSA	Sub-Saharan Africa

Abstract

Tədqiqatın aktualığı: İşsizlik dünyada bir çox dövlət üçün əsas problemlərdən biridir, xüsusilə Türkiyə üçün. Xarici investiyalar iqtisadiyyatın böyüməsi, işsizliyin azaldılması üçün əsas vasitələrdən biri ola bilər.

Tədqiqatın məqsəd və vəzifələri: Xarici investisiyalar, ümumi daxili məhsulun böyümə sürəti və işsizlik dərəcəsi arasında əlaqə olduğuna dair əhəmiyyətli sübut tapmaq.

İstifadə olunmuş tədqiqat metodları: Augmented Dickey–Fuller test, Cumulative Sum test, Autoregressive Distributed Lag Bound Test, Granger Causality test

Tədqiqatın informasiya bazası: Məlumatlar Türkiyə Mərkəzi Bankının internet saytından və Dünya Bankı məlumatlarından təmin edilmişdir.

Araşdırma dövrü 2006-cı ilin birinci rübündən 2018-ci ilin üçüncü rübünə qədər olan məlumatları əhatə edir.

Tədqiqatın məhdudiyyətləri: 15 İyul 2016-cı ildə edilən dövlət çevrilişinə cəhd, terror hücumları, Amerika Birləşmiş Ştatları sanksiyaları və tarifləri və Suriya vətəndaş müharibəsi, qaçqın böhranı nümunə göstərilə bilər.

Tədqiqatın nəticələri: Xarici birbaşa investisiyaların artması iqtisadi artımı sürətləndirməsinə baxmayaraq, işsizliyə təsir etməmişdir. Ümumi daxili məhsulun artmasında çox vacib rol oynayan xarici investisiyaların artımı sonrakı illərdə dövlətin yüksək sürətlə inkişafında mühüm amil olacağını söyləmək doğru olardı. Ancaq xarici investisiyalar Türkiyədə yüksək işsizlik faizinin əsas səbəbi deyil. Sürətlə əhalinin artması, qadınların məşğulluğunun az olması və sənaye ehtiyaclarına cavab verə bilməməsi Türkiyədə yüksək işsizliyin əsas səbəblərindəndir və hökumət bu faktorlara əhəmiyyət verməlidir.

Nəticələrin elmi-praktiki əhəmiyyəti: Tezisin nəticəsi müxtəlif beynəlxalq təşkilatlar və xarici məsləhətçilər üçün mənbə ola bilər. Türkiyə iqtisadiyyatında işsizliyə xarici investisiyaların təsirinin olmaması əsas əhəmiyyətli nəticələrdən biri kimi göstərilə bilər.

Açar sözlər: Xarici investisiya, ümumi daxili məhsul, işsizlik

INTRODUCTION

Economic growth is an increase in the country's production volume. It is one of the main indicators for estimating economic performance. Increase of foreign direct investment has a positive effects to economy. Specially in the field of technology, production methods, distribution and marketing. In some countries FDI has effect for decreasing unemployment rate. 2008-2010 crisis is effected negatively to countries' economies. As a result, GDP growth rate and FDI decreased, unemployment increased. In this paper, I am investigating the relationship between GDP Growth rate, FDI and unemployment. Turkey data is used for analysing methods. This research is covering the period between 2016 Q1 and 2018 Q3. Grahovac and Softic (2017), Velnampy (2013), Carp and Popa (2013) analysed the effect of GDP growth rate in unemployment in different countries. Dogan (2013), Gulmez (2015), Cestepe (2013) and other researchers investigated the relationship between foreign direct investment for economic growth using time series analysis, Granger causality test and other models for Turkey.

Research object – GDP Growth rate, FDI and unemployment rate in Turkey

Research goal – finding significant evidence of the relationship between FDI, GDP Growth rate and Unemployment rate

There are 2 hypotheses in this paper:

H1 – an increase in GDP growth rate has a negative effect on unemployment rate.

H2 – an increase in FDI has a negative effect on unemployment rate.

H3 – there is relationship between FDI and GDP growth rate.

Economic model is formed in order to test statistical significance of relationship between FDI, GDP growth rate and unemployment rate. ADF test, ARDL model, CUSUM test and Granger Causality test are set up using Eviews.

This thesis includes introduction, theoretical background, empirical research, research methodology, results and conclusions. To accomplish the goals of this paper in the first part theoretical aspects and literature review of previous researchers are performed. The second part is empirical research. In this part of thesis, fluctuations of GDP growth rate, FDI and unemployment rate in the world and in Turkey were analyzed. In the next part which data is used, hypotheses, methods for estimation relationships, results of economic model are explained. The last part of the paper is the conclusion. The main material is represented in 71 pages, including 19 figures, 13 tables. The bibliography list consists of bibliography. Also 7 annexes are given.

1. THEORETICAL BACKGROUND

In this section of the paper the theoretical aspects of GDP growth, Foreign Direct Investment Trends and Unemployment in different countries are analyzed. Graphs and tables related with effects of FDI and GDP growth to unemployment are provided. Literature review was given.

1.1 GDP GROWTH

Economic growth is the expansion of the production capacity of goods and services. According to another definition, economic growth is defined as an increase in the production level in a society in a long period of time such as twenty-five years (Unsal, 2007). Therefore, economic growth is determined by the producers in macroeconomic terms. Economic Growth: It is called as the long-term increase in real GDP. The increase in real national income means increases in production quantity. Economic growth is crucial for every economy. Economic growth can be defined as the increase in gross domestic product. Therefore, the increase in GDP means that people spend more. The increase in expenditures and demand will result in more production of companies and more sales. Increasing production or increasing the prices of goods encourages companies to work harder. Firms will either increase employment or increase wages to produce more. Unemployment will decrease, employment will increase, consumption will increase and inflation will increase without any harm to economic growth. However, since this price increase will trigger production, there will be no negative increase.

There are 4 elements that are not included in the calculations when calculating the GDP:

1. Unregistered goods produced under the counter.
2. Production and consumption of goods prohibited by the state. Drugs and so on.

3. Damaging to the environment when producing goods and services
4. Goods producing at home.

For calculating GDP value added from all stages of production is collected. In addition, the monetary provisions of the finished goods and services are also calculated. In order to ensure that the gross domestic product to be fully accurate the total amount of imports is deducted from the total export amount and the total amount of government expenditures, consumption amounts, investments made during the period summarized. The result is then added to the other found value. Thus, as a result of calculations show within a year, the country's economy is narrowing or progressing towards growth. The formula I described above is; GDP = consumption + investment + government expenditures + (export - import).

GDP growth rate o is directed by four components of GDP. The main driving force of GDP growth is personal consumption. It covers a critical sector of retail sales. The second component, construction and inventory levels. The third factor is the development of public expenditures. Its largest categories, social benefits, defense spending and medical aids. The government is often increasing spending driven by the economy during the economic recession. Trade is the fourth component.

1.2. Foreign Direct Investment Trends

Foreign direct investment according to the definition of Karluk (2013) is a long - term investment which a company establish a new company in another country, buying the existing company, merging with it, increasing the capital of an existing company in that country by establishing a partnership and bringing technology, entrepreneurship, management and organization skills. Foreign direct investments in the world economy have begun in the UK. The beginning of the industrial revolution in this country, raw material and mining trade and the capital outflows is the reasons of FDI in this country. Investments up to the 1950s mainly originated in the USA and the UK and focused on agriculture and mining. After

the Second World War, it was seen that direct investments in capital movements increased, these investments were made by multinational companies and investments were dominant in the industrial sector. In the 1980s, liberal policies, deregulation studies and international trade flows, which became widespread in the world economy have created a large area of influence in terms of investments. Especially in this period, there has been a significant increase in foreign direct investment activities globally (Karluk, 2013). These activities have changed radically foreign direct investments in developing countries' attitudes in the 80s. Although the debt crisis at the beginning prevented coming foreign direct investments to these countries, the foreign exchange shortage and the decline in domestic investments led to a clear change in the attitude of the governments. In order to attract foreign direct investments, the number of free zones has increased which are exempt from all kinds of taxes and preventive social arrangements (Adda, 2002).

The main reasons for the increase in direct foreign investments are the abolition of restrictions on trade and investment movements, as well as the increase in privatization practices and the technological developments carried out by the worldwide organizations and operations in a way easier and cheaper than in the past. In his introduction to the 1998 World Investment Report, the UNCTAD secretary general considers the reasons for which the multinational companies are investing in the following countries: while traditional elements such as the existence of a legislation encouraging foreign capital, rich natural resources, a broad market and the existence of working relationship with the growth potential of the market maintaining their importance, foreign companies are increasingly looking for other elements such as technological advantages and skilled workforce in the regions they are investing in. Many states are trying to offer the most attractive conditions, hoping that foreign direct investments will have positive consequences for employment and balance of payments, while some countries which have high growth dynamics such as Korea and Taiwan did not hesitate to apply strict control for foreign direct investments. In these countries, foreign direct

investments were sent to sectors where no national capital investment was made and could only be realized as a joint venture (Adda, 2002).

Foreign direct investment is preferring countries that follow stable macroeconomic policies, implement comprehensive privatization programs, achieve a certain level of development of financial systems and having legal regulations which encourage foreign capital. Foreign direct investment in developing countries is concentrated in a limited number of countries such as Brazil, Mexico, Thailand and China in recent years. In parallel with the general trend in international financial markets, the importance of portfolio investments increased while the share of bank loans decreased in capital flows to developing countries. Although portfolio investments are beneficial in terms of meeting the financing needs of developing countries, there is also the possibility of creating instability in these countries with their short-term characteristics.

The most important contribution of foreign direct investments to the economies of the countries is in the field of technology. It is possible to achieve significant productivity gains in developing countries in a short time for the company and the national economy by means of foreign direct investment in the field of complementary services such as technology, new physical production and production methods, organization, marketing and distribution. Foreign direct investments effect to the country's economy, such as production, employment, income, price, balance of payments and general welfare. These effects create permanent or temporary effects on the economy of the country. Foreign investments made a positive impact on the country's GDP as it contributes to the production level for the country. The increase in production activities is expected to increase labor demand as well as employment opportunities and production opportunities.

Foreign direct investments have positive or negative effects on the balance of payments of the host country. If direct investment increases it will have a positive effect on the balance of payments, if it increases imports, it will have a negative

effect (Karluk, 2013). Foreign direct investments against these positive effects may have negative effects. According to Seyidoglu, in case of the increase of foreign controlling over the economy, unfair competitive advantage against domestic companies, exceeding foreign trade restrictions, decreasing domestic investments, increase in foreign exchange expenses, negative developments in the country, investments may leave the country (Seyidoglu, 2015).

1.3. Unemployment

Those who have the power to work and want to work but cannot find a job in the current wage and working conditions are called unemployed. The international standard definition of unemployment is based on three criteria:

- No job,

- Ready to start work,

-Job search criteria.

In order for a person to be considered unemployed, all three of these criteria must be met at the same time.

In general, unemployment is classified as follows:

-Voluntary Unemployment: This type of unemployment, which is specific to liberal economies, is the unemployment caused by those who do not want to work under valid wages and conditions.

-Involuntary Unemployment: It is the condition that the workforce can not find a temporary or permanent workplace where they can work under the applicable wage and working conditions.

-Frictional Unemployment: This type of unemployment is partly voluntary and partly involuntary. It is based on temporary causes such as work and relocation and does not affect the whole economy. The lack of well-organized labor market, lack of information in the labor market, lack of mobility of labor force, inability of

production inputs to be timely, new participation in the working population, not finding suitable workplaces for their capabilities, and those who leave their jobs in the hope of finding a job in better conditions can be attributed.

-Seasonal unemployment: Economic activities may show seasonal fluctuations. In the seasons when employment opportunities increase, employment level rises and employment level decreases in decreasing seasons. Seasonal unemployment is the most evident in agriculture. In the construction and tourism sectors, seasonal unemployment is observed. Seasonal unemployment may be due to social reasons such as national and religious holidays, as well as natural causes.

-Cyclical Unemployment: Economic activity fluctuates over time in market economies. The result of this fluctuation is called cyclical unemployment during periods of pause and depression. Cyclical unemployment is the result of the low level of effective demand in terms of economy.

-Technological Unemployment: The use of new techniques, machines, and thus the replacement of manpower. While production increases in the sections where new technology is introduced, the workers in this sector become unemployed and the labor flow from this sector to other sectors starts. Technological unemployment is therefore also called structural unemployment. However, technological development plays an important role in employment reduction in the short term and employment creation in the long term. In the long term, side-work arms emerge and opportunities to re-use the labor force arise.

- Structural Unemployment: This unemployment is a type of unemployment that is driven by structural features of the economy and changes in demand structure. It may arise from in-economy (endogenous) or non-economic (exogenous) reasons. Unemployment caused by labor substitution or shift in demand is due to economic reasons. Occasionally, contraction in the capacity of the economy due to non-economic reasons, such as political and natural factors, or sudden increases in labor supply, may also lead to unemployment.

- Hidden Unemployment: If there is no change in the total production amount by withdrawalof a part of labor from any economic activity area, there is hidden unemployment here. Although the labor element seems to work, it actually works low efficiency. The reason of hidden unemployment in an economy is the inability to create production capacity which is more suitable for the increase in labor element and the lack of organization. Since the population growth rate in developing countries is higher than the rate of increase in capital, hidden unemployment in these countries gains continuity.

1.4. Relationship between FDI, unemployment and GDP in theory

In general, FDI and economic growth shows positive relationship in literature. Theoretically, economic growth can support the introduction of foreign direct investment when searching for foreign direct investment consumer markets or when growth leads to larger economies of scale and hence increases cost efficiency. FDI may influence economic growth with its effect on skill acquisition, market competition, capital stock and technology transfer. There are many experimental studies which examining the effect of foreign direct investment. Most show that foreign direct investment can revive economic growth through various ways.

According to Solow (1956), increasing of capital amount is led to increase of productivity. On the other hand, when capital increases marginal efficiency decreases per worker. In the end, the capital labor rate fixing and productivity growth stops. In this long-term stability capital, GDP and labor have all grown in the same externally defined rate. This time, technological progress coming out. If there is technology growth, the long-term GDP growth per worker is equal to technology growth rate. To the extent that capital is moved to countries where internationally active and profit expectations are high, this trend should be significantly strengthened. As a result, no matter countries are how poor or rich, the spaces in the income levels between them are expected to tight and eventually

lost. Countries where capital is limited or labor force is weak, should be expected to have a high rate of profit, higher capital collection and higher per capita growth on capital as concluded by Solow.

MacDougall (1960) analysed expenses and profits related to foreign direct investment for host economies. He used marginal productivity theory to study revenue impacts and estimated the expense and profit balance to several sectors of the host economy. MacDougall's work was revenue distribution analysis based on the assumption of perfect competition. According to MacDougall, the capitalist sector in the host country exposed to loss of income due to decreasing marginal capital efficiency as the capital stock in the host country is increasing with the higher foreign investment. Due to marginal return labor sector gains higher wages. FDI is seen to have a net positive income effect on the host country, as the benefits in the labor sector exceed the damage to the capitalist sector.

In addition, Kemp (1961) analyzed foreign direct investments and the benefits that the national economy gets such external financing. According to Diamond (1965), the expectations of people in capital-importing countries are bright and vice versa. He gave special importance to the efficiency of foreign investments. Otherwise, countries receiving it may not be able to achieve real benefits. In other words, from the literature in the early 1960s, the impact of foreign investment on economic growth in the short-term was positive, but in the long term the benefits were not sustainable.

Okun's Law - 1% growth of GDP, decreases unemployment by 0.5% in every economy. Okun's Law emphasized the inverse relationship between unemployment and growth, it is easier to see this relationship with the Philips Curve. Especially the crisis periods are the periods with the highest rate of dismissals, that is, the highest unemployment rates. The increase in unemployment means the reduction of expenditures, investment and hence the decrease in production, so the contraction of growth. In other words, while the unemployment in the economy increases, it also decreases growth. Ewald Walterkirshen (1999).

The relationship between economic growth and unemployment was analyzed by using the time series analysis method in European Union countries between 1988-1998. According to the results of the analysis;

• There is a strong and positive relationship between growth and employment. However, there is an inverse relationship between growth and unemployment.

• This study confirms the Okun's Law.

Yilmaz (2005); Between 1978- 2004, were also tested the relationship between unemployment and economic growth in Turkey using Granger causality analysis. According to this;

• There is no a mutual causality between unemployment and growth rates in Turkey's economy.

• The direction of the causality relation is only from the unemployment rate to the growth rate, and there is no causality from the growth rate to the unemployment rate.

• The reason for the high level of unemployment rate is not related to the growth rate and it is revealed that unemployment is due to other factors.

Aykiri (2008); Between the years of 1975-2006 the direction and intensity of the relationship between inflation, growth and unemployment were tested with using Granger causality analysis and ADF unit root test. According to the results of this study;

• There is a one-way and negative relationship between growth and unemployment.

The most important reason for unemployment is other factors than growth.

1.5. Literature review

In the economics literature, there are many studies to explain the relationship between direct foreign capital inflows and macroeconomic indicators (growth,

unemployment, etc.). It is possible to summarize some of these studies in the literature as follows:

Ekinci (2010), with foreign direct investment in Turkey, economic growth, employment and long-term analysis of the relationship between the figures for the 1980-2010 period has been used. Time series analysis was used in the study and as a result, while there was a long-term relationship between foreign direct investment and economic growth, no relation was found between foreign direct investments and employment. In addition, it was observed that the causality relationship between foreign direct investments and economic growth.

Sen and Saray (2010), the effect of economic growth, foreign direct investment in Turkey has been analyzed. Panel data regression analysis was used. The results of the analyzes - foreign direct investment coming to Turkey make a positive contribution to economic growth as a result.

Nwosa (2011) analyzed the relationship between financial development, foreign direct investment and economic growth in Nigeria between 1970 and 2009. ADF unit root test, Johansen co-integration test and error correction model were used in the study. As a result, it was observed that there was a long-term relationship and causality relationship between these variables. Moreover, financial development and foreign direct investment have a statistically significant effect on economic growth.

Yilmaz (2011), impact of foreign direct investments on economic growth for the 1980-2008 period were analyzed for Turkey's economy. In the analysis, two variables are used as gross domestic product and foreign direct investments. Time series analysis method was used in the study. As a result, a one-way causality relationship from foreign direct investments to economic growth was found. In addition, the variables were found to be co-integrated. Estimation results show that foreign direct investments have positive effects on economic growth.

Awan (2012) analyzed the foreign direct investments, exports, imports, domestic investments and economic growth for the selected South Asian countries

(Bangladesh, India, Pakistan and Sri-Lanka) for the period 1973-2010. The relationship between variables was tested by Granger causality analysis. Findings from the study showed that export-oriented growth and foreign investment driven growth hypotheses apply to selected Asian countries. As a result of different lag lengths, imports caused economic growth, but there was no causal relationship between imports and economic growth. In addition, the causality analysis did not support trade growth from economic growth to economic growth or vice versa. There is a two-way causality between commercial openness and foreign direct investment.

Gursoy and Kalyoncu (2012) analyzed the impact of foreign direct investments on economic growth in Georgia between 1977-2010. Engle-Granger cointegration test and Granger causality analysis were used in this study. As a result, it is seen that the two variables are co-integrated, they act together in the long term. Moreover, it was observed that foreign direct investments were the cause of economic growth.

Soylemez and Yilmaz (2012), in the period of financial liberalization in Turkey have investigated the relationship between economic growth and international capital inflows. The study included 82 observations for the variables of capital inflows - GDP and GDP growth rates, in the period 1992:1 - 2012:2. Results indicate that in Turkey foreign capital flows is the Granger reason of the growth. Finally, it is shown with an econometric model that can reveal the dynamic interaction of two series, a significant portion of fluctuations in economic growth in Turkey can be explained by shocks in international capital flows.

Sichei and Kinyondo (2012), the determinants of direct foreign direct investment in 45 African countries for the period 1980-2009 were analyzed by panel data method. As a result, in Africa impact of agglomeration economies, natural resources, real GDP growth and international investment agreements to foreign direct investment inflows were observed.

Akinlo (2013), the determinants of foreign direct investment in 10 African countries in the period of 1995-2011 were analyzed by panel data analysis method. Macroeconomic risk factors such as natural resource equipment, openness, inflation and exchange rates are important determinants of foreign capital inflows in Africa. Domestic investments and natural resources have positive and significant effects on foreign direct investment inflows in Africa.

Arik (2013), during the period from 1990 to 2011 impact of foreign direct investments came from emerging economies to Brazil, China, India, Russia, Mexico, Indonesia and Turkey was examined by panel data analysis. As a result of the analysis, it was determined that the market size, openness and economic stability of the host countries affected foreign direct investments.

Carp and Popa (2013) analyzed the relationship between economic growth, foreign direct investment and trade in Romania and Bulgaria for the period of 1990-2011. As a result, it was observed that the foreign direct investments of Bulgaria and Romania were effective on economic growth. Moreover, exports have not a strong impact on economic growth.

Cestepe (2013), in Turkey the causal relationship between foreign direct investment, economic growth and foreign trade figures for the 1974-2011 period has been used. In this study, the long-term causality between variables was investigated by following the Toda-Yamamoto method. Findings supporting: "growth-based export", "export-dependent FDI" and import-dependent exports" hypotheses. These findings can be evaluated that is not verified for Turkey example due to the structure of exports depends on imports and FDI inflows do not change this structure and the form of export-led growth hypothesis.

Dogan (2013), it was studied the relationship between foreign direct investment for economic growth, using time series analysis for Turkey. Therefore, analysis of foreign direct investment and gross domestic product of years of data covering the 1979-2011 period has been used for Turkey. As a result, there is a long-term positive relationship between economic growth and foreign direct

investments. The Granger causality test revealed a two-way causality relationship between foreign direct investment and economic growth.

Leitao and Rasekhi (2013) analyzed the relationship between economic growth and foreign capital investments in Portugal. Panel data analysis was used in the study. It is seen that there is a convergence relationship between Portugal and its commercial partners. In addition, foreign direct investment and bilateral trade increased economic growth. Growth is in reverse relation with inflation and GDP per capita.

Sghaier and Abida (2013) analyzed the relationship between foreign direct investment, financial development and economic growth for the four countries of Northern Africa (Tunisia, Morocco, Algeria and Egypt) between 1980 and 2011. Panel data analysis method was used in the study. As a result, there is a positive relationship between foreign direct investment and economic growth. The development of a domestic financial system has been seen as a prerequisite for foreign direct investment to positively affect economic growth.

Awosusi and Awolusi (2014) analyzed the relationship between foreign capital inflows, economic growth and trade in Nigeria for the period 1970-2010. Johansen co-integration test was conducted to analyze the long-term relationship between variables. For the analysis of the short-term relationship, Granger causality test and error correction model analysis were performed. As a result, there was a long-term relationship between the variables. There was also a causal relationship between variables.

Gocer and Peker (2014), the effects on employment of foreign direct investment in Turkey, Carrion-i-Silvestre (2009) multiple structural break unit root tests for China and India, Maki (2012) multiple structural breaks cointegration test and dynamic least squares were analyzed with the help of the data of the 1980-2011 period. As a result, the series are not stationary at the level value and there is a cointegration relationship between the series. According to the analysis of long-

term result is a 10% increase in foreign direct investment, decreasing employment 0.3% in Turkey, in China and India is increasing by 0.3% and 0.2%, respectively.

Haseeb (2014) analyzed the relationship between direct foreign investments, economic growth and exports in Malaysia for the period 1971-2013. ARDL border test method was used in the study. The results support the hypothesis of growth with export leadership and growth with foreign direct capital leadership in Malaysia.

Karpuz and Kızıltan (2014), the relationship between real exchange rate and short-term foreign investments in Turkey were examined. In the study, the data of 2003: 01 -2014:03 period were analyzed. As a result, it is seen that there is a causality relationship between real exchange rate and short term investments.

Ming (2014) analyzed the relationship between economic growth, trade and foreign direct investment between 1978 and 2009 in Taiwan. The VEC method was used in the study and as a result, there was a long-term and inverse relationship between economic growth and foreign direct investment in Taiwan.

Simionescu (2014) analyzed foreign direct investment – foreign trade relationship database in G-7 countries over the period 2003-2010. It is observed that there is a causal relationship between foreign direct investments and exports; foreign direct investments and imports in the short term. In the long run, there is a one-way causality relationship between foreign direct investment and foreign trade.

Grahovac and Softic (2017) examined data in the 2000-2014 period, unemployment rates and foreign direct investment flows in selected Western Balkan countries. From 2009, the analysis showed that net investments decreased significantly as a result of the global crisis, resulting in decreasing numbers of employees and rising unemployment. The results show that foreign direct investments had no positive impact on employment, like most of Central and Eastern Balkan countries.

Ozcan (2014) - Data covers 1980-2003 and 2003-2012. Analyzed FDI and growth. Using Granger causality analysis, Augmented Dickey-Fuller test, Johansen Cointegration Analysis, Vector Error Correction Mechanism reached to conclusion FDI is not a reason of growth.

Strat (2015), 1991-2012 yearly data, the relationship between foreign direct investment and unemployment in thirteen countries, which is the last member of the EU, was examined by Granger causality method. The main finding obtained in the study is that there is no Granger causality for the six countries, but there is a causal relationship between the others.

2. INVESTIGATION OF FDI, GDP GROWTH AND UNEMPLOYMENT IN THE CASE OF DIFFERENT COUNTRIES

In this section of the paper generalized information about the GDP growth, unemployment and FDI in Turkey. Historical stream is analyzed. Limitations of research were given.

2.1. GDP growth in Turkey

We can see the change of annually GDP growth rates in the world between 1961-2017 in Figure 1.

**Figure 1. GDP Growth rate in 1961-2017**
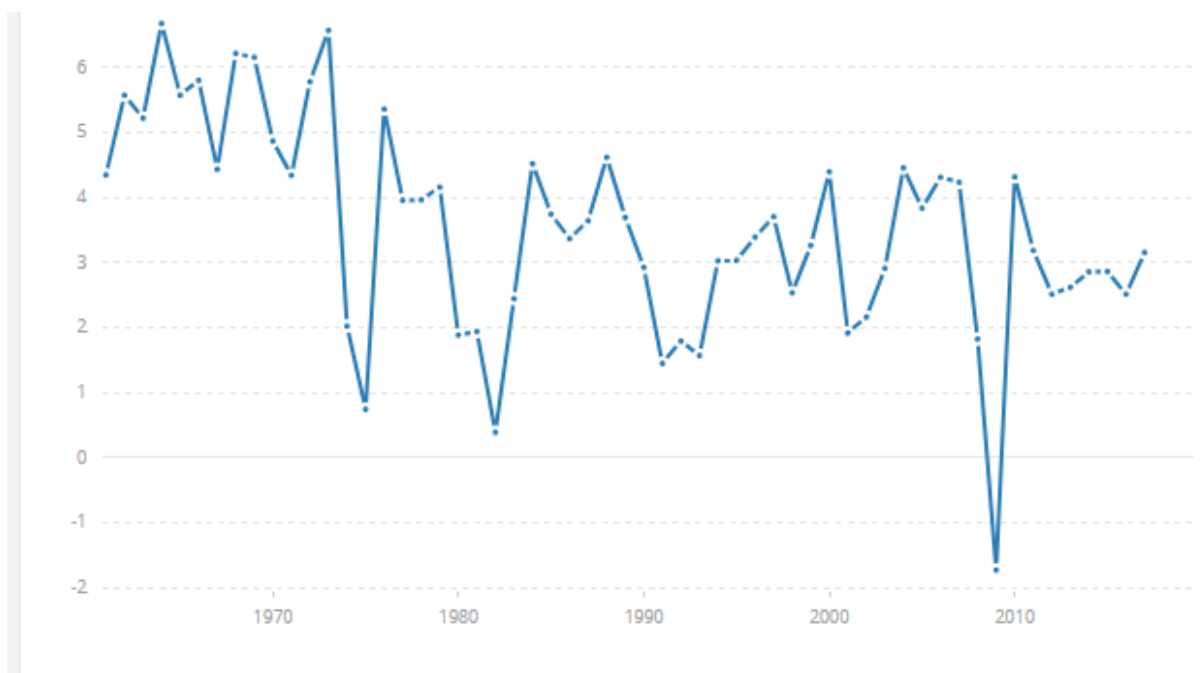
Source: data.worldbank.org

As seen in Figure 1, in 1960-1970th years GDP growth rate was higher than next periods. During 1973-1975, 1980-1982 and 2007-2009 economic crises GDP growth rate was the lowest values in the world. Oil price fluctuations, high interest rates are similar characteristics of these economic crises.

In Figure 2, GDP growth rates by countries are shown for 2018. We can see that GDP growth rates are high mostly in developing countries.

Figure 2. GDP Growth map
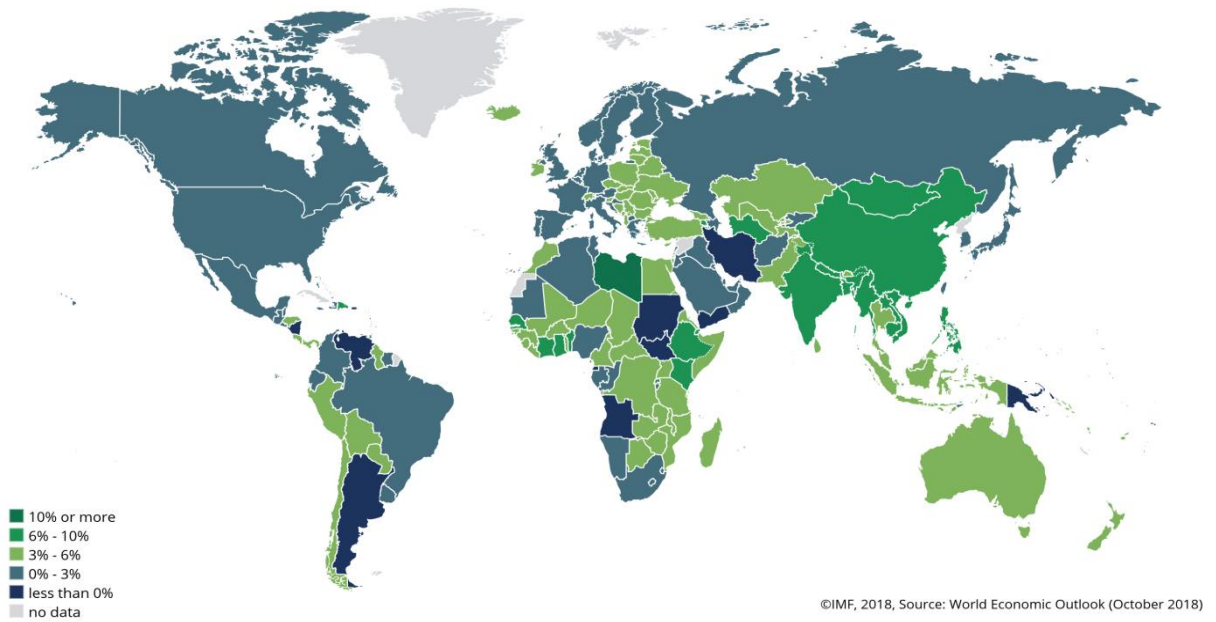
Source: IMF World Economic Outlook

There are average growth rates in 2018 for different regions in Table 1.

Table 1. GDP growth rates in different region (2018)

Regions	GDP growth rates
Asia and Pacific	5.5
East Asia	5.3
Southeast Asia	5.2
Caribbean	4.4
North Africa	4.3
Central Asia and the Caucasus	3.6
Africa (Region)	3.4
Australia and New Zealand	3.2
Eastern Europe	2.8

East Asia and Pacific

The regional financial markets stayed floating, although the volatility in the beginning and mid-2018 connected with the constrict financial policy in developed economies and the increase in trade tensions. Native monetary circumstances have constricted and constrict cautious policies have maintained credit expansion in checks.

In general, the region utilizes from strong foundations, including mild internal and exterior instabilities and key policies. But, some countries in the region proceeding to face weaknesses in the financial sector with high levels of debt (Thailand, Malaysia, Lao PDR, Mongolia, China, Papua New Guinea), with rapid credit growth (for example, Vietnam, the Philippines, China), large external attendance in local currency dominant bond markets (such as Indonesia, Malaysia) and major financial shortfall (Lao PDR, Cambodia, Vietnam, Mongolia).

Growth in the region stays strong. Exports proceeding to rise both in terms of amount and capacity, utilizes the improvement in worldwide investment and trade, as well as solid trade and investment integration between Eurasia and Asia and within Asia (Annex 1). Private consumption continues to be supported by solid consumer confidence and rising household wealth, amid moderate inflation. [1]

Latin America and Caribbean

Growth in the Caribbean and Latin America is accelerated by growth in the United States and rising commodity prices compared to a year ago, mainly due to positive internal and external financing conditions. Except in Brazil and Colombia, the negative output gap is almost covered. Regional investment recovered after a long contraction, backed by a solid recovery in commodity prices in 2017 (Annex

---

[1] World Bank- Global Economic Prospects 2018 East Asia and Pacific

2) Strong global demand increased exports and helped tightening the current account deficit as a part of GDP in some countries (Mexico, Brazil). On the other hand, the increase in imports at the regional level surpasses the increase in exports due to the recovery of domestic demand in commodity exporters, and consequently, net exports contribute partially negative to regional growth.[2]

Europe and Central Asia

Regional growth was robust in 2017 and reached 4 percent with wide-ranging recovery between goods importers and goods exporters. For commodity importers, a major increase in activity in 2017 was strengthened by demand from the Eurozone and payments of EU structural funds in Central Europe, but these factors began to decline gradually (Annex 3). On the other hand, there are increasing activities in commodity importers who have experienced a low growth in 2017 due to domestic problems, such as rising political pressures (FYR Macedonia) and poor public investments (Serbia). In the region commodity exporters proceeding to experience a periodical rise assisted by higher oil prices, recovery in domestic demand and reinforcing export growth. [3]

Middle East and North Africa

Growth in the North Africa (MENA) and Middle East region increased in the beginning of 2018. Oil exporters recovered after a year of decreasing oil production and financial tightening. The growth of oil importers was solid in 2017 and high-frequency data show that this growth continued until 2018 (Annex 4).

The growth in major oil importers was supported by wide-ranging improvements in domestic and foreign demand, indicating advances in policy reforms, increased commercial trust and a developed global economy. In the Arab

---

[2] World Bank-Global Economic Prospects 2018 Latin American and Caribbean
[3] World Bank-Global Economic Prospects 2018 Europe and Central Asia

Republic of Egypt, the region's biggest oil importer, investment and net exports developed, supported by steady of the exchange rate and robust domestic demand.[4]

Sub-Saharan Africa

The economic improvement in sub-Saharan Africa (SSA) has strengthened after a reasonable recovery in 2017 (Annex 5). Mining production increased in the metal exporters, new mining quarries are flowing and investments in existing mines are rising, supported by high metal prices (Zambia, the Democratic Republic of the Congo), but in some cases high government debts are growing (Sierra Leone, Mozambique). Mining production in South Africa has declined.

Among non-resource-intensive countries, the collection of economic activities is supported by developing some agricultural conditions and infrastructure investments (Uganda, Rwanda); in others, it was reflected in consumer spending with the help of low inflation and recovery in remittances (Kenya, Gambia). But, growth in oil production has been weakened in some oil exporters because of maturing oil fields (Nigeria, Angola). [5]

South Asia

In 2017 growth in South Asia was 6 percent, it was slowed comparing with previous years but remained strong (Annex 6). Growth in the region increased significantly since mid-2017, and by early 2018, impacted increased consumer and investor sentiment, higher investment and tight exports (India, Sri Lanka, Bangladesh). Growth in South Asia is dependent on domestic demand with support of export growth (India, Bangladesh). While the increase in imports accelerated by the strengthening of domestic demand, high energy prices contributed to the worsening of trade and current balances (Pakistan, Nepal, India). Growth in the region except India was mixed in the first half of 2018. After a deceleration in

---

[4] World Bank-Global Economic Prospects 2018 Middle East and North Africa
[5] World Bank-Global Economic Prospects 2018 Sub-Saharan Africa

2017 according to adverse weather conditions, in Bangladesh, 2018 was supported by the improving investment, particularly in the agriculture sectors and construction and related activities.[6]

The historical evolution of economic growth in Turkey can be discussed with the different periods. Breakdown occurred in certain periods, economic growth has been affected positively or negatively in this periods. In the year of the establishment of the Republic of Turkey GNP was 1078.2 million with the current factor prices. Between 1923 and 1929 (except for 1927) GNP was the very high rate and regular developments were achieved. In this period, GNP grew by an average of 17% per year. As a result of the negative developments in internal and external conjuncture after 1929, there was a significant contraction in the GNP and basic economic sectors. As a matter of fact, the GNP index declined from 209.8 in 1929 to 118 in 1932 (Sahin, 2007).

After the announcement of the Turkey Republic in the next 50 years (1924-1975), GDP approximately 12, population 3, per capita income 4 times has increased. From the establishment of the Republic until the 1970s, while the increase in national income was at the desired levels, the growth slowed down in the first years of the republic. It stopped during the World War II and accelerated again after the war. At the end of 1970s, there was a pessimistic and negative environment in the economy. By the end of 1979, the GNP fell to around 1.7%. The GNP, which began to compensate for its losses at the beginning of the 1980s, showed an unstable development. In 1949, due to bad weather conditions, agricultural production and GNP had fallen, and after 1950, when the Democratic Party came to power, economic activities increased and in the 1950-53 period, GNP increased by 11.3%. In 1954, agricultural production and GNP fell again due to drought (Eroglu, 2002). Economic growth in Turkey was the fast after the war over the next 30 years, but after 1980 showed a slower development. For the year 1997, the GDP per capita of the State Planning Organization was determined as

---

[6] World Bank-Global Economic Prospects 2018 South Asia

2.947 USD in current prices. Turkey was also close to the average half of the active population is employed in agriculture. The added value created in this sector has increased by 32% in real terms in the last 20 years and the working population has grown by 90%. The added value created in agriculture was found to be 0.54 in the 1970s when compared to the added value created in our country and it was found 0.34 in the 1990s (Karluk, 2004).

In 2000s years in Turkey's economy the most important development is high and continuous growth. Turkey's economy has experienced a major contraction in November 2000 and February 2001. Then, the growth trend that started in the first quarter of 2002 grew to 27% in the fourth quarter of 2008 and the average was 6.5% (Alpaydin and Tunali, 2011). In Turkey in the period between 2006- 2009, the annual average growth rate of GDP was 1.9%; the average growth rate for the industrial sector was 1.87% per annum; The average growth rate for the agricultural sector was 2.37% per annum. At the end of 2009, the share of the agricultural sector in GDP decreased to 8.2% and the share of the industrial sector decreased to 18.8%. The share of the services sector was 73% (Coban, 2010). In 2007, GDP increased by 4.7% and reached to $ 648.754 million in current prices. In 2008, the GDP growth rate was realized as 0.7% below the 4% target due to the impact of the global crisis and especially the economic contraction in the last quarter of 2008. In 2008, GDP increased by 0.7% in current prices and rose to 742.094 million dollars. With the economic crisis affecting country and the world in 2009, the growth rate of GDP in 2009 was -4.7% and the growth rate of the industrial sector was realized as -6.9%. In 2009, the current prices decreased by - 4.7% and fell to 617.611 million dollars.

As can be seen from the figure, growth has lost momentum since 2011. The growth rate of 7 quarters is below than 5%, which is accepted as the potential growth rate (Egilmez, 2014).

The average growth rate of Turkey's economy in the post-2003 period was 4.8 percent. However, especially in the post-2000 period, the growth rates followed a

very volatile course. As seen in the Figure below it seems that the 15-year period, twice recession and twice very high growth rates experienced. Thus, the last 15 years in terms of Turkey, which has been a frequent cyclical fluctuations of periods. The growth in the year 2014, 2014-2016 Medium Term Plan (MTP) was targeted by 4% of Turkey's economy. However, due to the political trends in the country, confusion in Russia, Ukraine and the Middle East, the shock increase in the policy rates, the restrictions on credit cards and the decrease of the confidence in the future had negative impact to the domestic demand on this issue.

Turkey in 2017, since 2013, scored the fastest annual growth for signature. The growth rate was 7.4%. When the activities constituting the GDP were analyzed, the value added of the agricultural sector as a chained volume index in 2017 increased by 4.7 percent, the industrial sector increased by 9.2 percent and the construction sector increased by 8.9 percent. The value added of the services sector, which consists of trade, transportation, accommodation and food service activities, increased by 10.7. Turkey's economy, the decline in the third quarter of 2016, noted that the coup attempt after 5 consecutive quarter of growth and grew by 7.3 percent in the last quarter 2017. Turkey, with this growth rate in OECD countries after Ireland with 8.4 percent growth was the fastest growing country. In terms of economic activity, the fastest growing sector in 2017 was the information and communication sector. According to TURKSTAT data, the sector recorded an annual growth of 12.4 percent in 2017. The slowest growth was in real estate activities. According to the data, the growth in the sector grew by 2.6 percent.

Figure 3. GDP growth rate in Turkey in the period 2000-2017
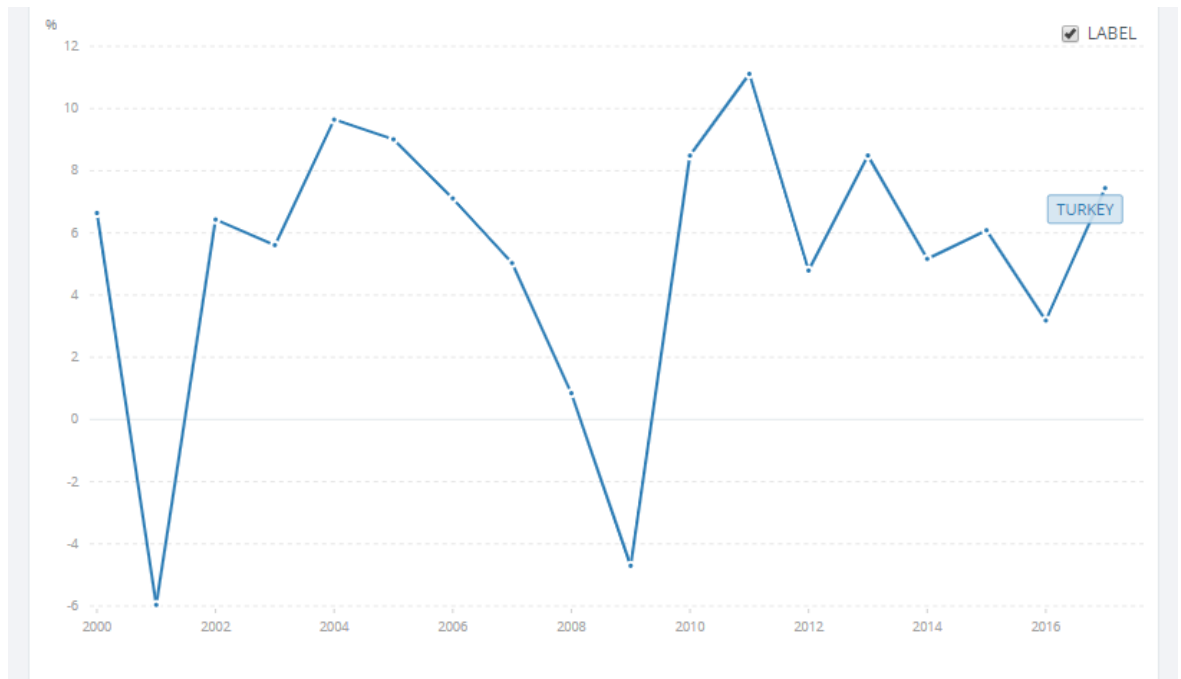
2.2. Foreign Direct Investment Trends in Turkey

Although the amount of foreign direct investment in the world has experienced a decline in the period between 1990 and 2001-03, it is in a continuous increase trend. Foreign direct investment has reached its highest level in 2007 and 2015 with an annual inflow of about 1900 billion dollars. Countries and country groups that are not attractive to foreign capital in the past can be the favorite of capital as a result of the developments in the investment climate over time. Foreign direct investment (FDI) decreased by 23 percent in 2017 and declined from $ 1.87 trillion to $ 1.43 trillion in 2016 (Figure 4).

Figure 4. FDI inflows, global and by group of economies, 2005-2017 (Billions of dollars and percent)

Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).
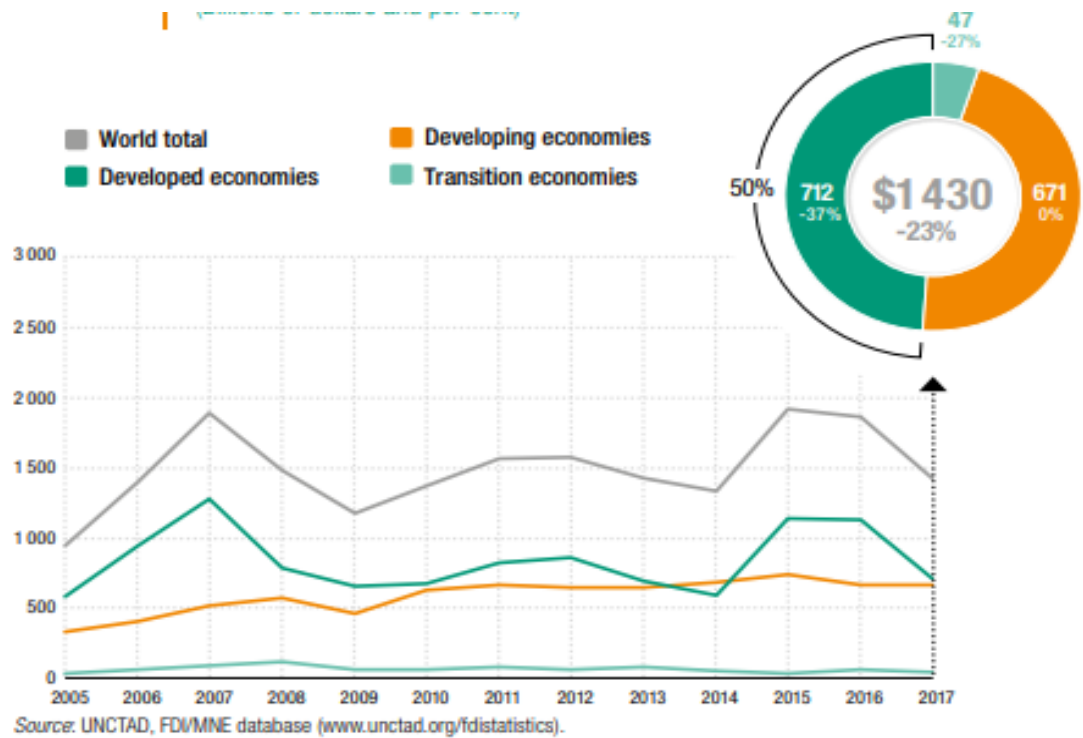
Source: UNCTAD – World Investment Report

Foreign direct investment has fallen in developed economies and remained stable in countries which economies in transition. As a result, emerging economies increased the share of global direct foreign investment inflows, which totaled 47% in 2016, compared to 36% in 2016. Flows to developed economies fell by a third, to $ 712 billion. The decline can be explained largely by the reduction of the previous year's high flows caused by cross-border M&As and institutional structures. Foreign direct investment inflows to emerging economies remained close to 2016 levels, at $ 671 billion, not showing any signs of recovery after a 10 percent decline in 2016. Foreign capital flows to Africa continued to slide, flowes into the developing Asia remained stable and flowes into Latin America and the Caribbean grew moderately. FDI declined by 27 per cent in 2017 to 47 billion dollars, the second lowest level since 2005, in South East Europe and the Commonwealth of Independent States (CIS).

Figure 5. FDI inflows by region 2016-2017 (Billions of dollars and percent)
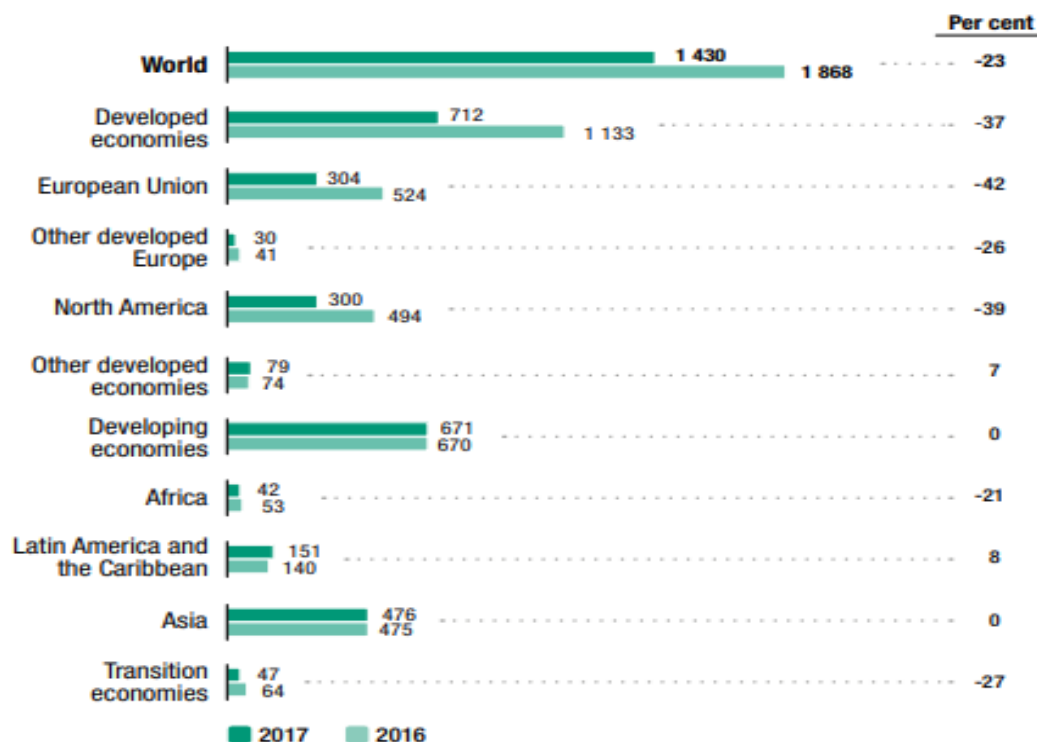

Per cent

Region	2017	2016	Per cent
World	1 430	1 868	-23
Developed economies	712	1 133	-37
European Union	304	524	-42
Other developed Europe	30	41	-26
North America	300	494	-39
Other developed economies	79	74	7
Developing economies	671	670	0
Africa	42	53	-21
Latin America and the Caribbean	151	140	8
Asia	476	475	0
Transition economies	47	64	-27

■ 2017   ■ 2016

Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).

Source: UNCTAD, World Investment Report 2018

Half of the top 10 host economies are emerging economies (figure 3). The United States remained the largest buyer of FDI inflows of $ 275 billion at the entrances, followed by a record $ 136 billion record despite China's first slowdown in the first half of 2017. There have been significant increases in the list (Germany, France and Indonesia).

Figure 6. FDI inflows, top 20 host economies 2016 and 2017
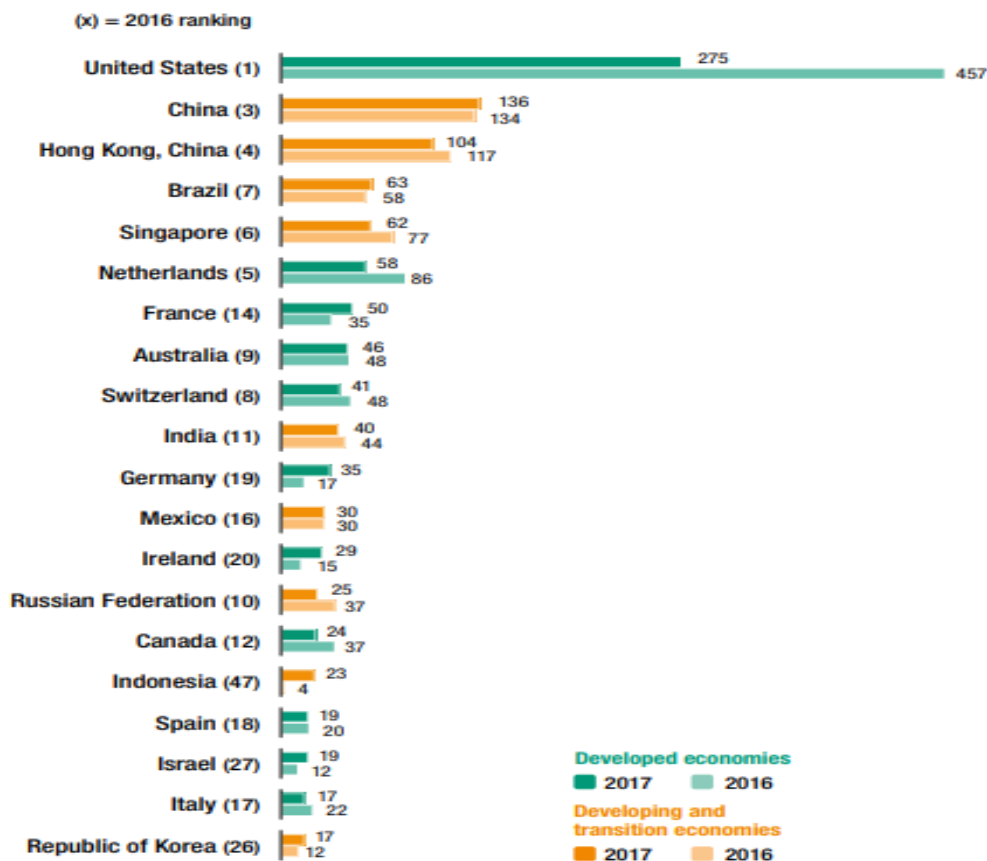
Source: UNCTAD, World Investment Report 2018

The top foreign investors are still mostly developed economies (Figure 4). MNEs from these countries have only marginally reduced their foreign investment activities. The outward investment flow from developed economies decreased by 3 percent in 2017 to $ 1 trillion. Their share in global outward FDI flows remained unchanged at 71 percent. Flows from emerging economies declined to 6 percent to $ 381 billion, as outflows from China declined for the first time in 15 years (36 percent to $ 125 billion) as a result of restrictive policies on major capital outflows in 2015-2016. The outflows from transition economies increased by 59 percent to $ 40 billion.

Figure 7. FDI outflows, top 20 home economies, 2016 and 2017

(x) = 2016 ranking

Economy	2017	2016
United States (1)	342	281
Japan (4)	160	145
China (2)	125	196
United Kingdom (158)	100	-23
Hong Kong, China (8)	83	60
Germany (9)	82	51
Canada (5)	77	74
France (7)	58	63
Luxembourg (10)	41	44
Spain (11)	41	38
Russian Federation (15)	36	27
Republic of Korea (12)	32	30
Singapore (14)	25	28
Sweden (29)	24	6
Netherlands (3)	23	172
Belgium (17)	21	22
Thailand (22)	19	12
Ireland (13)	19	29
United Arab Emirates (21)	14	13
Taiwan Province of China (18)	11	18

Developed economies
2017   2016

Developing and transition economies
2017   2016

In the early years of the Republic foreign capital has been positively considered which may contribute to economic development and growth. However, due to the nationalization, the 1929 crisis and the Second World War foreign capital investments remained limited. Foreign capital legislation was regulated together with the 1950 Democratic Party ruling. For this purpose, the Law on Encouragement of Foreign Capital was issued in 1954 but no foreign investment was received at the desired level. Foreign direct investment coming to Turkey in accordance with the law must obtain permission from the competent organs of the state. Thus, foreign capital inflows to the country were left in the state authority, and until 1980 the conservative attitude was generally followed. With the effect of 24 January decisions, open policy monitoring, economic and political stability have increased confidence in foreign capital policy (Karluk, 2014). Another important development to increase foreign investments is the regulation on the

Protection of the Value of Turkish Currency. In 1983, the Decree Law No. 28 and the Decree Law No. 30 in 1984 introduced the process of liberalization and institutional regulation in the foreign exchange market. The convertibility of TL was completed in 1989 by the decree No. 32, issued in 1990 and finally by the decree published in 1991 (Sahin, 2014). Turkey's 1986-2000 years annual average rate of increase in foreign direct investment was realized as 10-19.9%. The privatizations were made after 2000 which were tried to be realized for a long time. Related laws and advances increased foreign capital inflow to Turkey in line.

Foreign direct investments, which started to revive in the 1990s, did not reach the desired level. Foreign direct investment in Turkey's economy has increased significantly in the period after 2000. The significant increase seen in Figure in 2005 was due to the increasing of privatization activities. Although there was a decline in foreign capital due to the impact of the 2008 Global Financial Crisis, there was a recovery in the following years. Significant developments have occurred in sectoral sense in the increase of foreign capital. In addition to traditional foreign investments, investments have been made in sectors such as electronic and biotechnology (Cetinkaya, 2004).

Structural reforms that Turkey's impressive growth performance and save the applications received over the last decade have provided the country's entry into many international investors' radar.

According to EY 2017, according to the European Country Attractiveness Survey, Turkey, 3 places up compared to 2016, Foreign Direct Investment (FDI) has become the most popular in terms of location 7 countries in Europe. Turkey in 2017, has made a 66% increase compared to the previous year hosted 229 projects and also has had a 3% share in FDI projects in Europe.

The total FDI inflows in Turkey, while only the level of US $ 15 billion until 2002, this figure rose to 193 billion US dollars during the period from 2003 to 2017 levels.

**Figure 8. FDI inflows to Turkey in 2000-2017 period**
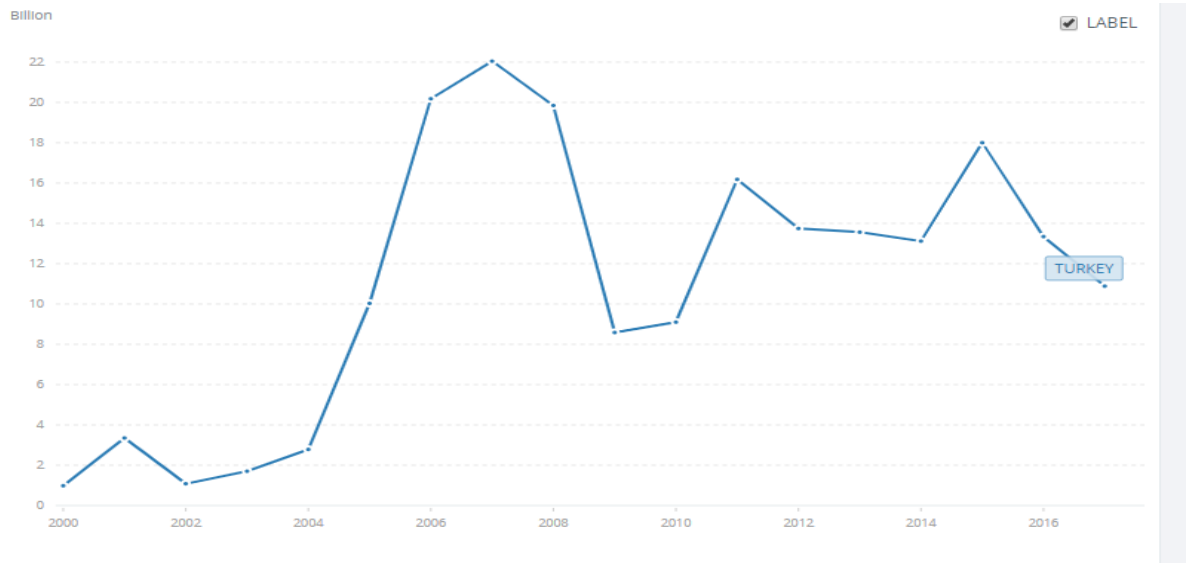
2017 laid out a table giving the signal in terms of foreign direct investment to Turkey. Back to Turkey in 2017 came to 10.8 billion dollars in foreign direct investment. Thus, the lowest number of last 7 years was recorded in 2017.

Foreign direct investments, which were $ 9 billion in 2010, increased to $ 18 billion in 2015. Foreign direct investment in 2016 is the year of the coup that took place in Turkey had fallen to $ 13 billion.

Finance and manufacturing sectors was the most attracting FDI over the last 15 years, while in line to see take place in the upper ranks of the global value chain in Turkey has been a significant diversification.

Figure 9. Top sectors for FDI in Turkey
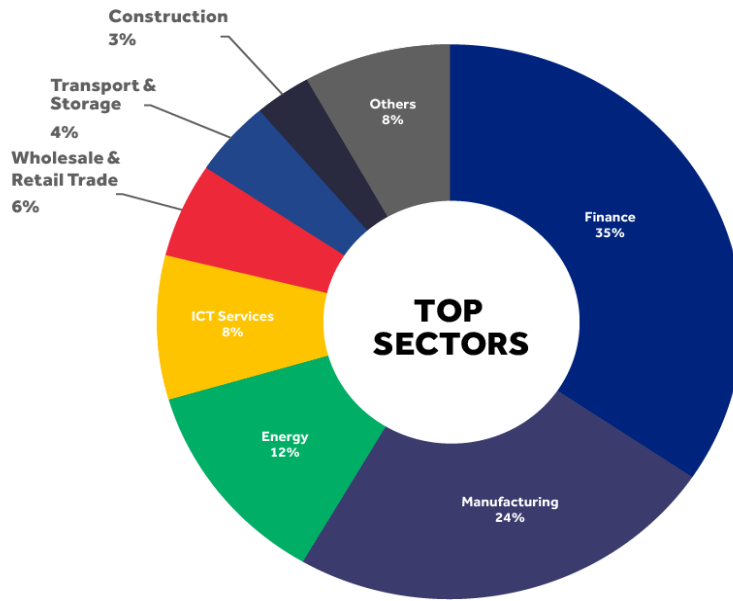
A large part of the past 15 years, FDI inflows in Turkey, entered from Europe, North America and the Gulf countries, the share of Asia is also increasing significantly.

The number of companies with international capital in Turkey was 5600 in 2002, at the end of 2017 reached 58 400.

Figure 10. Top investors to Turkey
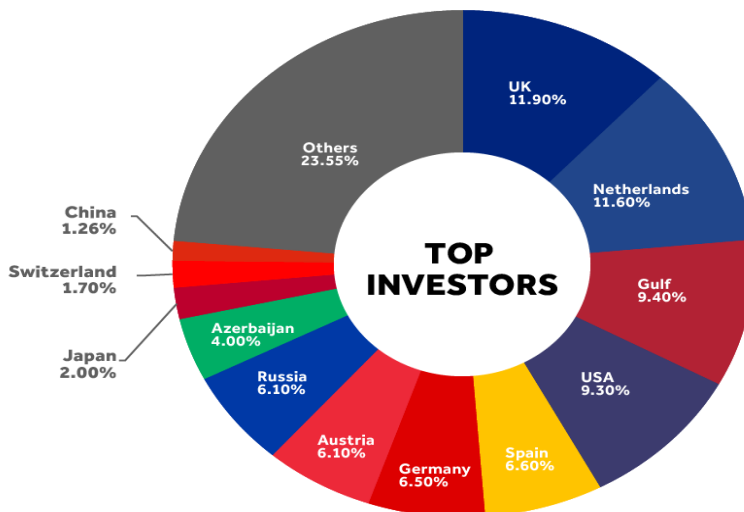
2.3. Unemployment in Turkey

The new report by the International Labor Organization (ILO) states that global unemployment was the same level in 2018, as the labor force is growing despite the fact that the global economy is coming to a close.

According to the report "Employment and Social Outlook in the World: Trends 2018" global unemployment is stabilized after the increase in 2016. The unemployment rate reached 5.6% in 2017 and the total number of unemployed is expected to exceed 192 million.

Figure 11. Unemployment rates in the world

IMF DataMapper — Unemployment rate (Percent, 2019)

- 20% or more
- 15% - 20%
- 10% - 15%
- 5% - 10%
- Less than 5%
- no data

©IMF, 2018, Source: World Economic Outlook (October 2018)
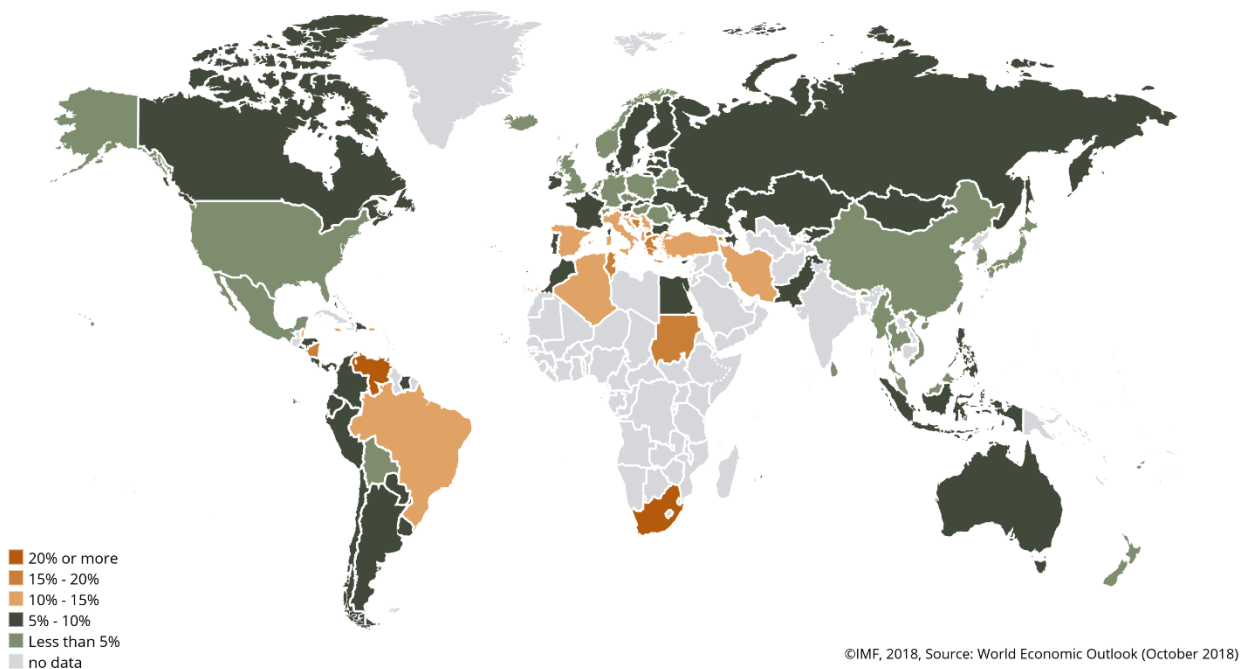
Source: IMF Data

Despite the stronger growth than expected in 2017, the long-term view of the global economy remains modest; The report attributes the positive trend from 2017 to 2018 mainly to the strong performance of labor markets in developed countries. It is estimated that the unemployment rate in developed countries was 5.5% in

2018, with an additional 0.2% decline, meaning that the unemployment rate will decline to the pre-crisis level.

On the other hand, employment growth is expected to fall behind the labor force growth in emerging and developing countries, but it is expected to improve better than in 2017.

While global unemployment has stabilized, a decent job gap remains widespread: the global economy still does not create enough employment. "Additional efforts are needed to improve the quality of work of employees and ensure fair share of growth returns", says Guy Ryder, Director General of ILO.

Figure 12. World unemployment 2004-2019
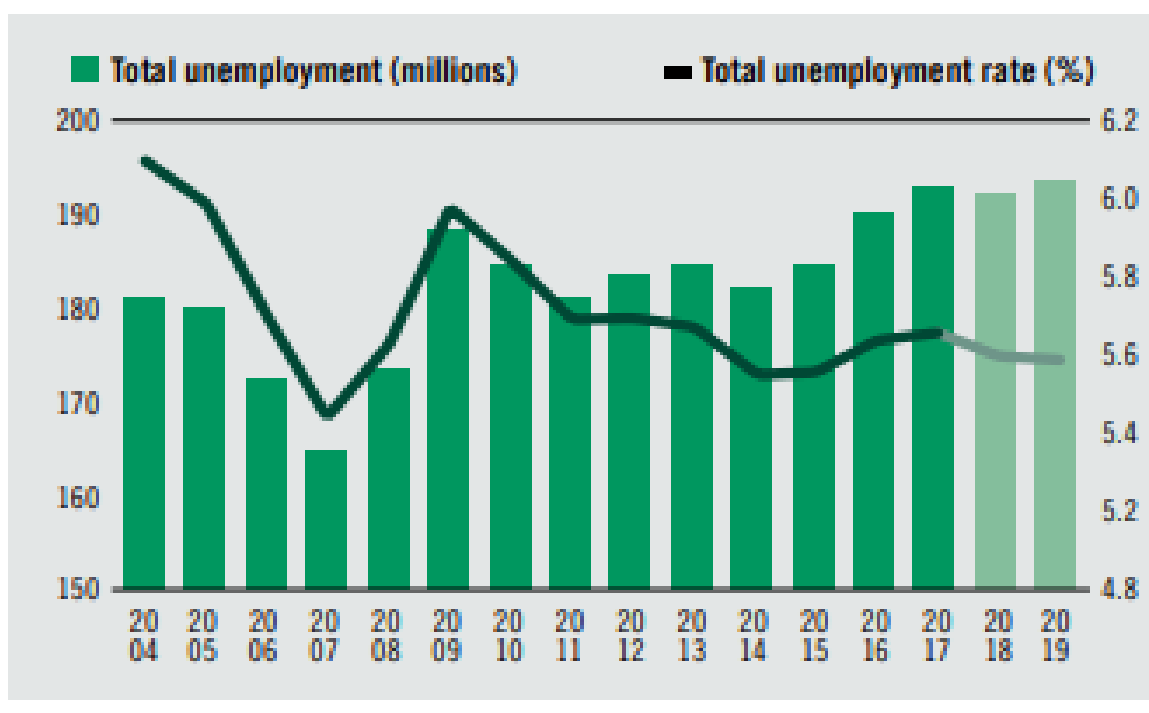
Greece rose more than twice the unemployment rate since 2006. Major increases in the unemployment rate and inadequate labor force were accompanied by a very high debt, a serious GDP deficit and deflation.

Similarly, Spain has seen a leap in unemployment over the last ten years due to structural problems in the labor and education sectors (Spain has one of the highest drop-out rates in Europe, both in high schools and higher education levels).

Inflation, economic crisis, food and drug shortage are one of the main problems in Venezuela.

South Africa's unemployment rate remained at its 15-year high in the second quarter, as the factories were dismissed. Per capita economic growth has turned negative and has the highest income inequality among countries measured by the South African International Monetary Fund.

In Bosnia and Herzegovina, the number of those who leave the country for economic and political reasons is increasing. Ethnic-based politics, high unemployment rate, low salaries, insufficient education and health system are the main issues that the public complains about.

Table 2. Top countries with high unemployment rate

Venezuela	39.8
South Africa	28.6
FYR Macedonia	19.8
Sudan	19.8
Bosnia and Herzegovina	18
Greece	16.3
Nicaragua	15.5
Iran	15
Tunisia	14.8
Spain	14.3

Source: IMF data

Until it is useful to look at the distribution of employment by sector for looking at the overall course of employment in Turkey. Accordingly, while the rate of labor force employed in agriculture was 77% in 1962, it decreased to 47% in 1999 and 40% in 2001. In the same years, the employment in the industrial sector increased from 7.9% in 1962 to 15.2% in 1999 and to 17.2% in 2001, while the employment in the service sector increased from 15.1% in 1962 to 43.2% in 2001. After the 2000s, there is an increase in the investments from agricultural sector to other sectors, especially in the service sector (Eroğlu, 2002). According to TurkStat, an average of 6,7% of the workforce was unemployed in the 1997-2000 period. During the 1980-2000 period, there were years that unemployment rate exceeded 10% and underemployment rate exceeded 18%. Although stability and high growth rates were achieved in the economy during 2003-2006, no progress was made on employment. In this period, the average unemployment rate was above 10% and the unemployment rate in the young population exceeded 20% (Şahin, 2007).

Unemployment is Turkey's very old and a structural problem. The most important reason for this structural problem is population growth. The transition from agricultural to non-agricultural sectors as well as population growth creates this structural problem. The decrease in employment in parallel to the increase in productivity in agriculture during the development process is a natural phenomenon. Frequent economic crises are another reason for increasing unemployment. When the change in unemployment between 2000 and 2008 is analyzed, it is seen that the unemployment rate increased from 6.5% in 2000 to 10.3% in 2002, although there has not been much change in labor force participation rate. The main reason for this rapid rise is the 2001 economic crisis. The impact of the 2001 crisis on unemployment has started to decrease in 2006 and unemployment has retreated partially, but it has been on the rise since the second half of 2008 due to the global economic crisis. In this process, the unemployment rate increased to 16.1% in 2009.

Although the positive developments and growth rates experienced in the economy in 2006 were not sufficiently reflected to the employment, the unemployment rate decreased to 10.2% compared to the previous year. In 2006, the number of people employed in the agricultural sector decreased compared to 2005. The slowdown in growth in 2007 and the contraction in agricultural employment created negative pressures on employment growth and the unemployment rate in 2007 was 10.3%. The decline in employment in agriculture continued in 2007 as well. The slowdown in growth in the last quarter of 2008 due to the global crisis caused negative pressure on employment growth and in 2008 the unemployment rate increased by 0.7 points to 11%. The impact of the global crisis in 2008, contraction in the Turkey economy reflected the industrial sector by the reduction in employment, however, increased employment rate in the agricultural sector. The global economic crisis, which affected the financial markets in the world in 2008, continued in 2009 and the unemployment rate increased to 14% in 2009 by reaching the highest level of the recent years. The unemployment rates, which were single-digit between 2011 and 2014, rose again to double digits as of 2015. In this negative development, the increase in employment was behind the increase in labor force. With the employment mobilization implemented in 2017, the increase in employment incentives positively reflected to the labor market and the number of those employed increased with the effect of economic growth. In 2016, the unemployment rate increased by 0.6 points to 10.9% compared to 2015 and remained at the same level in 2017.

Figure 13. Unemployment rate in Turkey 2000-2018
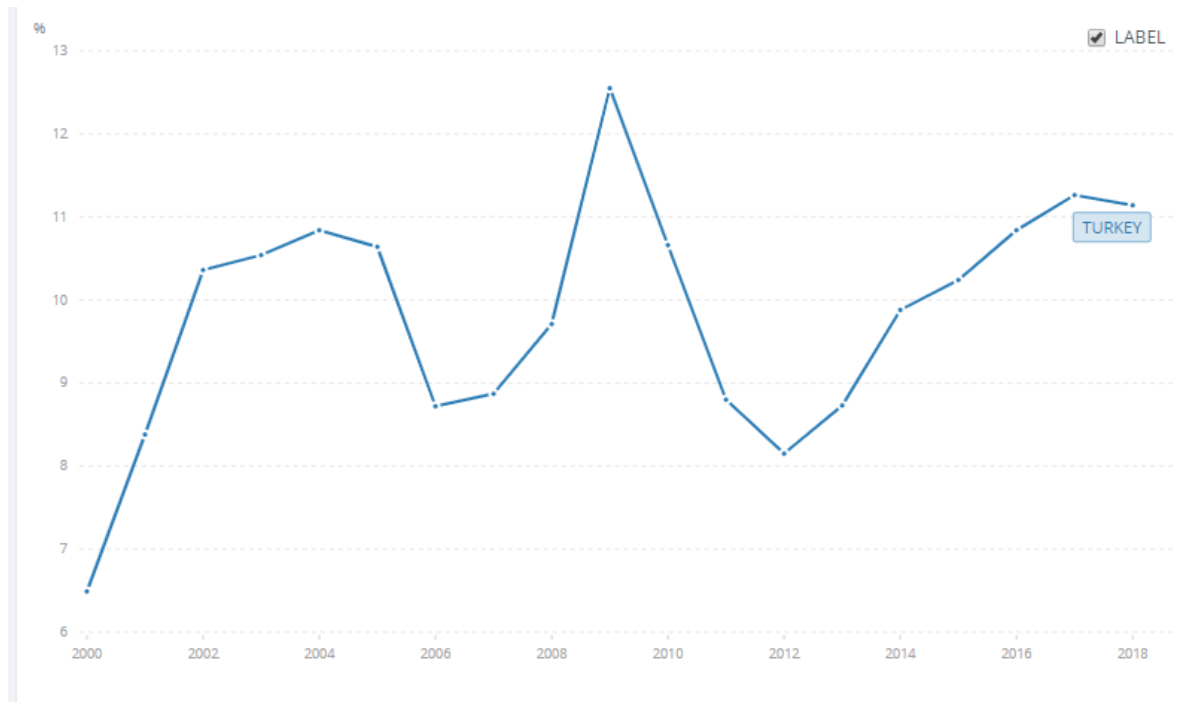
<div align="right">Source: Data Worldbank</div>

The labor force participation rate of the population aged 15 and over, which is an important indicator for the potential of the economy, increased to 52.8% in 2017 with an increase of 0.8 points. The labor force participation rate was 72.5% in men and 33.6% in women, with an increase of 1.1 points. Seasonally adjusted unemployment rates declined to as low as 9.9% in December, due to the favorable reflections of economic growth and the impact of the employment policies. The majority of the workforce, which is the sum of the employed and unemployed, consists of the below high school level.

In 2017, the number of those employed in the agricultural sector increased by 3.0% to 5 million 464 thousand, while the number of those employed in the industrial sector increased by 2.7% to 7 million 478 thousand persons, while the number of people employed in the services sector increased by 4.3%. It rose to 15 million 246 thousand people. Thus, total employment increased by 3.6% to 28 million 189 thousand people. In 2017, the share of the agricultural sector in total employment decreased by 0.1 percentage points to 19.4%, the share of industry sector decreased by 0.3 points to 26.5, the share of services sector increased by 0.4

percentage points to 54,1%. The services sector contributed the most to employment by providing additional employment to 629 thousand 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 195 thousand 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 to 108 thousand people due to the vigor in the sector.

Figure 14. Sectoral breakdown of employed
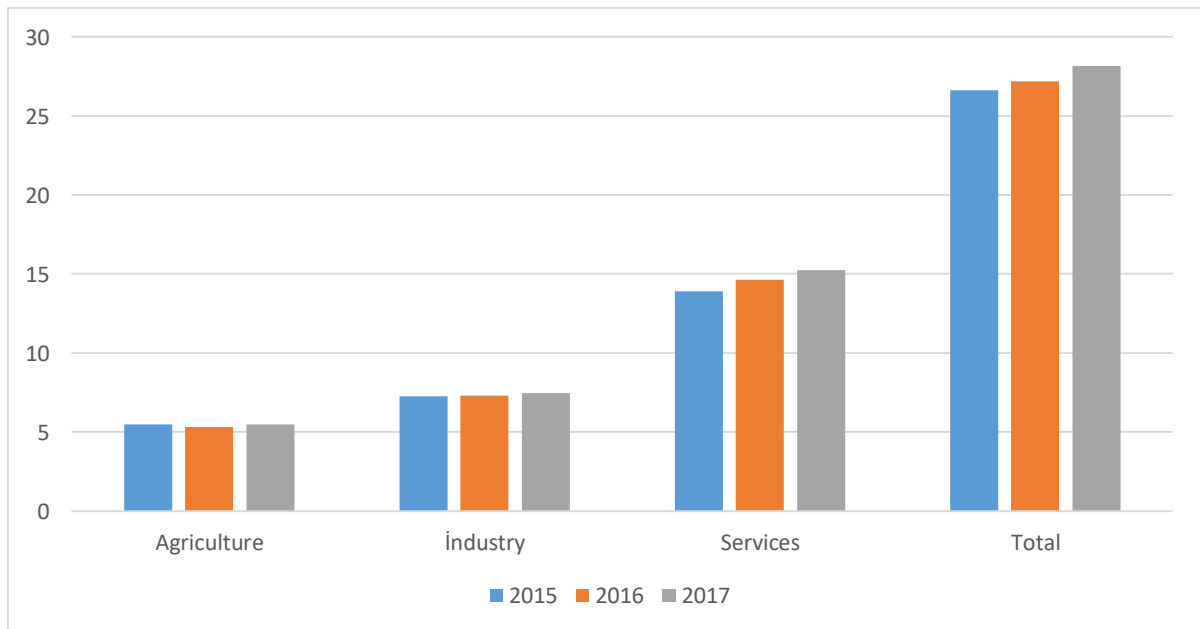
Source: TUIK

Limitations of the Empirical Research

Goal of this research is finding statistical evidence between GDP growth rate, FDI and unemployment. I used quarterly data. But there are other incidents that influenced Turkey economy. The coup attempt in July 15, 2016, terror attacks, US sanctions and tariffs and Syria civil war-refugee crisis can be example to these incidents.

3. EMPIRICAL ANALYSIS OF THE RELATIONSHIP BETWEEN FDI, UNEMPLOYMENT AND ECONOMIC GROWTH IN TURKEY

In this section of the paper the empirical aspects of the relationship between FDI, growth and unemployment are analyzed. Research goal, hyphotheses are developed. Then research data, model estimation are presented. Finally, method estimation is submitted.

3.1. Methodology

3.1.1. Model Specification

There are different methods for testing the relationship between FDI, GDP growth and unemployment. I used these methods for testing. Models were built in Eviews 9.

Augmented Dickey-Fuller test

It is the test for checking whether a time series is stationary or not in an auto-regressive model. There is a requirement for to use OLS.

The null hypothesis of the test is that **the unit root is found.**

We want **there is not the unit root**. If there is not unit root there is **stationary**. If you can reject the null hypothesis, you can use classical methods.

Stability levels of the series were first investigated by the Dickey Fuller (Augmented Dickey Fuller: ADF) test. The Dickey-Fuller (DF) test is based on three regression equations:

Simple form: $\quad\quad\quad\quad\quad\quad\quad\quad \Delta Y_t = \gamma Y_{t-1} + u_t$

Fixed term: $\quad\quad\quad\quad\quad\quad\quad\quad \Delta Y_t = \alpha_0 + \gamma Y_{t-1} + u_t$

Fixed term and trendy state: $\quad\quad\quad \Delta Y_t = \alpha_0 + \alpha_1 t + \gamma Y_{t-1} + u_t$

The DF statistics obtained from these tests were compared with the critical values of MacKinnon (1996); The null hypothesis (H0: ý = 0) is tested against the alternative hypothesis (H1: ý ≠0). The augmented dickey-fuller test statistic is a negative number. If the statistics are negative (based on the table value), the hypothesis of unit root is strongly rejected. The rejection of the unit root hypothesis indicates that the process is stationary as reminded above. Therefore, it is inconvenient to use the method in the analysis. However, when the hypothesis is not rejected, the result is that the variable is not stationary, and by various methods you first stabilize the series and then use it.

ARDL test

The ARDL model eliminates the difficulties associated with predetermining the stationary properties of the series in cointegration tests and enables the analysis of the existence of long and short term relationships. If some of the series is stationary in some of the first differences, cointegration analysis can be performed with this method in a multivariate model.

After determining the delay length, the basic hypothesis that there is no cointegration relationship between the related variables can be tested by testing the significance of one-period lag values of the level values of the dependent and independent variables in the above model. The basic hypothesis tested here is as follows:

H0 : $\alpha3 = \alpha4 = \alpha5 = 0$

CUSUM Test

This test, calculated with sequential errors, gives a rough description of whether or not there is a break in the data set. In the CUSUM test, the estimation of consecutive errors being the same appearance for a long time may indicate uncertainty.

Ho: No structural breaks.

H1: There is structural breakage.

Granger Causality test

Granger causality test is the method to defining causal relationships between variables. If having knowledge of the past values of variable X makes it possible to forecast Y more precisely the variable X is the Granger cause variable Y. The Granger causality test can be both from X to Y and from Y to X, known as two-way causality. Granger causality test checking the null hypothesis:

H0 = Granger does not cause.

H1 = Granger cause.

The Granger causality test is quite sensitive to the number of lags and the direction of causality can change depending on the number of lagged terms. For this reason, the Granger causality test can be performed for different lags or the individual lag length can be determined for the independent variables included in the model. A key feature for the Granger causality test analysis is the selection of an appropriate set of lags for variables. To decide the number of lags to be used in the Granger causality test, I employed the VAR Lag Order Selection Criteria procedure (using EVIEWS). Two lag order selected by the criterion. After identifying proper lags, I do Granger causality tests to test the connection between FDI, GDP Growth rate and unemployment rate. If probability of t statistics higher than 0.05, the null hypothesis accepting. If probability of t statistics higher than 0.05 null hypothesis rejecting. Rejection of this hypothesis mean that the coefficients in the model are significant. If the entering of lagged FDI variables raise the predictability of GDP Growth rate, FDI is said to Granger cause GDP growth rate.

3.1.2 Data

For conducting the main data in this research is used GDP Growth rate, FDI and unemployment rate in Turkey. Data is ensured at their central bank's website and worldbank data.

Research period

Research period covers data from Q1 2006 to Q3 2018.

Development of Hypotheses:

To accomplish with the research problem and to carry out the purpose of the research, is suggested 2 hypotheses:

H1 – an increase in GDP growth rate has a negative effect on unemployment rate.

H2 – an increase in FDI has a negative effect on unemployment rate.

H3 – there is relationship between FDI and GDP growth rate.

Table 3. Research stages and methods used for hypothesis testing

Stage	Content of stage	Hypothesis tested	Methods used
Preparatory	Collecting and systematization of data		Data collection and sampling
1	Investigation impact of GDP growth rate on unemployment rate. Testing stationarity and structural breaks in data sets. Evaluation of cointegration and causality of this relationship.	H1	ADF test / CUSUM test / ARDL test / Granger causality test
2	Investigation effect of FDI on unemployment rate. Testing stationarity and structural breaks in data sets. Evaluation of		ADF test / CUSUM test / ARDL test /

	cointegration and causality of this relationship.	H2	Granger causality test
3	Analysis of relationship between FDI and GDP growth rate in Turkey. Assessment of statistical significance of this relationship.	H3	Granger causality test
4	Interpretation of the results obtained		Dynamic analysis

Note: compiled by author

3.2. Estimation and Discussion

ADF Test FDI

Firstly, we testing FDI in Eviews. We can see that ADF probability is higher than 0.05 and absolute value of t-Statistic is lower than 1% and 5% level. It shows that there is not stationarity.

Table 4. Foreign Direct Investment - ADF Test
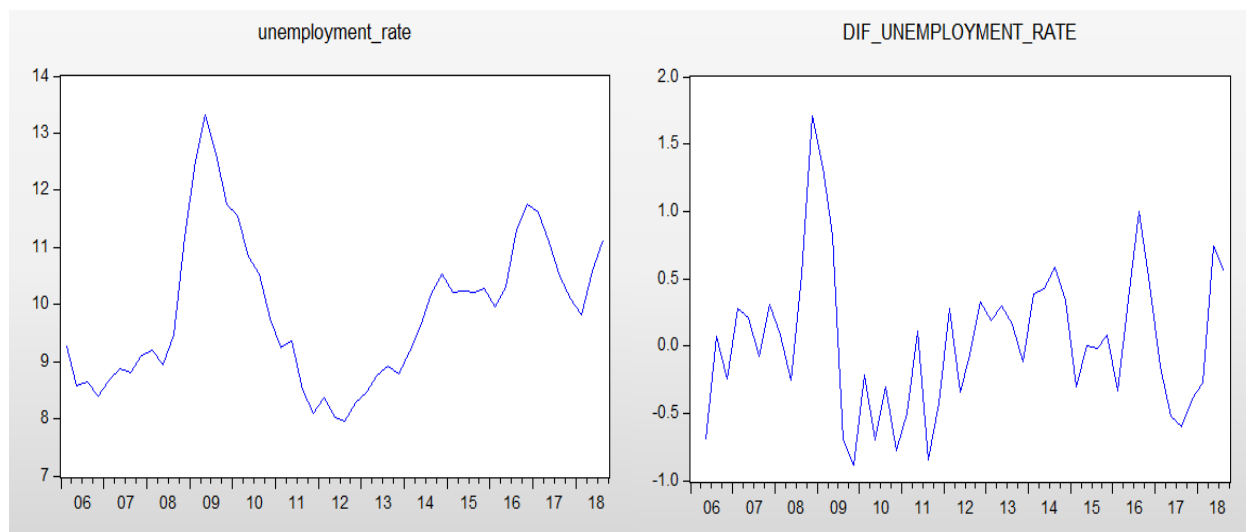
Null Hypothesis: FDI has a unit root

Exogenous: None

Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.626515	0.0973
Test critical values:	1% level	-2.612033	
	5% level	-1.947520	
	10% level	-1.612650	

*MacKinnon (1996) one-sided p-values.

Source: compiled by author Eviews

Adding trend and intercept for stationarity. ADF probability lower than 0.05, t-statistics value is lower than 1%, 5%, 10% level and absolute value of t-statistics is higher than 1%, 5%, 10% level.

Table 5. Foreign Direct Investment - ADF Test (after adding trend and intercept)

Null Hypothesis: FDI has a unit root		
Exogenous: Constant, Linear Trend		
Lag Length: 0 (Automatic - based on SIC, maxlag=10)		
	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.726049	0.0001
Test critical values: 1% level	-4.152511	
5% level	-3.502373	
10% level	-3.180699	
*MacKinnon (1996) one-sided p-values.		

Note: compiled by author Eviews

Figure 15. FDI graph
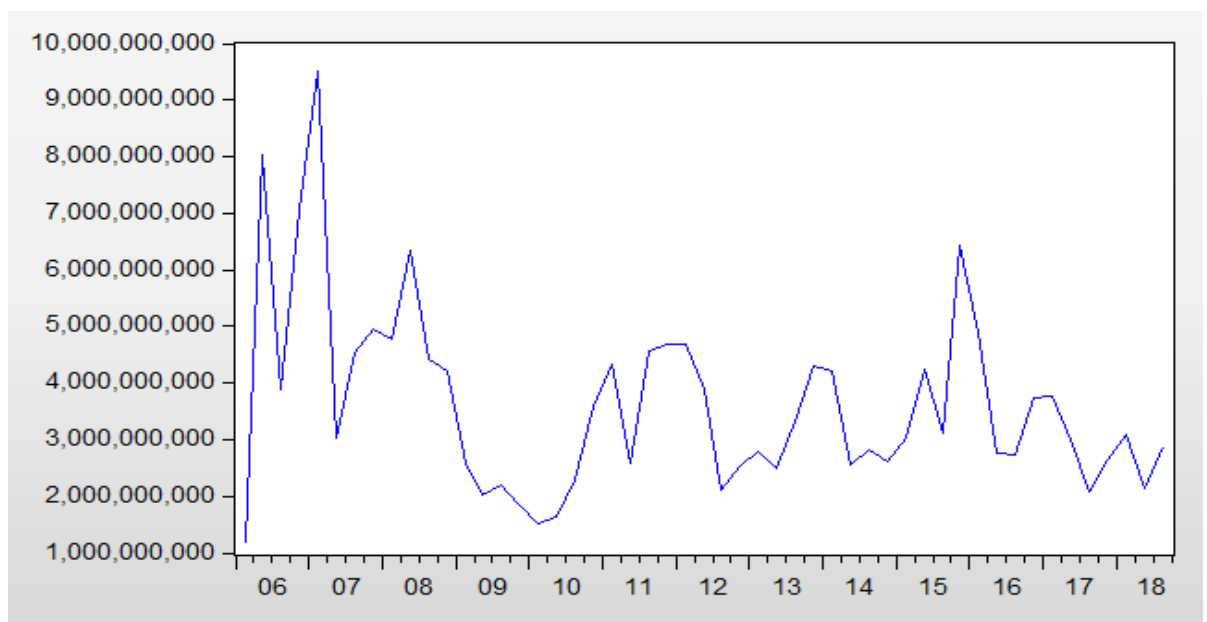
Source: compiled by author Eviews

ADF Test Unemployment Rate

ADF Testing of Unemployment rate shows that it is not stationary. If we add intercept and trend it will remain unstationary.

Table 6. Unemployment rate ADF test

Null Hypothesis: UNEMPLOYMENT_RATE has a unit root			
Exogenous: Constant, Linear Trend			
Lag Length: 1 (Automatic - based on SIC, maxlag=10)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.802348	0.2035
Test critical values:	1% level	-4.156734	
	5% level	-3.504330	
	10% level	-3.181826	
*MacKinnon (1996) one-sided p-values.			

Note: compiled by author Eviews

For stabilizing series we testing Unemployment rate with the 1st difference and results show that data will be stationary.

Table 7. Unemployment rate ADF test with 1st difference

Null Hypothesis: D(UNEMPLOYMENT_RATE) has a unit root			
Exogenous: None			
Lag Length: 0 (Automatic - based on SIC, maxlag=10)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.959179	0.0002
Test critical values:	1% level	-2.613010	
	5% level	-1.947665	
	10% level	-1.612573	

If we compare the graph of FDI before and after differencing we can see the change of graph.

Figure 16. Change of Unemployment rate graph with the 1st difference

Source: compiled by author Eviews

ADF Test GDP Growth Rate

Testing ADF GDP Growth rate with Eviews and analysing graph resulting that there is stationarity.

Table 8. GDP growth rate ADF test

Null Hypothesis: GDP_GROWTH_RATE has a unit root		t-Statistic	Prob.*
Exogenous: None			
Lag Length: 1 (Automatic – based on SIC, maxlag=10)			
Augmented Dickey-Fuller test statistic		-3.820179	0.0003
Test critical values:	1% level	-2.613010	
	5% level	-1.947665	

10% level	-1.612573

*MacKinnon (1996) one-sided p-values.

Figure 17. GDP Growth rate graph
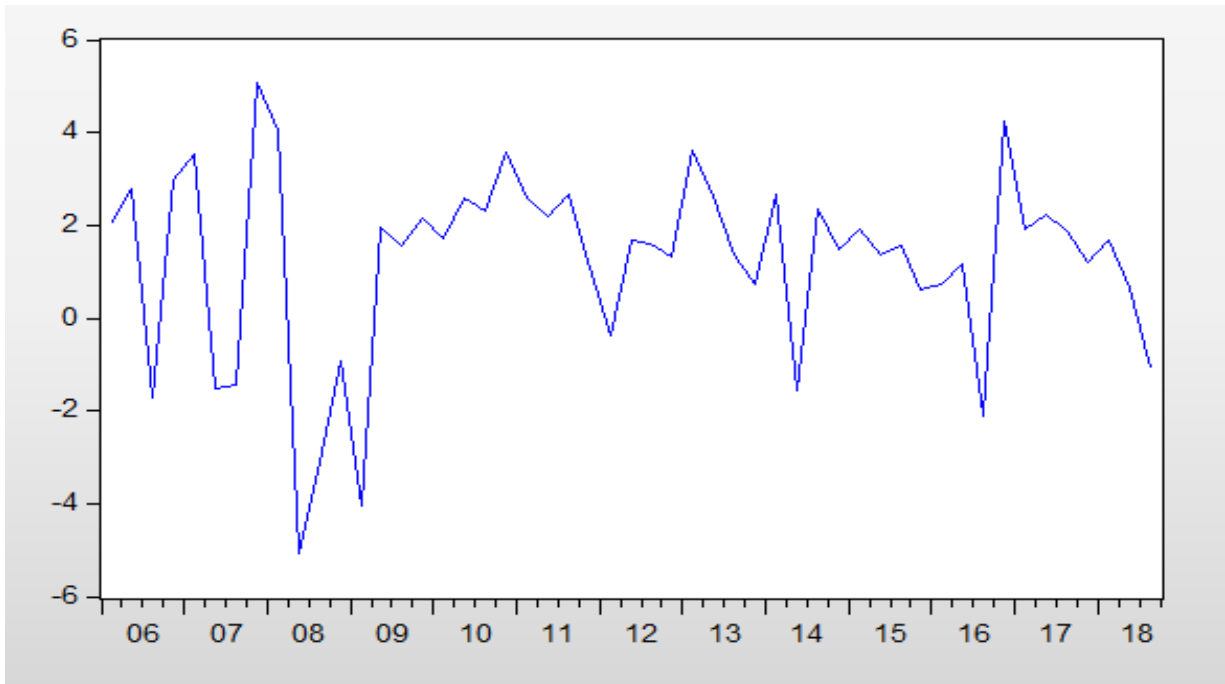
ARDL- Cointegration test

Firstly we must determine lag length for doing ARDL Test. Using VAR model detecting lag selection criteria for 2 lag.

Table 9. VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria
Endogenous variables: DIF_UNEMPLOYMENT_RATE
Exogenous variables: C D(FDI) D(GDP_GROWTH_RATE)
Date: 01/26/19   Time: 17:57
Sample: 2006Q1 2018Q3

Included observations: 42

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-34.64181	NA	0.351633	1.792467	1.916587	1.837962
1	-26.98209	13.86046*	0.256158	1.475338	1.641463	1.535997
2	-25.12655	3.269288	0.246069*	1.434597*	1.640830*	1.510422*
3	-25.05367	0.124926	0.257390	1.478746	1.726985	1.569736
4	-24.57412	0.799261	0.264158	1.503529	1.793141	1.609684
5	-24.01205	0.910016	0.270148	1.524383	1.855368	1.645702
6	-23.12930	1.387175	0.272215	1.529967	1.902324	1.666451
7	-22.41147	1.093831	0.276607	1.543404	1.957134	1.695052
8	-21.95723	0.670552	0.284794	1.569392	2.024496	1.736205

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Note: compiled by author Eviews

Then doing ARDL Test results indicate that probability of GDP growth rate is lower than 0.05 it means that it is significant. But FDI probability is high and it means there is no effect of FDI change to unemployment rate.

Table 10. ARDL Test

Dependent Variable: DIF_UNEMPLOYMENT_RATE

Method: ARDL

Date: 01/27/19   Time: 18:19

Sample (adjusted): 2006Q4 2018Q3

Included observations: 48 after adjustments

Maximum dependent lags: 2 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (2 lags, automatic): GDP_GROWTH_RATE FDI

Fixed regressors: C

Number of models evalulated: 18

Selected Model: ARDL(2, 2, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DIF_UNEMPLOYMENT_RATE(-1)	0.288683	0.144708	1.994928	0.0427
DIF_UNEMPLOYMENT_RATE(-2)	-0.231501	0.125835	-1.839724	0.0731
GDP_GROWTH_RATE	-0.081699	0.029711	-2.749802	0.0088
GDP_GROWTH_RATE(-1)	-0.081223	0.029654	-2.738965	0.0091
GDP_GROWTH_RATE(-2)	-0.097754	0.032320	-3.024529	0.0043
FDI	-4.86E-13	3.79E-11	-0.012830	0.9898
C	0.368775	0.166623	2.213239	0.0325

R-squared	0.542766	Mean dependent var		0.051788
Adjusted R-squared	0.475854	S.D. dependent var		0.547172
S.E. of regression	0.396141	Akaike info criterion		1.119946
Sum squared resid	6.434047	Schwarz criterion		1.392830
Log likelihood	-19.87872	Hannan-Quinn criter.		1.223070
F-statistic	8.111609	Durbin-Watson stat		1.967060
Prob(F-statistic)	0.000008			

*Note: p-values and any subsequent tests do not account for model selection.

Note: compiled by author Eviews

We are doing CUSUM test for checking there is structural break or not. In our chart, there is no deviation from the 5% interval and the values have changed over time, indicating that there is no structural break.

Figure 18. CUSUM Test
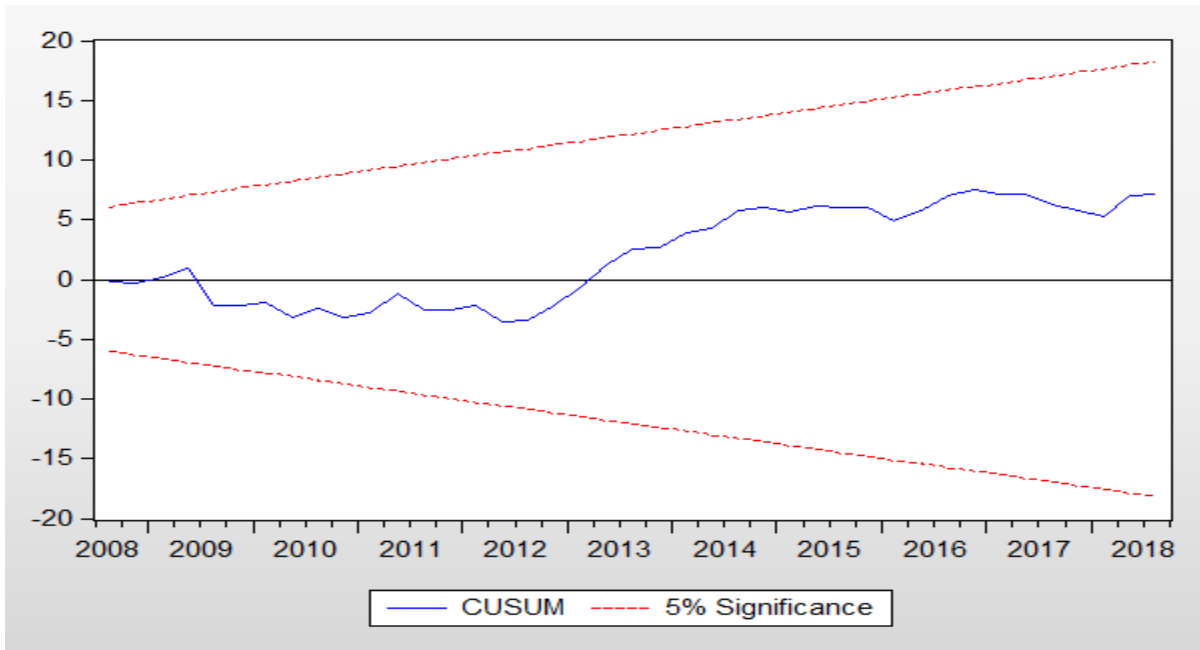
F-Bounds test checking cointegration in the variables. As can be seen in the table, the calculated F statistic value was found to be 10,35617. Since this value is greater than the upper level of the critical value I (1), it is concluded that rejection of the H0 hypothesis (there is no co-integration in the series) and that there is cointegration between the series.

Table 11. F-Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	10.35617	10%	2.63	3.35
k	2	5%	3.1	3.87
		2.5%	3.55	4.38
		1%	4.13	5

ARDL Error Correction Form help us to find long run relationship between variables. We see that CointEq(-1)* is negative and it is significant. From these we understanding that there is long run relationship.

Table 12. ARDL Error Correction Regression

ARDL Error Correction Regression
Dependent Variable: D(DIF_UNEMPLOYMENT_RATE)
Selected Model: ARDL(2, 2, 0)
Case 2: Restricted Constant and No Trend
Date: 01/27/19   Time: 18:12
Sample: 2006Q1 2018Q3
Included observations: 48

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DIF_UNEMPLOYMENT_R ATE(-1))	0.231501	0.114000	2.030714	0.0488
D(GDP_GROWTH_RATE)	-0.081699	0.024144	-3.383813	0.0016
D(GDP_GROWTH_RATE(-1))	0.097754	0.028514	3.428215	0.0014
CointEq(-1)*	-0.942818	0.141405	-6.667515	0.0000

Granger Causality Test

Doing Granger Causality Test we can analyse the causality among the variables (GDP growth rate, unemployment and FDI). We can see from the results:

- FDI Granger cause to GDP Growth rate (probability=0.021 lower than 0.05)
- GDP Growth rate Granger cause to unemployment rate (probability=0.005 lower than 0.05)
- There is not relationship between FDI and unemployment rate (probabilities are higher than 0.05)

Table 13. Granger Causality Test - FDI, Unemployment rate, GDP growth rate

Pairwise Granger Causality Tests
Date: 01/27/19   Time: 16:43
Sample: 2006Q1 2018Q3
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause DIF_UNEMPLOYMENT_RATE	48	1.59444	0.2148
DIF_UNEMPLOYMENT_RATE does not Granger Cause FDI		0.24302	0.7853
GDP_GROWTH_RATE does not Granger Cause DIF_UNEMPLOYMENT_RATE	48	5.99789	0.0050
DIF_UNEMPLOYMENT_RATE does not Granger Cause GDP_GROWTH_RATE		2.09179	0.1359
GDP_GROWTH_RATE does not Granger Cause FDI	49	0.05639	0.9452
FDI does not Granger Cause GDP_GROWTH_RATE		4.22380	0.0210

Note: compiled by author Eviews

In Figure 19 showing causality effects of variables with axes.

Figure 19. Causality between FDI, Unemployment rate and GDP growth rate
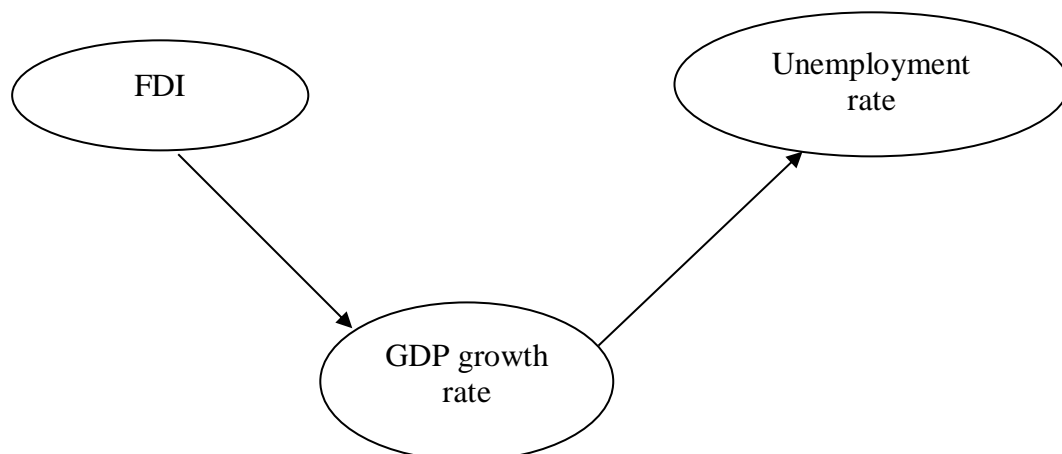
Source: compiled by author

Hypotheses results

H1 – an increase in GDP growth rate has a negative effect on unemployment rate - ACCEPTED

Based on ARDL Test result (coefficient: -0.081699) there is short and long run negative relationship between GDP growth rate and unemployment rate. From Granger Causality Test we found that GDP Growth rate has effect on unemployment.

H2 – an increase in FDI has a negative effect on unemployment rate – REJECTED

Based on ARDL result FDI is not significant variable in model. Because probability is high than 0.05. Granger Causality shows that there is not any relationship between FDI and unemployment rate.

H3 – there is relationship between FDI and GDP growth rate - ACCEPTED

Based on Granger Causality test FDI has effect on GDP Growth rate.

Conclusions

It has become the main issue of those who are interested in economics about how to bring the economies to a scientific ground and how to move the economies of the country from the existing level to the higher levels and to increase the welfare levels of the countries. Economic science shows that each country's unique economic structure, its internal dynamics and sociological structure is an important factor in determining the level of development and prosperity of countries. The 2008 global economic crisis has adversely affected the economy of Turkey. We studied the factors which the impact on Turkey's economy has been analyzed by establishing an econometric model. In the model, foreign direct capital amount, gross domestic product growth rate and unemployment rate were used.

First of all, the unit root problem was tested, in this direction ADF test was performed. According to the result of test, it is stable at 5% for foreign direct investment and 10% for intercept and trend models. When the level values of the gross domestic product growth ratio are examined, the model was found there is stationarity. ADF test result for unemployment rate is there is not stationarity. We solving this problem with differencing.

In the second stage, for building ARDL model selected 2 lags. ARDL test result shows that increasing of GDP growth rate has negative effect on unemployment rate, but FDI has not. F-bounds test result is there is long-term relationship between GDP growth rate and unemployment rate. According to CUSUM test there is no structural break in 5% deviation.

Analysing of Granger Causality test results indicating there is no relationship between FDI and unemployment rate. FDI can cause to GDP growth rate.

In the literature review, there are many studies related to the subject and in the majority of the studies, it has been concluded that foreign direct investments have a positive effect on GDP or have a significant relationship. When considered together all the analysis of the results obtained in the post-crisis period of direct foreign investment is that there is an important role for Turkey's economy. The

increase in foreign direct investments triggers economic growth, but has not effect on unemployment. It would be correct to say that the increase in foreign direct investment, which has a very important role in increasing the gross domestic product, will be an important factor in high-speed growth in the following years. But FDI is not reason for high unemployment rate in Turkey. Rapid population growth, low female employment and inability to respond to the needs of industry is the main reasons of high unemployment in Turkey and government should give importance to these factors.

Bibliography

English

1.   Aktar, I.Ozturk, L. (2009). Can unemployment be cured by economic growth and foreign direct investment in Turkey?

2.   A.Oznur Umit and H. Isil Alkan (2016). The Effects of Foreign Direct Investments and Economic Growth on Employment and Female Employment: A Time Series Analysis With Structural Breaks For Turkey

3.   Adda, Jacques. (2002). Globalization of economy

4.   Emre Aksoy (2013). Relationships between Employment and Growth from Industrial Perspective by Considering Employment Incentives: The Case of Turkey

5.   G.Üçler, O.Kızılkaya, Ü.Bulut (2013). The relationsip between foreign direct investments and employment: the case of Turkey for the period 1989-2011.

6.   Granger, C.W.J. (1988). Some recent developments in a concept of causality. Journal of Econometrics

7.   Grahovac, Dijana and Senad Softic. (2017). Impact of The FDI on Unemployment Rate in Countries of West Balkan.

8.   Hisarcıklılar, M. Karakaş, D.G. Aşıcı, A. C. (2009). Can FDI Be A Panacea For Unemployment? The Turkish Case, Workshop on Labour Markets, Tade and FDI.

9.   Isaac Nketsiah, Matthew Quaidoo (2017). The Effect of Foreign Direct Investment on Economic Growth in Ghana . Journal of Business and Economic Development

10.   M. Palát (2011). The impact of foreign direct investment on unemployment in Japan

11.   LEITAO, Nuno ; RASEKHI, Saeed. (2013). "The Impact of Foreign Direct Investment on Economic Growth: the Portuguese Experience"

12.   MING, Hsia. (2014). "Foreign Direct Investment, Trade and Economic Growth in Taiwan"

13. Mucuk, M., Demirsel, M. T. (2013). The effect of foreign direct investments on unemployment: Evidence from panel data for seven developing countries

14. Nwosa (2011). Causal relationship between foreign direct investment and financial development

15. Solow (1956). "Contribution to the Theory of Economic growth"

16. Yılmaz Bayar (2014). Effects of economic growth, export and foreign direct investment inflows on unemployment in Turkey.

17. YOUNUS, Hafiz; SOHAIL, Amir; AZEEM, Muhammad. (2014). "Impact of Foreign Direct Investment on Economic Growth in Pakistan"

Turkish

1. Barışık, S. Çevik, E.İ. Çevik, N.K. (2010). Türkiye'de Okun Yasası, Asimetri Ilişkisi ve Istihdam Yaratmayan Büyüme: Markov-Switching Yaklaşımı.

2. Ceylan, S. Şahin B.Y. (2010). İşsizlik ve ekonomi büyüme ilişkisinde asimetri.

3. Dilek Şahin (2015). The relationship between foreign direct investment and economic growth in Turkey: an ARDL bounds testing approach.

4. Göçer, İ.Mercan, M. Peker, O. (2013). İhracat, doğrudan yabancı yatırımlar ve işsizlik: Türkiye örneği

5. İ.N.Yalman, Ş.M.Koşaroğlu (2017). Effect on direct foreign investments on economic growth and unemployment

6. Karluk (2013). Uluslararası ekonomi: teori – politika

7. Özcan M.E. (2014). "Doğrudan Yabancı Sermaye Yatırımlarının Türkiye'nin Ekonomik Büyümesindeki Rolü: 2003 Öncesi Ve Sonrası" Galatasaray Üniversitesi Sosyal Bilimler Enstitüsü İktisat Anabilim Dalı Yüksek Lisans Tezi.

8. Seyidoglu (2015). "Uluslararası İktisat Teori Politika ve Uygulama"

9.   Soylemez, Arif; Yilmaz, Ahmet. (2012). "Türkiye Ekonomisinde Finansal Serbestleşme Döneminde Uluslararası Sermaye Girişi-Büyüme İlişkisi"

10.   Türkcan, B. (2008). "Doğrudan Yabancı Yatırımların Ekonomik Büyümeye Ve Kalkınmaya Etkileri: Panel Data Analizi"

11.   Unsal (2007). Iktisadi büyüme.

Titles of journal

1.   UNCTAD World Investment Report 2018

2.   World Employment and Social Outlook: 2018 Trends

3.   TOBB Economic report 2017

4.   Business and Economics Research Journal Volume 4, Number 1, 2013

5.   IMF World Economic Outlook

Online sources

1.   TCMB, http://evds.tcmb.gov.tr/

2.   TUİK, http://www.tuik.gov.tr/

3.   http://www.data.worldbank.org

4.   http://www.invest.gov.tr

ANNEXES

Annex 1. Empirical studies on the relationship between FDI, growth and unemployment

Research	Data sample and period	Results of research
Younus (2014)	Dataset covers the effect of foreign direct investments on economic growth in Pakistan for the period 2000-2010	Two-stage least squares method was used in the study. There is a positive relationship between economic growth and foreign direct investments. In Pakistan, it was observed that domestic investment, export and political stability were extremely important in the selection of foreign direct investment.
Gulmez (2015)	Database comprises short and long-term impact of foreign direct investment and external funding sources of foreign portfolio investment on economic growth in Turkey, 1986- 2014 period using annual data.	The findings obtained from the ARDL boundary test approach show that foreign direct investments have a positive impact on economic growth in the long run. The Toda-Yamamoto causality test results show that there is a one-way causality relationship from foreign direct capital investments to economic growth, from portfolio investments to economic growth and from portfolio investments to foreign direct investments.
Muhammad and Ijirshar (2015)	Covers the impact of foreign direct investments on economic growth in Nigeria between 1970 and 2013.	Time series analysis method was used in the study. A positive but statistically insignificant relationship was found between foreign direct investment and economic growth in the short and long-term in Nigeria.
Irpan (2016)	The impact of foreign direct investment in Malaysia on unemployment rate for 1980-2012. The study also includes variables such as the number of foreign employees, GDP and exchange rate.	Foreign direct investments, the number of foreign workers and the GDP have a significant impact on the Malaysian unemployment rate. Decrease in unemployment led to an increase in GDP production. Foreign direct investment and foreign workers have significantly reduced the unemployment rate.
Djambaska and Lozanoska (2015)	The relationship between unemployment and direct	Foreign direct investments have no statistically significant effect on

	foreign investments for Macedonia with the 1999-2013 annual data is evaluated by multiple linear regression analysis.	unemployment reduction. Inflation has an effect on unemployment, which will lead to a decrease in unemployment. In addition, the reduction of corruption will contribute to reducing unemployment as corruption has a significant impact on unemployment.
Stamatiou and Dritsakis (2014)	The data of 1970-2012, investigated the relationship between unemployment, foreign direct investment and economic growth in Greece with the ARDL and ECM-ARDL model.	The VECM Granger causality test results show that there is a strong one-way directional causality from economic growth to foreign direct investments in short-term and long-term.
Velnampy (2013)	The effects of foreign direct investments on economic growth and unemployment for Sri Lanka in 1990-2011	There is a significant relationship between economic growth and unemployment. There was no significant impact of foreign direct investment to unemployment.
Mucuk and Demirsel (2013)	Contains data 1981-2009 for developing countries, (Argentina, Chile, Colombia, the Philippines, Thailand, Turkey and Uruguay) the relationship between foreign direct investment and unemployment using panel data methods.	In all countries, foreign direct investment and unemployment are moving together in the long run. But in Turkey and in Argentina foreign direct investment increased unemployment, decreases in Thailand. Causality tests have shown that there is a long-term relationship between foreign direct investment and unemployment.
Fidangul (2014)	The relationship between foreign direct investment, GDP per capita and real exchange rate between 1980 and 2012.	Foreign direct investments have a positive effect on economic growth.

Note: compiled by author based on results of analysis of empirical researches

Annex 2.

A. Growth

B. Export growth

Annex 3.

A. GDP growth
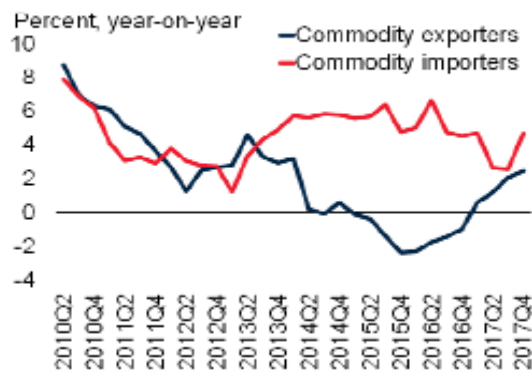
B. Investment growth
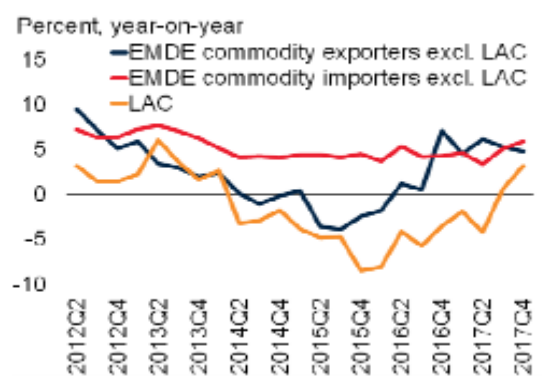
F. Export and import volume growth
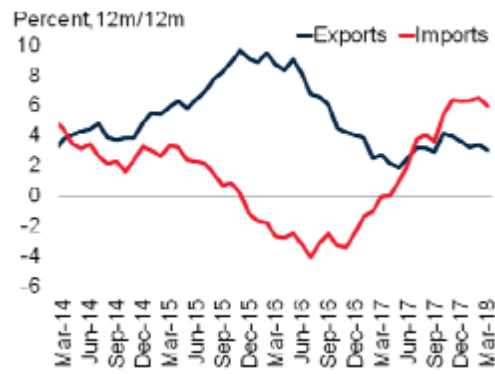
Annex 4.

A. Contribution to regional growth
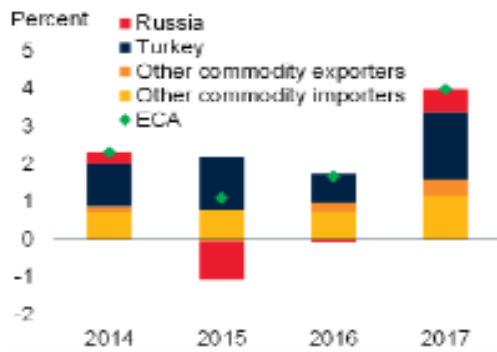
B. Bond spread for Russia after sanction
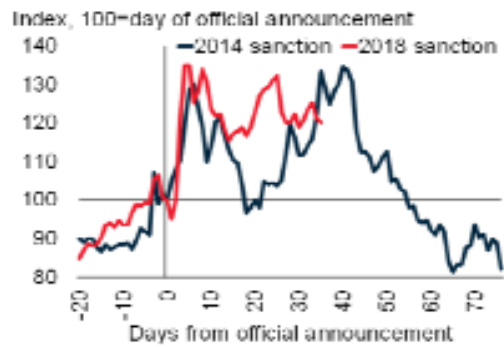
Annex 5.

A. Growth
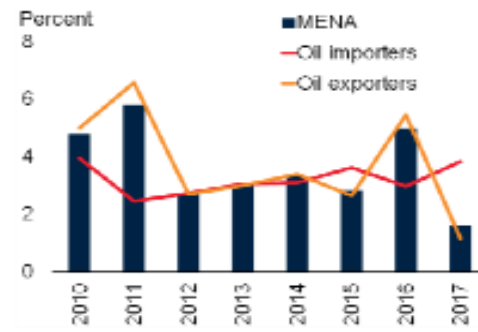
B. Fiscal break-even prices: Oil exporters
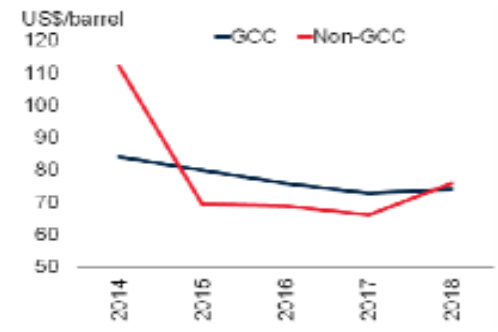
Annex 6.

A. GDP growth
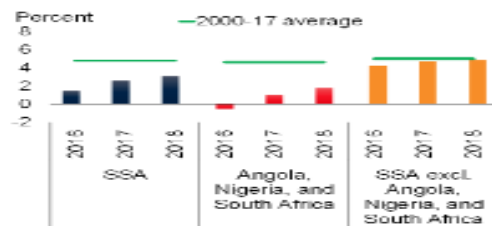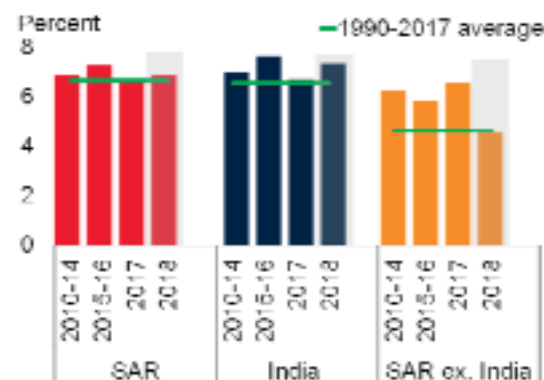

B. Oil production

C. Metals production

D. Investment growth

Annex 7.

A. GDP growth

B. Exports

LIST OF TABLES

LIST OF FIGURES