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DISCUSSIONS BETWEEN ECONOMIC AGENTS:

Trade Policy, Exchange Rates and Growth

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Discussions between Economic Agents:

Trade Policy, Exchange Rates and Growth

This book is the second one of “Discussions between Economic Agents” series. The key words; exchange rates, trade policy and growth are totally related each other. At the beginning of the 1980s, most of the world countries together with Turkey began to open up to the rest of the world. This was the end of the protectionism so trade policy literature has developed since these years. The main reason for this liberalization is to increase the role of market mechanism in the allocation of resources. Apart from this general principle, behind the financial liberalization movements in developed and developing countries, each country has its own specific reasons. Debt instability, unemployment problem, financial crisis and trade competitiveness are some important issues. In this context, the articles mentioned in the following paragraphs are discussed together. There are seven valuable works in the book.

In the first chapter of the book, Nuru GIRITLI prepared an analysis with the annual data from 2007-2017 in the study named “Recent Macroeconomic Performance, Labor Market Conditions and Unemployment in Ethiopia”. Ethiopia’s leading growth performance is described by various type of macroeconomic variables. Current macroeconomic performance and the labor market conditions in Ethiopia shows that the problem of youth unemployment is almost solved.

In the second chapter, Hakan ONER in his work called “2001-2019 Period Exchange Rate Policies of the CBRT in Chronological Order”, examined the exchange rate policies of the Central Bank of the Republic of Turkey in 2001-2019 period by chronologically in four parts. This study, which was compiled from the Central Bank's Money and Exchange Rate Policy reports, once again demonstrated the fact that the flexible exchange rate system would be intervened only when needed.

In the third part of the book, Gokhan KARTAL, the author of the study called “An Empirical Evidence on the Validity of The

Marshall Lerner Condition in Turkey: An Application of ARDL Bound Testing Approach", analyzed the time series data with ARDL approach using the annual data in the period of 1996-2017. In this study, the validity of the Marshall Lerner condition is tested for Turkey. Export and import demand elasticities have been computed using the long-term coefficients so author concluded that Marshall Lerner condition for Turkey is valid in the 1996-2017.

In the fourth chapter of the book, Ayse ERGIN UNAL conducted the study named "Inflation, Exchange Rate, and Interest Rate Relationship", in which she has analyzed impact of interest rate and inflation on the exchange rate. The relationship between the three variables is simplified by the given figures such as the channels through which policy Interest rate influence current account deficits. In the study, author concluded that interest rates that are contrary to the world economic trend increase the exchange rate risk and inflation while decreasing the growth rate.

In the fifth chapter, Nazife Ozge BESER and Murat BESER conducted a panel data analysis using 995-2017 period and 7 countries in the study named "Oil Consumption, CO2 Emission and Economic Growth Relation: E7 Countries". They investigated the effect of oil consumption on economic growth for E7 countries. They found a long run relationship between the variables.

In the sixth chapter, Hasan LOK in his work called "Turkish Economy and Financial Crisis through the period 1995-2018", focused the indicators of the Turkish economy and financial crisis during the given period. This study shows that Turkey has various types of possibilities for investors. It is also a corridor for gas from east to west. In addition, the population is young enough and still younger than most of the other European countries. Together with these, it is a big market that has no

complicated bureaucracy and swift is easy to outside of the Turkey.

"The Effect of Asymmetric Information Problem on Markets" is the last chapter of the book. The authors, Ceren PEHLIVAN and Rabia EFEOOGLU, examined the asymmetric information problem with an historical view. They also discussed the relationship between factor market and exchange rate market from the aspect of asymmetric information.

Assoc. Prof. Okyay UCAN

4 DISCUSSIONS BETWEEN ECONOMIC AGENTS: TRADE POLICY, EXCHANGE RATES AND GROWTH

CHAPTER 1:

Recent Macroeconomic Performance, Labor Market Conditions and Unemployment in Ethiopia

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INTRODUCTION

Ethiopia is one of the fastest growing countries in the world. The radical changes of policies and administrative changes within the framework of the Growth and Transformation Plan (GTP), Plan for Accelerated and Sustained Development to End Poverty (PASDEP), Technical and Vocational Education & Training (TVET) and Climate Resilient Green Economy (CRGE) since 2002 have had a positive impact on both the economy and the labor market in Ethiopia. The aim of the plans were to meet the Millennium Development Goals (MDG) in 2015 and bring Ethiopia to the level of middle-income countries in the long term between 2020 and 2023. The implementation of plans and thus changes in economic structure affected the economy positively. Ethiopia's GDP was $79.7 billion in 2017 according to International Monetary Fund (IMF). Population growth by the year 2017 in urban and rural areas was 4.67 and 1.90 percent respectively and per capita income in the country is around $850. Ethiopia, which has been pursuing an active policy to improve its economic and commercial relations with other countries, has become a member of many international organizations and has signed bilateral agreements with many countries. Ethiopia, which has close relations with credit institutions such as IMF, World Bank and African Development Bank, is pursuing a free market economy. The previous “command system” is replaced by “free market” economy which allows the local firms invest freely, enjoy the opportunities and earn profit. However, foreign investors are now attracted to invest in capital in Ethiopia, where capital was limited before the structural changes took place in the economy.

Structural transformation in Ethiopia benefited the country's economic performance positively but the employment opportunities in the country are still limited. Although there is not realistic data on Ethiopia's employment figures, it is known as one of the countries where unemployment is the most intense in the world. The high level of the young population in the country leads to a very high number of people who look for job opportunities, increasing the unemployment rate. The positive economic developments in Ethiopia and the practices related to the unemployment problems in Ethiopia are therefore attracted by most researchers. The scope of the chapter is to identify the factors that affect youth unemployment in Ethiopia and to evaluate the current policy intervention tools used by the policy makers to improve labor market conditions in decreasing the youth unemployment.

The first section of this chapter presents the background of Ethiopian economy in general. This section is particularly concerned with the concepts as size of the economy, sectoral structure, poverty, urbanization and unemployment. Then the next section of the chapter presents the labor market dynamics and characteristics of youth participation in the labor market by examining employment policies and strategies of youth and adult employment. Finally, the conclusions and recommendations are given in the last section.

Overview of the Ethiopian Economy

The main macroeconomic indicators summarized in Table 1 show that economic growth averaged around 10 percent and per capita

growth in real GDP shows a significant increase from 0.05 percent to 7.56 percent from 1997 to 2017.

Economic reforms and stabilization policies in the form of domestic credit expansion to finance private investments in Ethiopia successfully accelerated the economic growth. To finance public investments, foreign borrowing increased and thus demands for imports and foreign exchange increased. At the same time, through the expansionary fiscal policy, workers' wages and transfers increased. To finance these expenditures, current account deficit increased through the drawdown of official foreign exchange reserves and hence, the economic growth was accompanied by a real exchange rate appreciation by 14 percent from 2004 to 2007, as nominal exchange rates were kept almost constant while domestic inflation increased to 17.24 percent (Dorosh, at al. 2009). Although inflation has slowed substantially since then, real exchange rate appreciation by 14 percent widened the trade deficit. The numbers of organized industrial zones are established to increase exports and to attract foreign investors but changes in the global market challenged the GTP targets and hence, depletion of foreign currencies held by Ethiopia decreased the revenues from export commodities.

Although there have been a great amount of investments in industry in recent years, the country emigrates to other countries, especially Europe and the United States to escape political violence and a significant portion of Ethiopian migrants in the post 1990 period are destined to the oil rich Gulf countries and the Republic

of South Africa due to internal political changes that took place in Ethiopia. (Kefale and Zerihun Mohammed 2015).

In Ethiopia, where more than 40 million employees are in the labor force, the agricultural sector has the greatest employment in the country and has a very important place in the economy. Approximately 80 percent of total employment is employed in the agricultural sector (Table 1). After the agriculture sector, the services sector is in the second place with 13 percent share, while the highly underserved industrial sector contributes to the employment with 7 percent share (Cochrane and Bekele 2018). In Ethiopia, the employment opportunities are limited due to the fact that the industry and services sector have not been developed as anticipated. The high level of the young population in the country leads to a very high number of people who can work. Inadequate level of education in the country limits the amount of trained staff members and thus the vast majority of job seekers are unskilled.

However, both economic growth and structural shifts have important implications for poverty reduction and equitable income distribution in Ethiopia. According to (Lie & Mesfin 2018) and (Dorosh & Thurlow 2009) mainly three major indicators influenced the economic growth and income distribution, poverty and labor market positively.

- Investment on infrastructure and buildings has generated growth in construction sector and led to higher employment of

urban youth and rural migrants in construction together with sub-sectors.

- The agricultural sector played a major role in the rapid economic growth such that increased efforts in agricultural extension, good weather and improved transport and telecommunications infrastructure contributed to agricultural productivity and overall production.
- Finally, demand for goods and services increased through the expansion of employment and productivity especially in agricultural sector and the role of agriculture has decreased continuously against the increasing role of the services and construction sectors. This has led to reallocation of jobs and labor from the low-productive agriculture sectors in rural areas to the high-productive service sectors in urban areas.

Despite the positive improvements in major macroeconomic indicators, terms of trade had the worst performance over the last decade. As shown in Table 1, current account deficit as percentage of GDP increased from -4.20 to -11.33 as percentage of GDP, exports declined from 16.68 percent to 7.74 percent from 2011 to 2017 according to (World Bank 2018). Deterioration of current account deficit shows a large amount of imbalance between the import and export volumes in Ethiopia. It seems there are mainly two reasons for the disappointing performance of the exports; appreciation of the real exchange rate and high inflation rate as shown in Table 1.

Table 1. Main Macroeconomic Indicators and Social Statistics

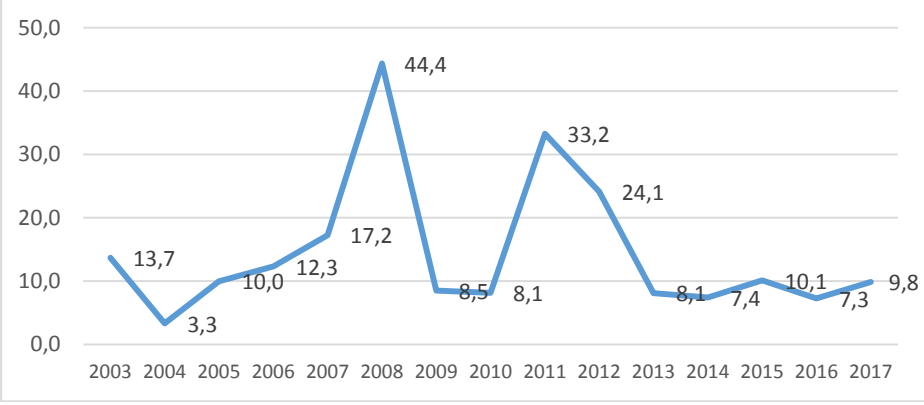
	1997	2007	2017
Urban Population Growth (annual %)	4.31	4.04	4.67
Rural Population Growth (annual %)	2.82	2.43	1.90
Population			104,957,438
Rural Population			83,640,582
Real GDP growth rate	3.13	11.46	10.25
Annual GDP per capita growth	0.05	8.49	7.56
GDP per capita (constant 2010 US$)	199.11	272.39	549.84
Unemployment rate	6.4	5.30	5.20
Labor Force Participation Rate (age 15+)	79.77	84.26	82.46
Inflation Rate (CPI)	2.39	17.24	9.85
Current Account Balance (% of GDP)	-0.47	-4.20	-11.33
Official Exchange Rate (Birr / US$)	6.71	8.97	21.73*
External debt stocks (% of GNI)	118.82	13.46	31.97
Poverty Rate at $1.90/day (2011 PPP) (%of population)	55.55	36.4	26.7
Poverty Rate at $5.50/day (2011 PPP) (% of population)	97.3	93.1	84.7

Source: *World Bank Data*

In the majority of emerging economies, chronic structural problems and high rates of inflation distorts the relative prices, discourages investment and technological changes and financial and political instabilities increase uncertainty, and thus stands in the way of sustainable growth in the economy (Polachek & Sevastianova 2010), (Yua & Wang 2013) and (Ashraf at al. 2015). Inflation means persistent growth in general price level over a period of time and effects of inflation are not always negative. Mild inflation stimulates production, employment and income. It also creates positive business expectations, stimulating investment and initiating full employment. The majority of the developing countries' main problem is a hyperinflation and policies often blamed for crises and poor macroeconomic performance include excessive government spending, high inflation, and overvalued exchange rates which discourages saving and hence investments (Lie & Mesfin 2018). Hyperinflation increases speculation

among investors, generating uncertainty, confusion and unfulfilled expectations. It also leads to inefficiency, lowering productivity and hence results in a misallocation of resources, price instability, low quality of products and less production (Lehmann 2007). The Ethiopian economy is experiencing historically high inflation rates and the consequences of high inflation are severe on goods market factors market and financial markets (Mundell 1963), (Gregorio 1993) and Fisher (1993). Chart 1 below present the annual inflation rate in Ethiopia between 2007 and 2017.

Chart 1. Inflation in Ethiopia



Source: *World Bank*

Ethiopia experienced single digit inflation before 2003 except in the years of supply shocks and war. In 2004, inflation rate decreased to 3.3 percent from 13.7 percent. From 2004, inflation rate started to increase rapidly and reached its highest rate of 44 percent in 2014. The average inflation rate base on 10 years period was 17.5 percent, indicating that Ethiopian economy's inflation rate is historically high. A high inflation during this period include accommodating monetary policy, agricultural supply shock and imported inflation

due to the rise in international prices (Durevall et. al. 2013). Inflation slowed down with global recession and climbed to 33.2 percent in 2011. With the implementation of policies mentioned above, inflation slowed down in recent years and with an average of 8 percent and it has been stable.

The Effect of the Structural Change on Sectors and Different Skill Groups

Overall economic development and efficiency of the urban labor market are key factors of the structural transformation in Ethiopia. As noted by (World Bank 2016), the urban space plays a key role to advance structural change in Ethiopia when focusing on industrial development and innovation. Recent efforts following these changes diversified the economic activities towards manufacturing, industry and services sectors and ensured more efficiency in production and hence, sustainable growth. It is expected that while a production structure that becomes increasingly flexible, economic growth will create more job opportunities in future as suggested by (Shimer 2005). Moreover, the multi-structure characteristic of the labor market will cause the unemployed to work marginally especially in urban areas while the size of informal employment is expected to increase. The number of workers and their share in total employed in three main industries in 2017 is that, 68 percent of the workers are employed in agriculture, 23 percent of the workers are in services and 9 percent of the workers are employed in industry sectors according to (World Bank 2017).

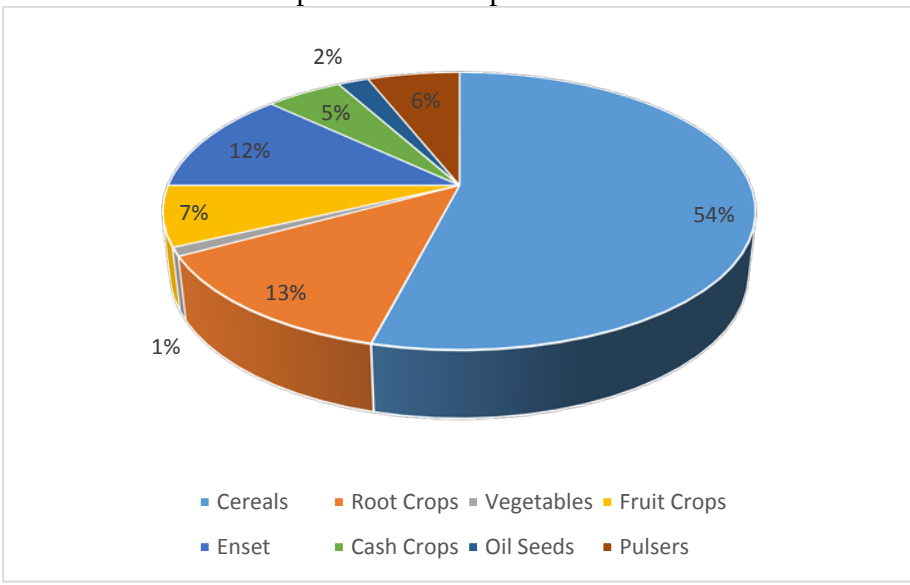
Considering the structural characteristics of the jobs created in the service sectors, they are more knowledge-intensive and hence wages are relatively higher. The earnings gap between skilled and unskilled workers in Ethiopia can thus widen. The study by (Seid at al. 2015) explores related social and economic changes that have affected employment of both skilled and unskilled workers including population growth and its demographic structure, the expansion of education, returns to education, and the role of the public sector and social protection programs in employment. Ethiopia has seen patterns of economic transformation that have directly affected its labor market, particularly the earnings of the urban sector. Real wages have shown large increases across the distribution, where the increase in wage is relatively higher for skilled workers (Byiers et al. 2015).

Although Ethiopia is one of the fastest growing African countries years it is known as one of the poorest countries in the world. As shown in Table 1, 26.7 percent of the population is below the poverty rate of $1.90/day and with 549.84 US dollars per capita GDP in 2017. The country's economy is based on agricultural production and 80 percent of the population lives in the countryside (Table 1). The agricultural sector market is segmented based on major cereals, cash, roots and food crops, oilseeds, fruits, pulses and vegetables.

However, the main industrial branches are also based on agriculture sector such as canning, sugar and weaving factories which

are the sub sectors of agriculture. Char 3 below presents the crop and vegetable production within agriculture sector which accounts for three-quarters of value added of agricultural production.

Chart 3. Share of Crops in Total Crop Production in 2017



Source: *World Bank Data*

Although ecological problems such as seasonal drought, soil degeneration, destruction of forests and high population density have a negative impact on the agricultural industry in Ethiopia, agriculture sector is the main source of employment and positive growth in the country. Developments in the agricultural sector and in the agricultural-based industrial sectors affect the overall economy positively and it is expected that GDP will increase in Ethiopia in the coming years. Table 2 below shows shares of employment of the main sectors in GDP.

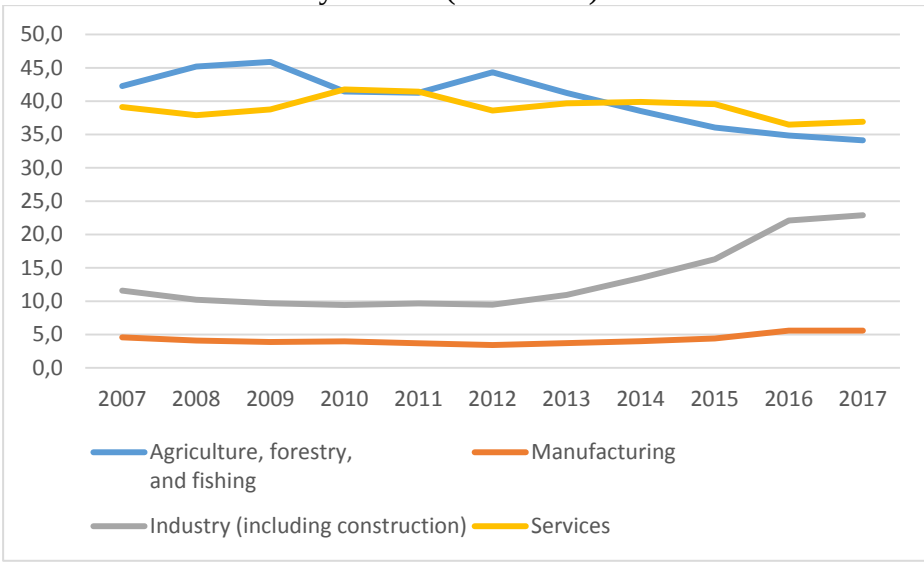
Table 2. Employment by Main Sectors

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Services	14.0	14.5	15.0	16.6	17.4	17.8	19.9	20.7	21.5	22.0	22.4
Industry	6.5	6.3	6.3	6.3	7.1	7.3	7.4	8.0	8.6	9.0	9.4
Agriculture	79.5	79.2	78.7	77.2	75.5	74.9	72.7	71.4	69.9	69.0	68.2

Source: World Bank, 2017

Although services sector is the major sector contributing to GDP the majority of the workforce is employed by the agriculture sector. Although the share of employment in agriculture has shown a decreasing trend for the last ten years, a modest shift in labor from agriculture to services and industry sectors explains a structural change in Ethiopia which resulted in positive economic growth over the past decade (Table 3). In Chart 3, positive effect of the structural change in industry and service sectors is presented. In 2013 and 2014, value added of the industry sector accounted for 15 percent of GDP while agriculture was 40 percent. By the beginning of 2016 to the end of 2017, the value added of the industry nearly doubled, services exceeded the agriculture sector's value added with 36.9 percent while the share of agriculture decreased to 35 percent according to World Bank estimates.

Chart 3. Value Added by Sectors (% of GDP)



Source: *World Bank, 2017*

Table 3. Value Added by Sectors (% of GDP)

	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Agriculture, forestry, and fishing	42.3	45.2	45.9	41.4	41.2	44.3	41.2	38.5	36.1	34.8	34.1
Manufacturing	4.6	4.1	3.9	4.0	3.7	3.4	3.7	4.0	4.4	5.6	5.6
Industry (including construction)	11.6	10.2	9.7	9.4	9.7	9.5	10.9	13.5	16.3	22.1	22.9
Services	39.1	37.9	38.8	41.8	41.4	38.6	39.7	39.9	39.5	36.5	36.9

Source: *World Bank, 2017*

Effect of the Structural Change on Poverty

Ethiopia is still among the least developed countries in the world despite the positive developments in agriculture, industry and service sectors. While the performance of the economy continues to grow, the poverty headcount under the national poverty line decreased

considerably from 55.55 percent at $1.90/day in 1997 to 26.7 percent in 2017. While the 26.7 percent of the population is suffering from poverty and faced with widespread unemployment and inequality, structural changes remain insufficient to solve the problem of poverty. The impoverishment of people who is lack of a certain income is primarily due to the fact that they do not work. Hence, the unemployment problem is the greatest threat to countries' economic development and stabilization goals.

Most people in Ethiopia live in rural areas where poverty is higher than in urban areas. Poverty in rural areas with 39.3 percent than in urban areas with 35.1 percent (Jayamohan & Kitesa 2014). Poverty is also deeper and harder to cope with in rural areas. Lack of availability of sufficiently productive land and limited employment opportunities in rural areas are the most common cause of rural-urban migration according to (Atanafu at al. 2014). Internal migration flows in Ethiopia over the last few decades have been driven by economic, climatic and political factors, including drought, war, political turmoil, forced migrations and poverty according to (Berhanu and White 2000) and (Comenetz and Caviedes 2002). Poverty and lack of job opportunity in rural areas therefore, are the key drivers of rural residents seeking better opportunities in the cities and hence it is the main guiding element behind the relationship between economic growth and poverty in the context of unemployment. Therefore, it is of great importance to assess the poverty problem in terms of the labor market.

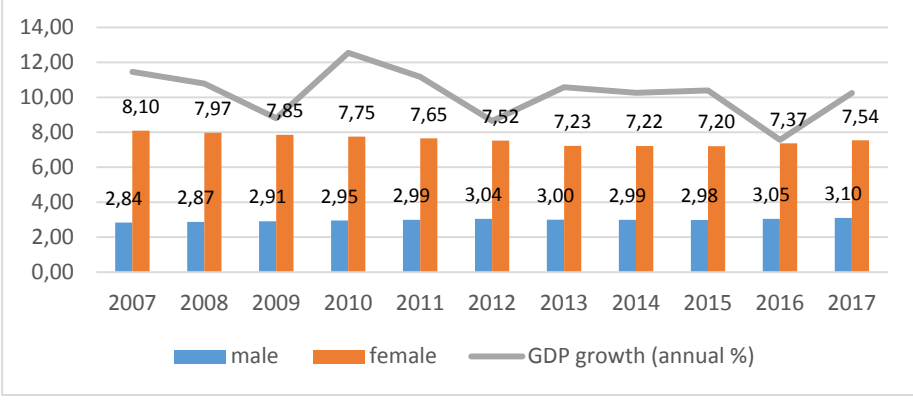
Economic Growth and Unemployment

Economic growth results from percentage increase in real GDP due to productivity growth, increase in quantity of production factors as well as increase in the employment of existing factors of production. From the complete definition of economic growth it is clear that a high growth rate is expected to reduce unemployment. Unemployment issue is among the serious political problems faced in Ethiopia and the policy makers, researches and businesses are paying great attention to this issue. Various programs such as PASDEP and GTP as part of structural reforms have been initiated to improve the labor market conditions, increase economic growth, living standards and to reduce unemployment rate for at least one and a half decade but despite these efforts the economy is struggling to produce equitable job opportunities in line with growing labor supply (Ali & Kaushik 2014). However, according to the author, there are no reliable data on unemployment. Statistics produced by the Ministry of Labor and Social Affairs appear seriously incomplete and thus there is no official unemployment rate and actual unemployment among youth may be as high as 60 percent.

In general, unemployment is caused by many combination of factors such as insufficient total demand, technical development, and work stability, costs of information, cyclical movement of industries, union power and periodic features of jobs (Rodenburg 2004).The problem of unemployment is costly and there are economic and social consequences of that.

Although general unemployment rate have been decreasing for the last two decades in Ethiopia, there are large disparities between the unemployment rate of urban and rural areas, between female and male and between adults and youth workers. Chart 4 below presents the unemployment rate disparity between female and male. Unemployment rate between female groups is twice as higher compare to male according to World Bank data. Neither the disparity between male and female workforce nor the overall rate of unemployment seems affected from the boom and bust periods of the economy and hence, unemployment rates in both genders changed slightly over time.

Chart 4. Economic Growth and Unemployment Rate According to Gender



Source: *World Bank, 2017*

Unemployment is likely to increase when the labor market is inefficient despite industrial development, innovation and structural change. High rates of unemployment harm the social well-being too. When a person loses his or her job, there is often an immediate impact to that person's standard of living. However (Becker 1968) and (Philips

and Land 2012) empirically evidenced that unemployed are more likely to engage in criminal activities. There are numerous empirical studies investigating outcomes of being unemployed for a long time and results show that the pressure caused by unemployment on human psychology increases the stress-related diseases and increases the homicidal phenomena along with the disturbances in the value judgments of the unemployed communities (Montgomery at al. 1999), (Ferguson et al. 2001) and (Thern et al. 2017). In addition, unemployment causes a waste of resources while the economy leads to grow below the potential growth level. An example of a waste of resources caused by unemployment is the fact that people have to work only in jobs and earn wages which are not compatible with their education levels. As it is clear, it is very difficult to fully measure the negative effects of unemployment on individuals and for the society as a whole.

Labor Market Dynamics and Youth Unemployment in Ethiopia

Working age population includes both economically active and economically passive individuals. According to the Central Statistical Institute in Ethiopia, individuals over 10 years of age are included within the working age population. The labor force includes only the economically active individuals in the working age population and it is used to measure the size of the country's active working age population. Therefore when we are dealing with labor market dynamics in a particular economy we consider three basic categories in the framework of the working age population: number of employed, number of unemployed and those not in the workforce.

General Unemployment Rate

Unemployment occurs when a person who is actively searching for employment is unable to find work. The most frequent measure of unemployment is the unemployment rate, which is the number of unemployed people divided by the number of people in the labor force.

Labor Force Participation Rate

The labor force participation rate is the measure to evaluate working-age population in an economy. The participation rate refers to the total number of people or individuals who are currently employed or in search of a job. People who are not looking for a job such as full-time students, homemakers, individuals above the age of 64 etc. are not part of the data set. According to the World Bank (2017) data Ethiopia has one of the highest labor force participation rates compare to the other developing African countries. Despite the successes of structural development programs, obstacles in the labor market continue to prevent sustainable growth in the country. The World Bank estimates that about 600,000 individuals enter the Ethiopian labor force every year. However, job creation in the economy is not enough for this large number, especially with the large number of young people entering the market in coming years due to the youth bulge. The imbalance between the supply of demand for workers continuously increasing and creating long-lasting unemployment for Ethiopian young individuals. Table 4

below presents the labor force participation rates according to age group.

Table 4. Labor Force Participation Rate in Ethiopia

	1997	2007	2017
Ages 15-64	79.77	84.26	82.46
Ages 15-24	76.76	79.17	75.05
Ages 07-14	56	26	NA

Source: *World Bank, 2017*

Employment to Population Ratio

Another useful, although less widely used measure of economic performance is the employment-population ratio. A ratio of those who are of working age that relates to the overall labor force. This statistic is determined by taking the total number of individuals who are labor force employed and then dividing it by the total population. Table 5 presents the employment to population ratio. Although percentage of female employers is lower than the males the gap between them closed slightly in 2017.

Table 5. Employment to Population Ratio

	1997	2007	2017
Ages 15+	74.64	79.79	78.17
Ages 15+ (male %)	86.92	87.99	85.09
Ages 15+ (female %)	62.69	71.80	71.39

Source: *World Bank, 2017*

Youth and Children in the Workforce

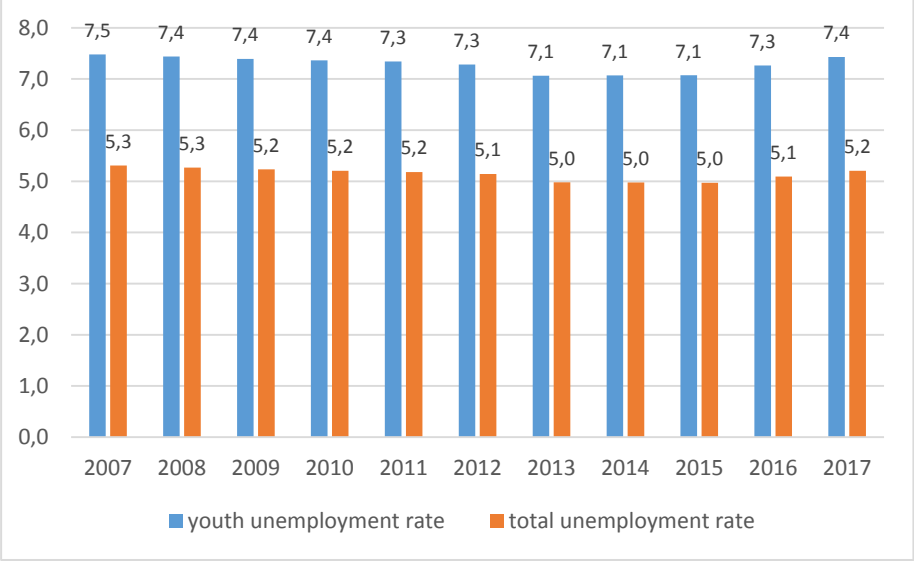
Youth unemployment is a major concern in many developing and developed countries. The youth unemployment rate is above the general

and adult unemployment rates and inability to exploit the potential of the young population brings significant costs to the countries in economic and social fields. This situation undoubtedly plays an important role in fight against youth unemployment and it is amongst the political priorities of many countries. The problem of youth unemployment or more generally, problems experienced in the young labor markets stand out with their different dimensions at global and regional level and therefore concerns all countries regardless of their level of development.

There are many factors that are considered as possible determinants of youth unemployment. Insufficient economic performance, the characteristics of labor and product markets, discrepancy between institutional rigidities, educational qualifications and skills are some of the factors of high youth unemployment in Ethiopia. Youth unemployment is one of the most critical and important problem, where the two thirds of the population is younger than 25 years of age. While the labor force is growing parallel to population growth in Ethiopia, employment opportunities are insufficient to meet the needs of labor market.Although the unemployment rate declined in recent years, a continuation of the problem of accurate unemployment data,results inunderestimation labor market statistics.Significant number of research highlights that young population experiences serious problems especially in the transition from education to working life (Isengard 2003, ILO 2011, Fields 2011 and Jewell 2014). It is shown that young people face significant difficulties especially when

they move from secondary education to employment. Many young people have short spells of unemployment during their transition period as they often get trapped in unemployment and risk becoming unemployed in the long term (Kelly et al. 2012). Undoubtedly, the imbalance between social development and economic development especially in the modern sector with the loss of education-employment balance itself reveal a widespread of youth unemployment in Ethiopia. Chart 5 indicates the general unemployment versus unemployment rates of youth population between 2007 and 2017.

Chart 5. Rates of Youth Unemployment and Total Unemployment



Source: *World Bank (ILO estimates. Percentage of total labor force)*

The unemployment rates of young working age population are generally above the general unemployment rates of the total labor force. Young people's disadvantaged position in the labor market is an

important factor in youth unemployment rates. The rates of youth unemployment remained at 7.3 percent on average over a ten-year period from 2007 to 2017. From 2013 to 2015, the ratio of young unemployed people declined by 0.3 percent and this was due to positive trend in economic growth in those periods. At the global level, the ratio of youth unemployment to adult unemployment has changed slightly over time and remained stable. Another reason for the high unemployment among young people is the fact that young people, especially children, occupy an important place in the total population. In addition to that it has been suggested that the education programs are not suitable for the purposes of both agricultural and industrial development plans.

The Demographics and Health Survey (DHS) conducted by the government in 2011 showed that most children work in the family business and especially in agriculture sector. Children are also employed in the worst forms of child labor including housework. According to Socio Economic Survey (ESS 3) 2016 children workers between 7-14 age groups is 41.5 percent of the total population. However, DHS Report also states that most of the children workers are male, living in rural areas. In 2014, Ethiopia began to adopt a new policy, taking into account the intricacies of child labor. Accordingly, it has been made a number of efforts to reduce child labor by implementing various international protocols. Within the scope of policy efforts to reduce the number of child labor in the country, a large-scale education improvement project has been initiated to combat the

worst forms of child labor and it is expected that labor force participation rate of 10-14 age group children will decrease. In Ethiopia, as in other developing countries, factors leading to child labor are diverse and are linked to various factors. As stated by (Assefa 2002), the main factor of child labor in Ethiopia is poverty in the country. Children are seen as a source of income during periods of poverty. Thus, children are assigned to housework at early ages so that they support their parents at later ages. The other reason of child labor is cultural values. Ethiopian culture encourages children to acquire skills so that they join the workforce at early ages. Other reasons include school distance, lack of education, educational problems in financing the expenses of food, uniform, textbooks, etc., divorce related family corruption, war and internal turmoil, drought and resettlement, AIDS related orphanage and rapid urbanization.

The level of development, welfare systems, social and demographic structures, labor market conditions and education systems and many other factors play an important role for the key differences between the countries of their youth unemployment problem. In developing countries as Ethiopia, employment is the main link between poverty and economic growth and sustained poverty reduction would require enhancing the employment especially of the youth population. In order to address the issues of labor market, National Employment Policy and Strategy of Ethiopia (NEPS) focused on three important goals such that enhancing social welfare, accelerating economic growth, and achieving political stability.

- *Social welfare:* The ultimate impact of growth on poverty is determined by the quantity and quality of employment opportunities created. Making growth pro-poor and shared could be assisted through employment policies that address the demand, supply, and institutional dimensions of the labor market. Accordingly, the primary objective of the National Employment Policy and Strategy of Ethiopia is to provide guidelines for streamlining productive employment and decent working conditions in the country and there by promote social welfare and equity through poverty reduction.
- *Economic growth:* In addition to the social objective of welfare promotion through poverty reduction, the policy has an economic objective of accelerating and sustaining growth and development through proper utilization of the country's labor force in a productive manner as the most important resource of the country.
- *Political stability:* A mass of unemployed population, especially when such incidence is high among the educated and the youth, becomes a potential source of political and civil unrest. Employment policies and strategies contribute towards reducing and avoiding such threats by addressing both the supply and demand side of the labor market towards the creation of productive employment.

Conclusion and Recomendations

In this chapter while the macroeconomic developments through structural changes are discussed, the main emphasis was put on the Ethiopian labor market. The Ethiopian government has initiated new policies as outlined in the Plan for Accelerated and Sustained Development to end Poverty (PASDEP), Growth & Transformation Plan (GTP) and Technical and Vocational Education & Training (TVET) putting necessary emphasis on strategies for job creation. Despite these plans, unemployment problem has not shown a significant improvement especially for the youth work force. The most important reason for the high unemployment rate in Ethiopia is high population growth, insufficient entrepreneurship and innovation activities and poor quality in education. However, unemployment rates are underestimated due to lack of comprehensive, adequately disaggregated and consistent time serried data on employment and unemployment and thus, labor force figures are not in line with economic growth. According to National Employment Policy & Strategy of Ethiopia, the Central Statistical Agency (CSA) provides labor force and related data from surveys of varying scope conducted since the mid-1970s and the data is complemented by the 1984, 1994 and 2007 Population and Housing Censuses and the results of these survey programs have not been comparable to enable researchers consistently track developments in the labor market. Critical analysis on labor market dynamics show that positive economic growth trend does not benefit the labor market as expected. However, there are difficulties in employment creation in Ethiopia and youth unemployment leads to significant economic costs and hence, potential of the youth is not sufficiently utilized. It is the common problem of poor or developing African countries that schools and training centers are not providing the skills that young employers demand. Policies against fight for youth unemployment issues can be expressed in three main policy areas:

Macroeconomic policies

Policies on Macro and Small Business Enterprises (SMEs) and other labor-intensive activities should be implemented in order to offer opportunities for high employment and reduce unemployment. As indicated in (PASDEP), job creation through private sector development and implementing focused programs on small and medium enterprise development is supported by the (TVET). It is necessary to take the necessary actions to develop capacity of production and production techniqies to improve efficiency. Before the macroeconomic policies come into force, it is crutial to identify the causes of the institutional problems that occurred in the past and eliminate these problems.

Education policies

In many developing countries including Ethiopia, one of the difficulties encountered in creation of employment opportunities is that schools and education centers cannot provide the skills that employers are looking for. In order to eliminate this problem it is necessary to take the necessary actions to reconcile the education system with the needs of the labor market, keeping in mind that labor demand in Ethiopia is insufficient for both experts and young population.

Labor market policies

If the Ethiopian government effectively eliminates the barriers faced by young people in the short term, developments in education, the emergence of new technologies, and rapid urbanization and the development of the business sector will provide opportunities for the new jobs. The long-term problem of informality and unemployment in rural sectors will be resolved in line with the entrepreneurial potential of young people if the policies of the government are properly implemented.

Finally, main link between poverty and economic growth is employment and poverty arises from lack of job opportunities and thus insufficient amount of income. Therefore struggle against poverty requires a multi-dimensional effort and harmony of the policies on education, labor market and youth population growth.

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CHAPTER 2:

2001-2019 Period Exchange Rate Policies of the CBRT in Chronological Order

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INTRODUCTION

Inflation rates were remained at high levels for many years in Turkey. This situation made it necessary for the Central Bank of the Republic of Turkey (the CBRT) to fight against inflation. For this purpose, in 1999 the government adopted a disinflation program aided with the supervision and technical support of the IMF. In the following period, the most important goals of the CBRT were the price and the exchange rate stability. Thus, fixed exchange rate regime was applied before 2001 and expectations of the economic agents and the foreign exchange market participants on the exchange rates were based upon a more sound basis (TCMB, 1999). As a result of the reduced confidence in the stabilization program implemented in the aftermath of the crises in 2000 and 2001, the CBRT abandoned the fixed exchange rate regime and left the exchange rates to fluctuate (TCMB, 2004 and Tunay, 2008: 38-39).

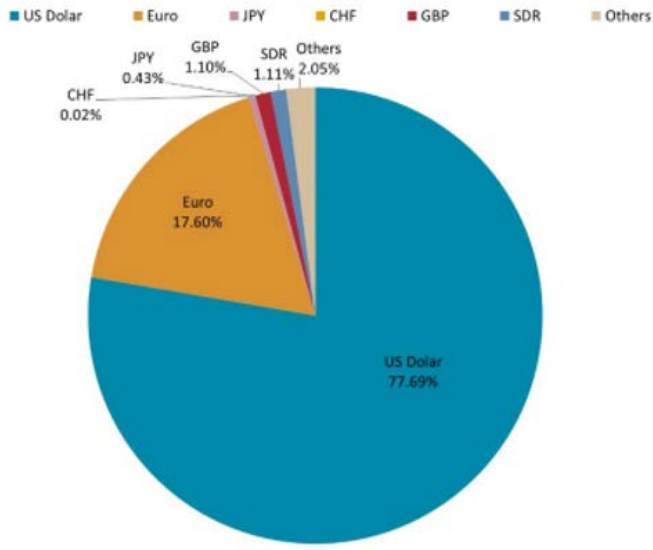
2002-2017 period gross foreign exchange reserves of the CBRT is shown in Chart 1. The increase in the gross foreign exchange reserves of the CBRT from January 2002 to December 2017 was mainly driven by foreign exchange purchases and sales, export rediscount credits and the reserve requirement practice.

Chart 1. Gross Foreign Exchange Reserves of the CBRT of the 2002-2017 Period (Billion USD)

Source: CBRT

Total foreign exchange assets of the CBRT by currency is shown in Chart 2. The breakdown of total foreign exchange assets on the CBRT's balance sheet by currency unit as of 31 December 2017 reveals that % 77.7 of these assets are USD-denominated, % 17.6 of them are Euro-denominated and % 4.7 of them are denominated in other currencies.

Chart 2. Total Foreign Exchange Assets of the CBRT by Currency (%)



Source: CBRT

As of 31 December 2017, the CBRT's reserves were composed of securities investments by % 62, cash and deposits at commercial banks and central banks abroad by % 16 and gold assets by %22.

1. Exchange Rate Policies of the CBRT in Chronological Order

In the aftermath of the crisis in February 2001, the CBRT abandoned the fixed exchange rate regime and shifted to the floating exchange rate regime, and thus, the exchange rate policies have been shaped in this new regime perspective. Study is compiled from the CBRT's Monetary and Exchange Rate Policy Reports. Exchange rate policies of the CBRT can be chronologically summarized as follows:

2. 2001-2005 Period

According to the 2001 Monetary and Exchange Rate Policy Report, the CBRT's foreign exchange market interventions would be carried out in order to prevent excessive fluctuations (volatility) in the exchange rate in short term. The aim was to maintain the long-term equilibrium value of the exchange rate. For this reason, it was stated that foreign exchange market interventions would be mostly perfomed by using the foreign exchange auction method and the increasing importance of the level of international reserves in the current policy woulod be taken into consideration. (TCMB, 2001: 20-22)

By the 2002 Monetary and Exchange Rate Policy Report, the CBRT aimed to intervene only in excessive volatility, and so to minimize interventions in the floating exchange rate regime. In addition, in the case of excess foreign exchange supply in the economy, appropriate methods that would not contradict with the floating exchange rate regime would be used transparently in order to increase the foreign exchange reserves (TCMB, 2002: 5-6).

According to the 2003 Monetary and Exchange Rate Policy Report, the floating exchange rate regime would be maintained, and so the CBRT would not purchase or sell foreign currency in any way in order to determine the level or direction of the exchange rates. The CBRT would be able to conduct interventions in the form of buying or selling when the exchange rates fluctuate, and also it would intervene in the long-term trend in order to increase foreign exchange reserves (TCMB, 2003:9).

According to the 2004 Monetary and Exchange Rate Policy Report, the floating exchange rate regime would be maintained, and it was announced that if there would be excessive fluctuations in the exchange rates, the CBRT might intervene in foreign exchange markets in the form of buying or selling. In order to strengthen foreign exchange reserves in case of developments in the balance of payments and reverse dollarization process, in the event of an opposite situation, the CBRT aimed to interrupt foreign exchange auction by pre-public announcement (TCMB, 2004a: 12-13).

According to the 2005 Monetary and Exchange Rate Policy Report, the purpose of the CBRT's foreign exchange buying auctions was not to influence the foreign exchange demand and supply conditions structurally, but to prevent or decrease the foreign exchange reserves in a moderate manner in times of increasing supply. Therefore, the rules on foreign exchange purchases were made through the auctions announced previously. Accordingly, in order to minimize the effect of foreign exchange buying auctions on the foreign exchange market in 2005, it was aimed that this program would not be changed unless an extraordinary program of foreign exchange liquidity was disclosed and an annual program was announced (TCMB, 2004b: 10-11).

3. 2006-2010 Period

In 2006, the CBRT stated that the general framework of the 2005 exchange rate policy implementation would also be valid for the year 2006 and exchange rates would be determined by the demand and

supply conditions in the market. The main factors determining foreign exchange demand and supply were the fiscal and monetary policies of the government and the economic foundations and expectations determined by the structural reform process. The CBRT expected a high level of foreign exchange supply in 2006 and set a policy for the continuation of daily foreign exchange buying auctions (TCMB, 2005: 19-20).

By the 2007 Monetary and Exchange Rate Policy Report, the CBRT stated that the floating exchange rate regime would be maintained in addition to inflation targeting. It was also stated that the exchange rate was not a target or policy instrument in the floating exchange rate regime, and the target is only inflation. In case of excessive volatility in the foreign exchange market and unhealthy price formation that might occur in the foreign exchange prices, it could be announced that the foreign exchange buying auctions might be suspended for a short or long period. (TCMB, 2006: 7-11).

By the 2008 Monetary and Exchange Rate Policy Report, in order to have a strong foreign exchange reserve position, the CBRT aimed to realize foreign exchange buying auctions and so to accumulate reserves in the periods of excess foreign exchange supply. Although it was aimed to carry out the auctions in the framework of the program described, it was stated that if there were unforeseen remarkable improvement in foreign exchange supply, the CBRT could directly intervene in the foreign exchange market (TCMB, 2007: 8-10).

According to the 2009 and 2010 Monetary and Exchange Rate Policy Reports, the floating exchange rate regime would be maintained beside the inflation targeting, and the CBRT aimed to realize foreign exchange buying auctions in order to build up foreign exchange reserves. In order to reduce the volatility in the exchange rate that emerged as a result of the problems in international markets, the CBRT would be able to directly intervene in the foreign exchange markets, increase the limits of trading in banks' foreign exchange markets, and reduce the required foreign exchange reserve ratios (TCMB, 2008: 11-14) (TCMB, 2009: 14-18).

4. 2011-2015 Period

During the time that the global economy continued to recover progressively in 2010, the recovery in advanced economies that suffered the crisis was slow and fragile. (CBTR, 2011: 2). After the 2008 crisis, monetary policy began to address financial stability in addition to price stability in many countries (CBTR, 2012: 2).

By the 2012 Monetary and Exchange Rate Policy Report, the CBRT strengthened the inflation targeting regime and designed a new monetary policy. According to this, the CBRT maintained its primary objective in maintaining price stability, and began to consider macro financial stability to the extent allowed by economic conditions. Within the outline of this new structure, the CBRT planned a new monetary policy which is mixed the interest rate corridor between the overnight lending and borrowing rates and the policy rate as well as the necessary reserves in order to ensure the mutual use of the interest rate and the

variety of the instruments which is required by the monetary policy implemented to achieve multiple targets.

According to the 2013 Monetary and Exchange Rate Policy Report, the CBRT has focused on decreasing macro economical risks since 2010. In order to eliminate the corruption in the current account deficit and to provide a healthier growth composition to the economy, the CBRT slowed down credit growth and revival. Policy instruments such as required reserve ratios, liquidity policy, weighting of credit risk, general provisions and the value/ratio of loans in coordination with other authorities have been used to ensure credit slowdown. In order to eliminate the excessive appreciation in TL, policy rates were decreased and the interest rate corridor was extended downwards in order to follow a fluctuating course in short term market rates (CBTR, 2012: 6).

The Reserve Option Mechanism (ROM), which was almost completed in 2012, has facilitated a more flexible foreign exchange liquidity management for the banking sector and increased the resistance of the banking system against internal and external shocks. Therefore, it should be emphasized that this mechanism has reduced the need for both foreign exchange auctions and direct interventions. According to the 2013 report, The ROM would be used as a supportive monetary policy tool in 2013, depending on global growth conditions and short-term capital movements (CBTR, 2012: 16-17).

According to the 2014 and 2015 Monetary and Exchange Rate Policy Reports, the CBRT would continue to implement the floating exchange rate regime. The main determinants of foreign exchange

demand and supply were fiscal and monetary policies in place, economic essentials, international improvements and expectations. The CBRT did not have a nominal or real exchange rate target under the exchange rate regime in place. However, the CBRT was unresponsive to the excessive appreciation or depreciation of the Turkish lira in order to limit risks to financial stability (CBTR, 2013: 11).

5. 2016 – 2019 Period

The impact of the volatility and inflation outlook in the foreign exchange markets following the significant global and geopolitical shocks in the second half of 2016 was influential in monetary policy decisions in early 2017.

In 2017, In the floating exchange rate regime, exchange rates are determined according to the demand and supply situations in the market. The demand and supply of exchange rates were determined by the current fiscal and monetary policies, economic fundamentals, international developments and expectations. The CBRT would maintain to take all necessary measures to ensure the effective functioning of the foreign exchange market. However, the involvement of all economic agents in managing the exchange rate risk under the exchange rate regime was critical. (CBRT, 2018: 2-4).

The CBRT maintained a main monetary policy such as price stability. Inflation targeting would continue to be the monetary policy regime. The CBRT continued to implement a floating exchange rate regime. Under that regime, the exchange rate was not used as a policy

instrument. The CBRT did not have a nominal or real exchange rate target under the exchange rate regime in place. If the exchange rate movements permanently affected price stability, the CBRT would give the necessary reaction with its instruments. In addition, if the foreign exchange rate was at odds with economic fundamentals and created a risk for financial stability, it would not remain unresponsive to this situation. The CBRT would maintain to look at exchange rate developments and any risk factors related to it closely, to take necessary measures and to use the relevant instruments in order to enable the foreign exchange market to operate effectively. However, under the exchange rate regime in place, it was so important for the economic actors to hedge their own exchange rate risk (CBRT, 2017: 1-5).

According to the 2019, the main aim of the CBRT is to maintain price stability. Monetary policy dimensions are based on inflation expectations, pricing behavior and other factors affecting inflation. The CBRT will continue to safeguard financial stability as a supporting element of price stability (CBRT, 2018: 2)

The CBRT will continue to implement a floating exchange rate regime. Under the current regime, the foreign exchange demand and supply are mainly determined by economic fundamentals, the fiscal and monetary policies implemented, international developments and expectations. There is no any exchange rate target that is targeted by the CBRT. Nonetheless, if the exchange rates are at odds with economic fundamentals or excessive volatility poses risk to financial stability, the CBRT will not remain indifferent to these developments. If the

exchange rate movements permanently affect price stability, the CBRT will change its monetary policy stance and give the necessary reaction. The CBRT will continue to closely monitor exchange rate developments and any risk factors related to it and will take necessary measures and use the relevant instruments in order to make sure that the foreign exchange market operates efficiently.

In 2018 August, in response to the rapid depreciation of the Turkish lira due to excessive volatility in the market, the CBRT introduced several financial stability oriented measures to ensure the efficient operation of markets. For example, the reserve options mechanism (ROM) rates was decreased, liquidity was provided to the markets by reducing the TL and foreign exchange reserve requirement ratios, banks' collateral conditions were made more flexible, and a facility was introduced for export companies allowing them to make their repayments for rediscount credits in Turkish lira provided that the payments are made on maturity (CBRT, 2018: 5).

CONCLUSION

After the 2000 and 2001 crises, the CBRT abandoned the fixed exchange rate regime and the floating exchange rate regime in which exchange rates are determined according to demand and supply conditions in the market. By this exchange rate policy change, CBRT's main goal is to maintain price stability.

With the aim of examining the exchange rate policies of the CBRT in chronological order during the 2001-2019 period, this study is compiled from the CBRT's Monetary and Exchange Rate Policy

Reports. In this context, the CBRT states that the implementation of the floating exchange rate regime will continue and the direct or indirect foreign exchange market interventions will be carried out only if the CBRT deem necessary.

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CHAPTER 3:

An Empirical Evidence on the Validity of the Marshall-Lerner Condition in Turkey: An Application of ARDL Bound Testing Approach

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INTRODUCTION

Although there is a close relationship between exchange rate and import-export in the literature, direction of the causality between exchange rates and terms of trade are still debated both in the theoretical and in the practical studies (Zengin, 2000:27; Doğan and Kurt, 2016:330). In empirical studies, it is seen that different results are obtained between different periods and different country groups. These results indicate that influencing the balance of foreign trade or increasing exports cannot be made only by currency adjustments (Barışık and Demircioğlu; 2006:82).

According to the approach known as the condition of critical elasticities, under the assumption that the supply elasticities of the goods subject to foreign trade shall be infinite, if the sum of any country's import demand and export demand elasticities is greater than one, the loss of value a country's currency will affect the foreign trade balance positively. This was first mentioned by Marshall (1897), and his critical elasticities were precisely explained (previously by Gandolfo reported that explained by Bickerdicke (1920) and Robinson (1937)) by Lerner (1944) (Yamak and Korkmaz, 2005:17). The critical elasticities that expressed as the Marshall-Lerner Condition, mean that the devaluation will improve the trade balance of a country in the long run, as long as the sum of the absolute values of export and import demand price elasticities is greater than one (Arize, 1994:1). This condition means that when the value of a country's currency falls, the relative price decline in export products increases exports, and the

relative price increases in import products decline imports, so that the trade balance can adequately compensate for the deterioration in price (Bahmani-Oskooee et al., 2013:412).

In the historical process, it applied different exchange rate systems in Turkey, in accordance with the exchange rate systems applied in certain periods, foreign trade balance tried to provide through exchange rate adjustments. When the effect of the devaluation made in Turkey is examined, exports increased in the short term, the foreign trade balance was also affected positively; but as a result of the continued increase in imports, foreign trade deficits increased again. The most important reason for this situation that is largely dependence on imported inputs of Turkey's exports. Because, as a result of devaluation, imported input prices are increasing, which in turn negatively affects the import-dependent export sectors and softens the positive effect of devaluation. In addition to the exchange rate of exports, it is also influenced by factors such as input costs, productivity, production capacity, price policy, external demand and the structure of international markets. Therefore, exchange rate policies, which are not supported by other economic policies, are not effective enough to maintain foreign trade balance (Karagöz and Doğan, 2005:226-227; Hepaktan et al., 2011:62).

1. LITERATURE REVIEW

According to the results obtained from the empirical studies on the validity of the Marshall-Lerner Condition, the Marshall-Lerner Condition have been invalid that according to Arize (1987) for seven of the eight African countries; Noland (1989) for Japan; Arize (1994) for the seven other countries except Sri Lanka and India from nine Asian countries; Reinhart (1995) for twelve underdeveloped countries; Bahmani-Oskooee and Niroomand (1998) for most countries in a country group of about thirty countries; Sinha (2001) India, Japan, the Philippines, Sri Lanka, Thailand, the study examined all countries except for Sri Lanka; Brahmasrene and Jiranyakul (2002) for Thailand; Onafowora (2003) for three ASEAN countries (Thailand, Malaysia and Indonesia) in bilateral trade with the US and Japan; Bahmani Oskooee and Kara (2005) for most countries which the country group which from twenty-eight countries including Turkey; Liu et al. (2007) to Hong Kong; Prawoto (2007) for Malaysia and Thailand from four Asian countries (except Indonesia and Singapore); Pandey (2013) for India; Bahmani-Oskooee and Brooks (1999) to four of the US and six trading partner countries. Also, according to the the results obtained from the empirical studies on the validity of the Marshall-Lerner Condition, the Marshall-Lerner Condition have been invalid that according to Andersen (1993) for most countries from 16 OECD countries; Bahmani-Oskooee (2002) for Iran; Hatemi-J and Irandoust (2005) for Sweden where the largest trading partner which from six countries (except from Germany); Irandoust et al. (2006) for Sweden where in the case of bilateral trade

between eight major trading partners, excluding France and the Netherlands; Shahzad et al. (2017) for seven South Asian countries; Mahmud et al. (2004) for six developed economies, except Norway. According to the results obtained from the empirical studies on the validity of the Marshall-Lerner Condition for Turkey, the Marshall-Lerner Condition have been valid that according to Türkay (2014); Hepaktan (2009); Doğanlar et al. (2004); Bakan and Akkaya (2018); Bahmani-Oskooee and Kara (2005); Aydoğuş and Yıldırım (2001); Şimşek and Kadılar (2004); Okay et al. (2011); Göçer and Elmas (2013); Cambazoğlu and Güneş (2016). Also, according to the results obtained from the empirical studies on the validity of the Marshall-Lerner Condition for Turkey, the Marshall-Lerner Condition have been invalid that according to Yamak and Korkmaz (2005); Terzi and Zengin (1999); Karagöz and Doğan (2005); Peker (2007); Uslu (2008); Yavuz et al. (2010); Aslan and Ersungur (2018).

Table 1: Marshall-Lerner Condition Literature Review on Turkey

SN	Author(s)	Period	Method	MLC valid/invalid
1.	Terzi and Zengin (1999)	1989:1-1996:12	VAR, Variance Decomposition and Impulse Response Analysis	Invalid
2.	Aydoğuş and Yıldırım (2001)	1960-1979; 1980-1997	ARDL	Valid
3.	Doğanlar et al. (2004)	1981.1-1999.4	Cointegration	Valid (e_x=-1.07; e_m=3,08)
4.	Şimşek and Kadılar (2004)	1970-2002	ARDL Bound Test	Valid
5.	Karagöz and Doğan (2005)	1995.1-2004.5	Multiple Regression Analysis and Cointegration	Invalid
6.	Yamak and Korkmaz (2005)	1995:1-2004:4		Invalid (Long term)
7.	Bahmani-Oskooee and Kara (2005)	25 countries (including Turkey)	ARDL	Valid (for Turkey) (e_x+ e_m=1,65)
8.	Peker (2007)	1992:1-2006:4	Cointegrating Regression Durbin-Watson (CRDW)	Invalid
9.	Uslu (2008)	1989:Q1-2018:Q1	ARDL Bound Test	Invalid
10.	Hepaktan (2009)	1980–2008	Fractional Co-integration	Valid (e_x=1.58; e_m=1,14)
11.	Yavuz et al. (2010)	1988-2007 (quarterly)	ARDL	Invalid
12.	Okay et al. (2011)	2003:01-2010:12	Johansen Cointegration and VECM	Valid
13.	Göçer and Elmas (2013)	1989Q1-2012Q2	Unit Root (Carrion-i-Silvestre, 2009) and Cointegration Test (Maki, 2012) with Multiple Structural Breaks and DOLS	Valid
14.	Türkay (2014)	1980-2012	Johansen Cointegration and VECM	Valid (Long term)
15.	Cambazoğlu and Güneş (2016)	2010.01-2014.12	ARDL	Valid
16.	Arslan and Ersungur (2018)	1998Q1-2014Q4	ARDL	Invalid
17.	Bakan and Akkaya (2018)	1950-2000	OLS, Kernel Denstiy and SMINK	Valid (e_x=0,74; e_m=0,30)

2. Data Description and Methodology

In this study to examine validity of the Marshall-Lerner Condition in Turkey after Union Customs Bahmani-Oskooee and Niroomand (1998) was followed by the procedure used. Thus, in this study assume that the import demand function for Turkey takes the following form:

$$lnM_t = \alpha_0 + \alpha_1 lnGDPTR_t + \alpha_2 ln(pm/pd)_t + \varepsilon_t \quad (1)$$

where "M" volume of imports; "pm" import prices; "pd" domestic price level; "GDPTR" real GDP for Turkey and ε is an error term. In the equation "α_1" shows the domestic income elasticity of imports; "α_2" shows the price elasticity of imports. Here $\alpha_2 < 0$ and $\alpha_1 > 0$ should be. However, in the literature, it is concluded that the increase in domestic income will result in a negative income elasticity if the increase in the production of substitutes results from the increase in the production of substitutes (Bahmani-Oskooee and Nirooman, 1998:102).

As for the export demand model, again following Bahmani-Oskooee and Niroomand (1998) in this study assume the exports demand function for Turkey takes the following form:

$$lnX_t = \beta_0 + \beta_1 lnGDPW_t + \beta_2 ln(\text{px\_tr}/\text{px\_w})_t + \varepsilon'_t \quad (2)$$

where "X" volume of export; "px_tr" export prices for Turkey; "px_w" export prices for World; "GDPW" real GDP for World and ε′ is an error term. Here $\beta_2 < 0$ and $\beta_1 > 0$ should be.

Marshall-Lerner condition, taking into account the critique by Harberger (1950) and Laursen-Metzler (1950) that income impact should be taken into account, it is provided under the following

conditions(Vergil and Erdoğan, 2009:43; Yamak and Korkmaz, 2005:19; Yücel, 2006:60):

$$|\alpha_2 - \alpha_1| + |\beta_2 - \beta_1| \geq 1 \quad (3)$$

The data used in the analysis are given in Table 2. All data are annually for the period 1996-2017 and are taken from World Bank World Development Indicators (WDI). In addition, the logarithm of all data was taken in the analysis.

Table 2. Variables Using In This Studies

Variable	Definition
gdp_w	Real GDP (constant 2010 US$) for Turkey
gdp_tr	Real GDP (constant 2010 US$) for World
X	Exports of goods and services (constant 2010 US$) for Turkey
M	Imports of goods and services (constant 2010 US$) for Turkey
px_tr	Export volume index (2000 = 100) for Turkey
px_w	Export volume index (2000 = 100) for World
pm_tr	Import volume index (2000 = 100) for Turkey
pd	Consumer price index (2010 = 100) for Turkey

3. Empirical Results

The Johansen Cointegration test can using that if all variables stationary when they take the first differences, that is, when all variables are I(1). The ARDL approach can be used even if they are stationary in different degrees. The results of ADF Unit Root Test used in this study are given in Table 3. According to the results of ADF Unit Root Test, while real export variable in the export function is stationary at the

level, other variables in the export function is stationary when they take the first differences. In import function, all variables there is unit root at level (5% significance), they is stationary when they take the first differences. Furthermore, real GDP variable for Turkey is seen stationary at level of 10% significance level. As a result of unit root analysis, ARDL Boundary Test, which allows the analysis of the cointegration relationship in the series which are stationary in different degrees, has been determined as the econometric method to be applied.

Table 3. ADF Unit-Root Test Results

Model	Variable	Level	1. Dif.
	lnm	0.2900	0.0001*
Import	**lngdp_tr**	0.0592***	0.0157*
	ln(pm/pd)	0.1094	0.0131*
	lnx	0.0405**	0.0000*
Export	**lngdp_w**	0.4962	0.0231*
	ln(px/pxw)	0.3274	0.0014*

*%1, **%5, ***%10

For the selection of the appropriate ARDL model were investigated that step by step looking for all the lag counts up to max 4 lag, models which have no autocorrelation problem and have the smallest value of Akaike Info Criterion and Schwarz Criterion information criteria. As a result of this analysis, the most appropriate model for the import function is the Akaike Info Criterion ARDL (3, 2, 3), while the Schwarz Criterion ARDL (1, 0, 3). From these two models, model which Schwarz Criterion pointed ARDL (1, 0, 3) was selected, due to the presence of autocorrelation at 10% significance level in ARDL (3, 2, 3) model indicated by Akaike Info Criterion.

The most appropriate model for the export function was selected that ARDL (3, 4, 4) model which have no autocorrelation problem and have the smallest value of but Akaike Info Criterion and Schwarz Criterion information criteria.

3.1. Import Function Results

Results for ARDL (1, 0, 3) executed for Equation 1 are given in the. According to the results given in the Table 4, it is seen that there is a cointegration relationship between import function variables at 1% significance level.

Table 4. ARDL (1, 0, 3) Models Cointegration and Long Run Coefficients

Significance	I0 Bound	I1 Bound	F-statistic
10%	3.17	4.14	
5%	3.79	4.85	8.936946*
1%	5.15	6.36	

Long Run Coefficients

$$lnM_t = -2.721600 + 1.176478 LnGDPTR_t + 0.107737 Ln(pm/pd)_t + \varepsilon_t$$
(0.0000) (0.0003) (0.0001)

Basic Statistical and Diagnostic Tests Results					
CointEq(-1)	R-sq.	Prob(Fstat)	Durbin-Watson	BGLM(Fstat)	BPG(Fstat)
- 1.387982 (0.0000)	0.840362	431.4632 (0.000000)	2.643312	2.525705 (0.1403)	3.092349 (0.0555)

*%1, **%5, ***%10

The long-term coefficients of the import equation are also given in the Table 4. According to Table 4, when the results are examined, it is observed that income elasticity of imports is significant and the coefficient is positive according to the theory. When Table 3 is

analyzed, income elasticity of imports (α_1) is significant in terms of 1% significance level and positive coefficient in accordance with the theory. Whereas, the price elasticity of imports (α_2) seems to be positive and significant in terms of 1% significance level, contrary to expectations.

$|\alpha_2 - \alpha_1| = 1{,}07$

3.2. Export Function Results

Results for ARDL (3, 4, 4) executed for Equation 2 are given in the. According to the results given in the Table 5, it is seen that there is a cointegration relationship between import function variables at 5% significance level.

Table 5. ARDL (3, 4, 4) Models Cointegration and Long Run Coefficients

Significance	I0 Bound	I1 Bound	F-statistic
10%	3.17	4.14	
5%	3.79	4.85	5.220936**
1%	4.41	5.52	

Long Run Coefficients

$lnX_t = -19.027437 + 2.189846LnGDPW_t + 0.156424Ln(\text{px\_tr}/\text{px\_w})_t + \varepsilon'_t$

(0.0001) (0.0000) (0.3621)

Basic Statistical and Diagnostic Tests Results					
CointE(-1)	R-sq.	Prob(Fstat)	Durbin-Watson	BGLM(Fstat)	BPG(Fstat)
-1.191862 (0.0400)	0.965450	0.000023	2.510923	0.578019 (0.5024)	0.636462 (0.7598)

*%1, **%5, ***%10

The long-term coefficients of the import equation are also given in the Table 5. According to Table 5, when the results are examined, it

is observed that the income elasticity of exports is significant and the coefficient is positive according to the theory. When Table 5 is analyzed, income elasticity of exports (β_1) is significant in terms of 1% significance level and positive coefficient in accordance with the theory. Whereas, the price elasticity of exports (β_2) seems to be positive and not significant in terms 5% and %1 significance level, contrary to expectations.

$|\beta_2 - \beta_1| = 2{,}03$

When the results are fulfilled in equation (3), the results of the Marshall-Lerner condition for Turkey are as follows:

$|\alpha_2 - \alpha_1| + |\beta_2 - \beta_1| = 3{,}10$

According to these results, Marshall-Lerner condition is provided for Turkey; because the sum is greater than one which of the absolute value of the difference in price, elasticity and income elasticity of imports with the absolute value of the difference in price elasticity and income elasticity of exports.

CONCLUSION

Although the relationship between exchange rate and foreign trade is subject to various empirical research, there is no consensus on the effect of exchange rate changes on foreign trade. The economics literature states that an increase in the exchange rate (the depreciation of the local currency) has relatively reduced the export products price of the country, while the relative price of imported products has increased. In this case, it is suggested that while increasing exports, it will decrease

imports and consequently, foreign trade deficit will decrease. However, in order for the positive effects of the increase in the exchange rate on the foreign trade balance, equality that also known as critical elasticities, sum of absolute values of price elasticities of import and export demand is required to be equal to one or greater than This rule, known as the Marshall-Lerner equation, was later criticized by Harberger (1950) and Laursen-Metzler (1950) for the lack of income elasticities. In this context, taking into account this situation known as the Harberger-Laursen-Metzler effect, the Marshall-Lerner condition will be provided if the absolute value of the difference in price and income elasticities of the import demand and the absolute value of the difference in price and income elasticities of the export demand is one or greater than.

In this study, by considering into Harberger-Laursen-Metzler effect and within the framework of the procedure followed by Bahmani-Oskooee and Niroomand (1998), it was investigated that the validity of the Marshall-Lerner condition by using the ARDL bounds testing approach for the period between 1996-2017 in Turkey. In this context, ARDL (3, 4, 4) for imports and ARDL (1, 0, 3) model for export were determined as the most suitable model. As a result of the empirical analysis, it was determined that the cointegration relationship between variables in both export function variables and in import function existence of relationship. Then, the critical elasticities required for the Marshall-Lerner condition were determined by estimation of ARDL long run coefficient.

According to the results obtained, the price elasticity of imports was 0.11 and the income elasticity of imports was 1.18, while the export elasticity of exports was 0.16 and the income elasticity of exports was 2.19. According to these results, critical elasticities total was found to be 3.10 ($|\beta_2 - \beta_1| = 2{,}03$ $|\alpha_2 - \alpha_1| = 1{,}07$ and $|\alpha_2 - \alpha_1| + |\beta_2 - \beta_1| = 3{,}10$), the Marshall-Lerner condition was concluded that between the years 1996 to 2017 is valid for Turkey.

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CHAPTER 4:

Inflation, Exchange Rate, and Interest Rate Relationship

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INTRODUCTION

Inflation, as one of the pricing mechanisms, indicates the price level of goods and services; while interest rate indicates the value of the national currency in the financial markets; whereas foreign exchange rate indicates the value of foreign currencies. The adaptive movement of these indicators also indicates that the equilibrium in production and consumption is achieved in the economy. The fact that the pricing instruments move away from equilibrium for a certain period causes the economy to encounter various problems. It is important to notice the severity of the negative aspects in one of the pricing mechanisms, or the impact of a shock on others, in order to implement a macroeconomic policy with stability. Since the economic structure of each country is different, the sensitivity rates of the pricing mechanisms may also differ.

The increase in the foreign exchange rate is an important ground for the upward trend in inflation. Considering the relationship between inflation and the US Dollar exchange rate, a change in exchange rates is reflected in the prices. The rise in foreign exchange rates affects the prices of imported goods, especially in countries with high levels of raw material and energy resource imports, the rise in foreign exchange rates is reflected in the final goods, and an increase in the general level of prices is observed. In this case, a policy can be applied to reduce the value of the domestic currency as a precaution to prevent the country's competitive power in the foreign markets from being adversely affected by the rise in inflation.

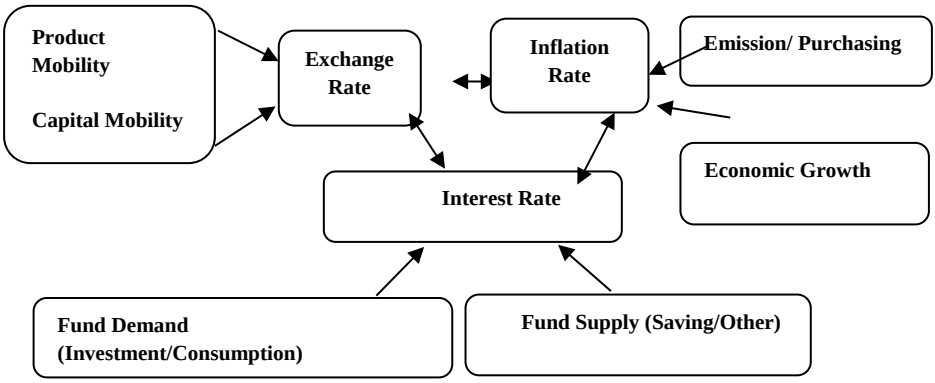
Although there are many factors affecting the movements in the foreign exchange rates, one of the most important reasons involves the differences in the interest rates of the countries. The interest rate is an important instrument having an impact on both the US Dollar Exchange rate and inflation rate. The capital always aims for a higher interest rate. If the national capital cannot achieve the expected profit, it would certainly be driven towards other countries with higher interest rates. The low-level increases observed in the equilibrium between the US Dollar exchange rate, interest rate and inflation rate, which are considered as price mechanisms, are increasing the macroeconomic performance (Forbes et al., 2018). In this study, the relationship between inflation, foreign exchange rate, and interest rates are obtained theoretically.

An Overview of the Interaction among Inflation, Interest Rate, and Foreign Exchange Rate

Some important indicators, such as inflation, interest rate, and foreign exchange rates are, used in assessing the macroeconomic performance of a country. While inflation rate determines the price levels of goods and services, interest rate determines the value of domestic currency in the financial markets, whereas foreign exchange rate indicates the exchange rate of foreign currencies, and these indicators collectively determine whether or not production and consumption equilibrium is achieved in the economy (Sever and Mızrak, 2014: 265). In general terms, the relationship between these

three macroeconomic variables is illustrated in Figure 1 (Ekren, 2010: 10) to be examined in detail.

Figure 1: Inflation, Foreign Exchange Rate, and Interest Rate Relationship



Source: Ekren, 2000:10.

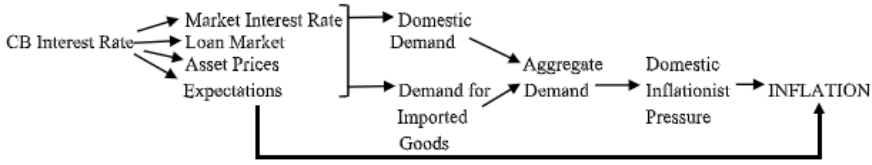
The formation of the foreign exchange rate, inflation and interest rate and the relationship among them can be monitored through the related figure. The three monetary variables taken into consideration are affected by the current situation or the change in different effective variables in different sectors of the economy. In addition, these three variables also interact with each other. More precisely, there is a relative equilibrium relationship between the internal equilibrium of the economy (both in terms of real and financial sectors) and the external equilibrium. As a natural consequence of this, it should not be neglected that there should be a relative equilibrium of all three variables

depending on the structure and characteristics of the economy. The deterioration of those equilibriums may influence the overall economic aspect adversely by affecting the alternative costs (Ekren, 2000: 10).

Inflation – Interest Rate Interaction

The relationship between the inflation rate and the interest rate was first introduced by Irving Fisher in 1930. According to the phenomenon called "the Fisher Effect," it is argued that the nominal interest rates increase at the same rate as the increase in inflation whereas the real interest rates are not affected by the increase in inflation (Mercan, 2013: 369). Figure 2 illustrates the impact of the interest rate change on inflation;

Figure 2: The Impact of Interest Rate Change on Inflation



Source: www.tcmb.gov.tr, 2004.

Upon examining Figure 2, it is seen that the impact of the interest rate change on inflation is realized through four different channels. The first one is that the interest rate change is effective on the interest rates of other banks and financial institutions. On the other hand, market interest rates lead to a change in the amount of loan received from banks

and asset prices such as stocks foreign exchange. While the third one involves the amount of foreign capital entering the country, the fourth channel is about decisions on interest rates and the expectations that also affect the forward-looking decisions (CBRT).

The maturity lengths of interest rates differentiate the effect on inflation so that relatively short-term interest rates render individuals and firms more active in their investment-saving decisions as well as being more effective on the economy in comparison to long-term rates (Karadeniz and Berkman, 2011). For example, investment expenditures, while determining long-term interest rates in spending decisions on consumer goods such as housing and automobiles, may change long-term interest rates along with the monetary policies implemented in the CB financial markets based on short-term interest rates (Şengönül and Genç, 2012: 104). In other words, changes in long-term interest rates affect the aggregate demand and thus, the total output and inflation by acting on the decisions of investment and durable goods, while an increase in the short-term interest rates leads to the appreciation of domestic currency and, in turn, inflation in an open economy under normal circumstances (Arabacı and Baştürk, 2013: 16).

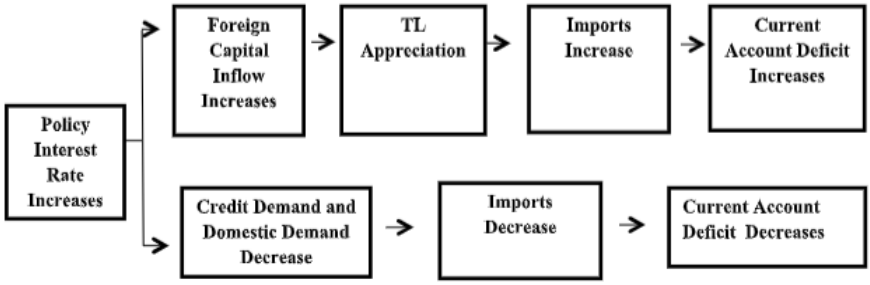
Interest Rate – Foreign Exchange Rate Relationship

Despite the abundance of discourses on the foreign exchange rate - interest relationship which is one of the topics discussed in the economic literature, there is no consensus on the direction of the relationship between these two variables. In an open economy with unlimited capital mobility, the increase in the domestic interest rates

causes an appreciation of the national currency by decreasing the amount of capital inflow towards the country and consequently the foreign exchange rate decreases. In other words, with the rise of interest rates, demand for the national currency decreases and inflation rates can rise as the national currency depreciates (Karaca, 2005). Theoretically, the relationship between interest rate and foreign exchange rate can be realized through three different channels.

According to the first one of these, similar to the situation above, domestic demand increases due to high domestic interest rates and accordingly, foreign currency supply increases and the domestic currency appreciates. According to another channel, the increase in interest rates causes a decrease in profits due to the increased debt burden of firms and banks, and it decreases the cash flow and reduces the repayability of loans. Declining repayability would cause pessimistic expectations in the market and also cause the value of the country's currency to drop. According to the last channel, the increasing interest rates would increase the inflationary expectations and views towards risk in the public finance and the value of the national currency still falls (Karacan, 2010: 72). The impact on interest rate and foreign exchange rate is illustrated in Figure 3 (Esen et al., 2011: 218).

Figure 3: The Channels through which Policy Interest Rate Influence Current Account Deficits

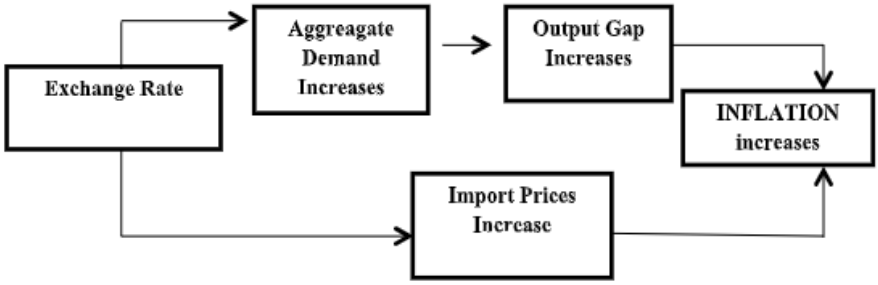


Source: Esen et al., 2011: 2018.

The Interaction between Foreign Exchange Rate and Inflation

Upon analyzing the foreign exchange rate - inflation relationship, the main analysis involves the change in macroeconomic indicators caused by internal and external market instability. That is to say, in the open economy, any shock or adversity in the economy of the other country causes an adverse impact on domestic economic indicators. The two macroeconomic indicators discussed here represent the external economic changes. However, inflation, i.e., the continuous increase in the general level of prices, represents the domestic economic phenomenon. Therefore, any change in the foreign exchange rate affects the domestic price level through various channels, and the transition effect in the literature is defined as "pass-through." A simple representation of the foreign exchange rate - inflation relationship, which is to be elaborated in the following sections, is illustrated in Figure 4.

Figure 4: Foreign Exchange Rate - Inflation Transmission Mechanism



Source: Allsopp et al., 2011: 11.

Although the relationship between foreign exchange rate and inflation is very crucial in the functioning of developing economies, as illustrated in Figure 4, changes in foreign exchange rates are reflected in domestic prices. In particular, the heavy reliance of developing countries on imports, as the result of changes in foreign exchange rates, not only causes consumer prices to rise but also increases production costs (Gül and Ekinci, 2006: 92). According to Woo (1984), the relationship between the level of domestic prices and the foreign exchange rate is explained in four different aspects. Those aspects include the following (Woo, 1984: 514):

- Imported consumption goods which directly affect the consumer price index,
- Imported input prices which directly affect domestic production costs,

- Foreign exchange rate changes affect the aggregate demand through the current account and it passes-through to domestic prices,
- The prices of products that are domestically produced in competition with imports are affected by the increase in goods prices in foreign countries.

On the other hand, while the above explanations are a unilateral explanation of the relationship, the direction of the relationship between foreign exchange rate and inflation is a questionable issue, and there are two different approaches that would explain the issue. According to the first approach, which is the standard theory described in the first section of the study, the causality runs from the change in terms of trade towards the real foreign exchange rates. The other approach, which is called "pass-through," argues that the causality runs from foreign exchange rates towards the terms of trade. According to different economic schools, the relationship between foreign exchange rate and inflation is interpreted in different aspects. Table 1 indicates the economic schools and the inflation-foreign exchange rate relationships.

Table 1: Inflation-Foreign Exchange Rate Relationships According to Basic Economic Schools

Economic School	*Identifications*
Classical School	Although the assumptions of the Classical School regarding the economy's equilibrium in full employment, market-clearing, and price/wage elasticity prevent inflation from getting started, the money supply must be reduced in order to suppress inflation. According to the Classical thought which advocates the existence of a self-functioning mechanism based on the foreign exchange rate-inflation relationship, exports would be reduced if the general level of prices increases and imports would be decreased if it falls.
Keynesian School	The increase in foreign exchange rates and depreciation of the national currency in case of underemployment of the Keynesian thought would increase the demand for imported substitution goods which would be reflected the economy through its multiplier mechanism. On the other hand, changes in demand do not affect prices due to price/wage rigidity and full (infinite) supply elasticity.
Monetarist School	Depreciation of the national currency does not affect real economic variables in the long-run but raises domestic prices. Accordingly, the rise in the foreign exchange rate and the increase in the amount of input used in the production increase the general level of prices. This situation results in an increase in domestic prices and cost inflation.
Rational Expectations Theory	According to the theory, rational expectations are based on the fact that economic agents make accurate determinations about the equilibrium and organize their behaviors in this direction. In other words, the relationship between foreign exchange rate and inflation is completely related to the preferences and expectations of economic agents.

Source: Prepared by the author.

Different Identifications of the Interaction between Foreign Exchange Rate and Inflation and Their Economic Roles

It is essential to comprehend how the change in foreign exchange rates affects domestic prices and what kind of mechanism it involves, after all, there are different definitions of the transition effect, which had become even more important especially following the Great Depression. The pass-through is involved with the impact of changes in foreign exchange rate on domestic prices. In other words, the change in domestic prices is initially based on the change in nominal foreign exchange rates.

Although the foreign Exchange rate pass-through to inflation is defined as the percentage change in the foreign exchange rate of 1% in domestic prices, this concept generally refers to the impact of the changes in foreign exchange rates on the prices of imported products in terms of national currencies (Menon, 1996: 434). In other words, following the percentage change in the foreign exchange rate in the transition period, the change in import prices in national currency is examined (Tüzün, 2007: 44).

The transitional effect, which has been described differently above, is very important for the Central Banks (CB) whose duty is to maintain price stability in the economy. The fact that the pass-through level is low, meaning, the domestic prices are less affected by the changes in the foreign exchange rate, enables the CB to implement its monetary policy more easily and achieve the goal of price stability (Shintani et al., 2013: 1). In contrast, the high level of pass-through

makes it easier for international economic crises to spread to other countries (Özçiçek, 2010: 314). In other words, the magnitude of the transition effect is very important in terms of the effectiveness of the monetary policy to be implemented and the monitoring and predicting the inflation (Devereux et al., 2004: 3).

The impacts of pass-through effect, which plays a key role in achieving the targets of the CB and inflation targets, are also very important and the studies on this subject have increased along with the increase of international relations especially in the early 1980s.[2] In these studies, the pass-through effect, in general, is related to the sensitivity of the import prices in terms of national currency concerning foreign exchange rate changes. The theoretical background of the approach is based on incomplete competition conditions, intra-industry trade phenomenon and oligopolistic market structure. The pass-through effect, which is the change in prices of goods and services caused by the foreign exchange rate changes, are handled in three different aspects in economic literature. These aspects are as follows;

- Pass-Through to Import Prices
- Pass-Through to the Consumer Price Index
- Pass-Through to Export Prices,

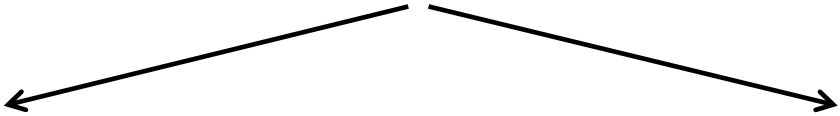
Inflation and domestic prices are utilized in pass-through to both import prices and consumer prices, whereas the last one involves the

impact of foreign exchange rate on international competitiveness (Akat and Yazgan, 2012).

Theories Explaining the Operating Mechanisms of Pass-Through between Foreign Exchange Rate and Inflation

In the open economy literature, there are two outstanding models that explain the foreign exchange rate - price interaction, the first of which is based on the existence of the law of one price, while the other is the Keynesian approach. The model, which is considered as an alternative approach to the assumptions of the law of one price, implies that each country specializes in the production of its own goods. That is if both domestic and foreign goods have low elasticities and the wages are determined in terms of national currency, the relative price is $\lambda = P/ERP_d^*$. In other words, considering the prices determined in a given unit of labor, foreign exchange rate changes affect the relative prices proportionally. There are a number of theories that try to explain the pass-through mechanism from a more general point of view, which can be divided into two categories; namely, traditional and modern theories. Traditional theories consist of the elasticity approach, the law of one price and the purchasing power parity. Modern theories include the mark-up models and the industrial organization models determined by taking corporate behaviors into consideration.

Figure 5: Theories Explaining the Pass-Through between Foreign Exchange Rate and Inflation



Traditional Theories
~Law of One Price
~Elasticities Approach

Modern Theories
~Mark-up Models
~Industrial Organization Models

Source: Prepared by the author.

Upon examining the operating mechanism in the context of theories explaining the foreign exchange rate pass-through, two different channels are brought forth; namely, direct and indirect channels.

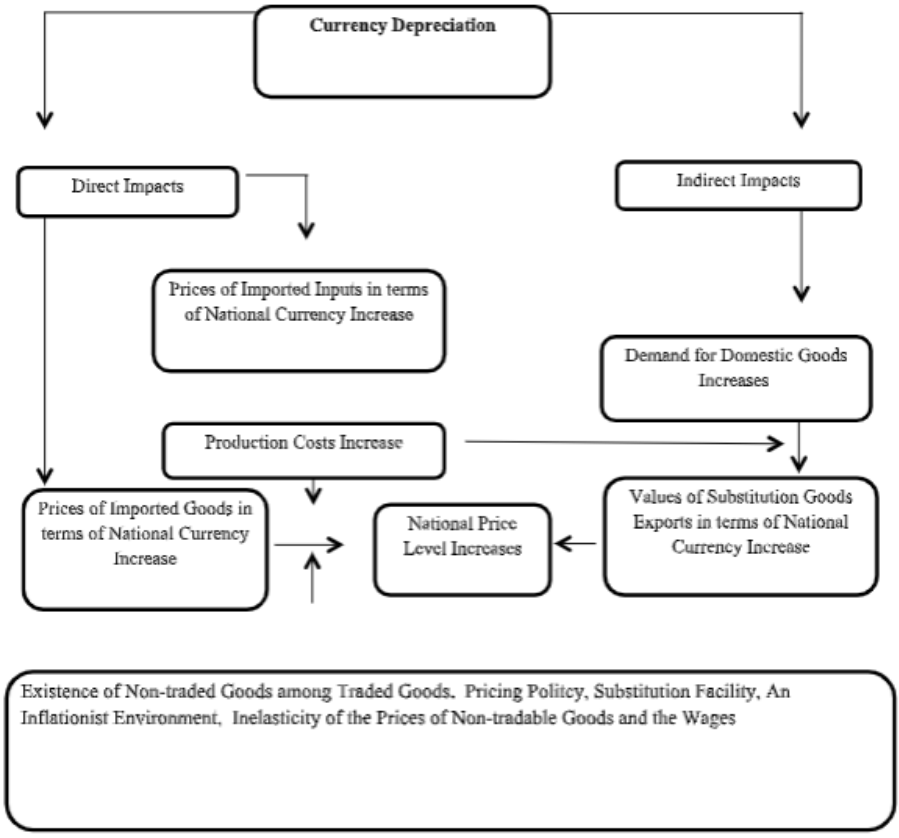
While the indirect channel which provides the foreign exchange rate pass-through to prices is the aggregate demand channel, the increase in the foreign exchange rate would result in cheaper domestic goods compared to foreign goods, and accordingly, the increase in exports and total demand compared to the potential output causes higher prices. On the other hand, since the nominal wage contracts are fixed in the short-run, the real wages would decrease, and output would increase.

However, when the real wages return to their former levels, the output level would be reduced in response to the increase in production costs and the general level of prices. That is, the increase in the foreign exchange rate would lead to a temporary increase only in the permanent

output level in prices (Damar, 2010: 9). Upon reconsidering this situation from a different perspective, the depreciation of the domestic currency increases the prices of imported consumer goods and the consumer price index. In the meantime, as the prices of the imported intermediate goods increase, production costs would increase and the increase in the cost of goods causes an increase in the prices of consumer goods (Dennis, 2001: 1).

As mentioned above, the impact of the indirect channel in the operating mechanism of the pass-through effect is evaluated in either the context of imported goods or through the net export channel. The depreciation of the foreign exchange rate would increase exports by rendering exports relatively cheaper than other goods. In this case, imported goods would become more expensive and domestic demand would be driven to the import substitution goods produced to be exported (Comunale and Simola, 2018). This situation would cause a price increase in the country's economy and changes in the foreign exchange rate would affect domestic prices through different channels. This mechanism is illustrated in Figure 6.

Figure 6: Transmission Mechanism of the Foreign Exchange Rate Pass-Through to Prices



As a result of changes in the foreign exchange rate, firms may choose to have a partial pass-through by reflecting only a portion of the changes in the sales price or a complete pass-through by reflecting the changes completely. If firms do not change their sales prices despite the changes in the foreign exchange rate, the pass-through cannot be mentioned. Lack of pass-through requires that is the price of imported goods in national currency is not affected by the changes in import costs

(Flamini, 2003). There are many factors that determine the foreign exchange rate pass-through to consumer and producer prices. Some of these factors include competitiveness, inflation rate, inflation targeting, pricing policy of firms, market share strategies, the quality of the goods to be traded, the share of imported goods in PPI and CPI basket, and the direction and size of foreign exchange rate movements.

Conclusion

The foreign exchange rate is the value of the national currency in terms of foreign currencies. An increase in the demand for or a decrease in the supply of the national currency raises the value of money. Inflation refers to the continuous increase in the general level of prices and the decrease in the value of money. The interest rate is the rate of return on capital. The coherence of these three indicators is very important for the country's economy. Positive or negative changes in one of the indicators may be effective on others. From a macroeconomic point of view, it is crucial that interest rate, inflation rate, and the US Dollar rate increases are to be convergent but not at high levels for healthy growth and economic equilibrium. The adaptive, but a high-rate increase of these three indicators would adversely affect the welfare level.

The interest rate, inflation rate, the US Dollar rate are the three most important indicators of a national economy, and they are closely affected by each other. The fact that these three indicators cannot remain in equilibrium creates different problems within the economy. In order to understand the relationship between inflation and interest

rate mentioned in the above paragraph, it is very useful to consider many macroeconomic factors, from the type of inflation to the methodologies used in financing public deficits.

The low level observed increases by maintaining the equilibrium of the US Dollar rate, interest rate, and inflation rate, which are considered as price mechanisms, have a boosting effect on macroeconomic performance. Today, due to the impact of globalization, central banks determine the interest rates in accordance with the general trend in the world. The decisions made against the trend in the world may increase the foreign exchange rate risks, increase the inflation rate and decrease the growth rate. In this context, the equilibrium of these three variables is of great importance for the economies of the countries and the policymakers as well.

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CHAPTER 5:

Oil Consumption, CO_2 Emission and Economic Growth Relation: E7 Countries

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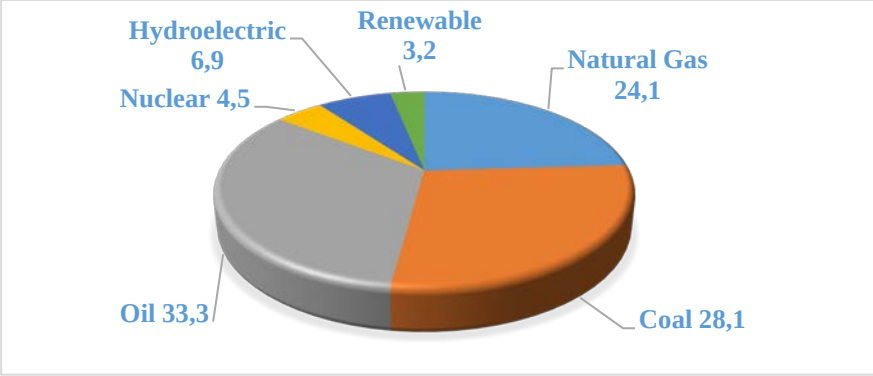
INTRODUCTION

Energy that is one of the irreplaceable factors of economic and social development had been provided from firstly oil, then from significantly fossil sources such as coal and natural gas. Oil had taken the place of coal which is the basic energy resource of First Industrial Revolution since end of 19. Century. Although consumption patterns had changed and new energy resources had showed up, oil had not lost its importance in also these days. Despite increase of concerns as individually and global scale about climate change and investments of businesses and governments to renewable energy resources, 97% of needed energy in making and using of a lot of products in daily life such as especially car has been supplied by oil and its derivatives in the first half of 21st century.

Nowadays obtaining and usage of energy is one of the most important development indicators of countries. Although energy resources vary day by day, the importance of oil in primary energy resources had still hold one's own. One of the most important reasons is percentage of oil in total energy consumption of the world. Petrol is non-renewable energy resource that has a huge usage in areas from electricity use to transportation.

Figure 1. Global Primary Energy Consumption Percentage Rates of 2017 (%)

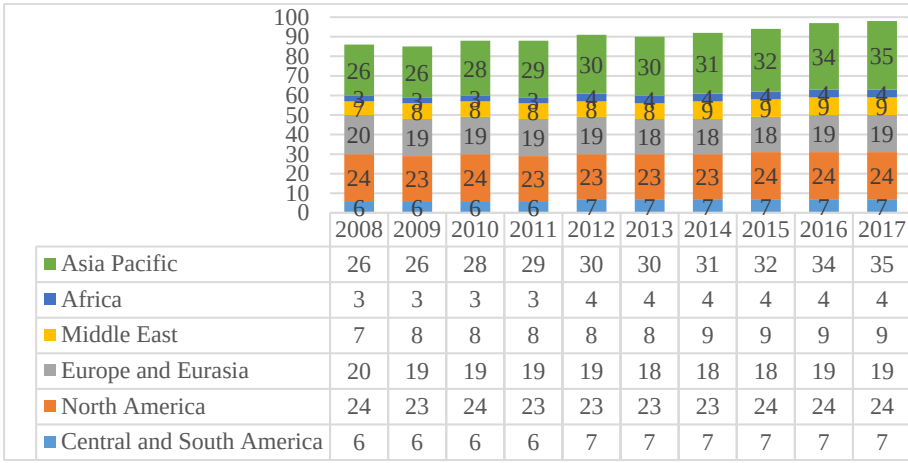


Source: BP, 2019

In Figure 1, the percentages of primary energy consumptions have been given in the world since 2017. As seen from figure, oil has taken place the first line in world energy demand as 33.3%. Then, it has been seen that coal is seen as 28.1% and natural gas as 24.1%, respectively.

In economic literature, relation between oil consumption and economy had been an investigating subject almost every period and obtained results had been evaluated. It has been seen that China and India have taken place in the first lines in world oil consumption. The reason of seeing of the most consumption in these countries can be shown as increases in production and export and fast growth in latest years.

Figure 2. World Oil Consumption in accordance with Areas in between 2008 and 2017 (million v/g)



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Asia Pacific	26	26	28	29	30	30	31	32	34	35
Africa	3	3	3	3	4	4	4	4	4	4
Middle East	7	8	8	8	8	8	9	9	9	9
Europe and Eurasia	20	19	19	19	19	18	18	18	19	19
North America	24	23	24	23	23	23	23	24	24	24
Central and South America	6	6	6	6	7	7	7	7	7	7

Source: BP, 2019

Figure 2 has shown the world oil consumptions in accordance with areas. In the figure, it has been observed that world oil consumption shows increase in every year. World oil consumption which is 91 million v/g in 2013 had reached to 98 million v/g by increasing as 7.75 in last 5 years. When world oil consumption is examined as regionally, the most oil consuming region is Asia-Pacific Area in years of 2008-2017 while North America Area has been in the second place. Middle East Area that takes place in first place in oil production has been fourth line in between six regions in oil consumption.

In this research, countries that take place in first lines in oil consumption had been chosen and relation between oil consumption, CO_2 and economic growth had been analyzed as econometrically in

these countries in between 1995 and 2017. Not analyzing of relation between oil consumption and economic growth in these country group before have importance in terms of contributing to literature.

1. LITERATURE SEARCH

Yang (2000) had searched relation between energy consumption and economic growth for Taiwan economy in between years of 1954 and 1997 by the help of Granger Causality analysis. Obtained results from study have revealed that economic growth is the reason of oil consumption.

Soytaş and Sarı (2003) had examined the relation between energy consumption and economic growth in Turkey in between 1950 and 1992 by the help of Granger Causality analysis. In conclusion, unidirectional causality relationship had been found between energy consumption and economic growth.

Zou and Chau (2006) had analyzed the relation between oil consumption and economic growth for China in between 1953 and 2002 by the help of cointegration and causality analysis. In the result of study, it had been determined that there is causality relation between variables in also long term as in short term.

Aktaş and Yılmaz (2008) had investigated the relation between oil consumption and economic growth in Turkey in between 1970 and 2004 by the help of cointegration and causality analysis. At the result of application, it had been seen that there is bidirectional causality

relation between economic growth and oil consumption in short and long terms.

Bushal (2010) had searched the relation of oil and economic growth in Nepal in between 1975 and 2009 by the help of Johansen Causality-Cointegration analyzes. Obtained results from research are in the direction of that a powerful causality relation was obtained between oil consumption and economic growth variables.

Öztürk and Acaravcı (2010) had benefited from Granger causality test in the purpose of searching the causality relation between energy consumption, economic growth and unemployment rates for the era of 1968 and 2005 in Turkey. Obtained results are in the direction of that there is a long-term relation between variables in significance level of 5%.

Kim et al. (2010) had examined the mutual dependence between CO_2 emission and economic growth for Korea by using dynamic models which are not linear. While there is not causality between two of them according to Linear Granger Causality test, it had been concluded that CO_2 emission is the reason of economic growth according to nonlinear Granger causality test.

Al-Mulali (2011) had researched the effect of oil consumption on economic growth for MENA (Middle East and North Africa) countries in between 1980 and 2009. In the study, cointegration test had been applied and it had been seen that there is cointegrated relation between CO_2 emission and economic growth and oil consumption. In addition, it had been concluded that oil consumption and CO_2 emission are the

reason of economic growth at the result of applying also Granger Causality test.

Arı and Zeren (2011) had inspected the relation of CO_2 emission and economic growth for Mediterranean countries in between era of 2000 and 2005 with the help of panel data analysis. In the study that Environmental Kuznet Curve (EKC) hypothesis was used, it had been found that relation between CO_2 emission and economic growth is as N-shape. In this case, obtained results have shown that CO_2 emission may increase in high economic growth levels.

Ceylan and Başer (2011) had analyzed the relation between economic growth and oil consumption for Turkey in between 1965 and 2011 by the help of cointegration test and Granger Causality test. Obtained results from research are in the direction of that oil consumption is the reason of economic growth.

Hossein et al. (2012) had tried to determine the relation of energy consumption and economic growth in Iran economy for the era of 1980 and 2010 with the help of Granger Causality and Cointegration. At the result of study, unidirectional relation had been found from economic growth to energy consumption in short term. However, any causality relation could not be found in long term.

Özcan (2013) had examined the relation between CO_2 emission, energy consumption and economic growth for 12 Middle East Countries for the era of 1990 and 2008 by the help of Environmental Kuznet Curve. According the results of research, it had been concluded that economic growth is the reason of energy consumption.

Park and Yoo (2014) had searched the relation between economic growth and oil consumption for Malesia in between 1965 and 2011 by the help of cointegration test and Granger Causality test. As a result of research, it had been found that there is bidirectional causality between economic growth and oil consumption.

Uçak and Usupbeyli (2015) had benefited from Granger causality and Johansen cointegration tests for long and short terms to determine the relation between oil consumption and economic growth in Turkey in the period between 1971 and 2013. As a result, any causality and cointegration relation couldn't be found.

Keskin (2017) had used econometric analyzes that take the structural breaks into account to search the existence of relation of economic growth and oil consumption for Turkey economy in between 1980 and 2016. As result of application, it had been found that there is not any relation of the variables in long term. Toda-Yamamoto causality test had been also used for variables. According to this result, it has been presented that there is a causal relation of oil consumption on economic growth.

2. ECONOMETRIC METHOD

In the study, it had been tried to analyze the relation of oil consumption, CO_2 and economic growth in E7[3] countries in the era of

[3] China, India, Brazil, Russia, Indonesia, Mexico, Turkey

1995 and 2017 by panel data analysis. Variables that are taken in model have been shown in Table 1.

Table 1. Variables Used in Model

Variables	**Using Variables**	**Source**
lnGDP	GDP per person (constant prices 2010 US $)	WDI (World Bank)
lnoil	Oil consumption (metric ton)	IEA (International Energy Agency)
$lnCO_2$	CO_2 emissions (metric tonnes per person)	WDI (World Bank)

Firstly, panel unit root test had been used for variables that are used in analysis and then coefficients had been interpreted with cointegration estimators after applying the cointegration test.

2.1. Panel Unit Root Tests

The difference of Levin, Lin and Chu (2002) test from other tests is that it recommends a more powerful unit root test when compared to other unit root tests. LLC takes consideration of this model:

$$\Delta_{yit} = \delta_{yit-1} + \sum_{L=1}^{p_i} \Theta_{iL} \Delta_{yit-L} + \alpha_{mi} d_{mt} + \varepsilon_{it}$$

m=1,2,….. (1)

Since pi could not been known, it has suggested a three-way process. In first stage, it turns every individual regression to ADF.

In this equation, d_{mt} has shown the deterministic variables vector while α_{mi} shows coefficients vector in model. Its hypotheses are as below:

$$H_0: p_i = 0 \quad (2)$$

$$H_1: p_i < 0 \quad (3)$$

After p_i is determined, residuals are obtained by applying Δ_{yit} and $y_{i,t-1}$ regressions on $\Delta_{yit-L}(L = 1, \ldots\ldots p_i)$ and d_{mt}.

In second step, the rate of long-term standard error to innovation standard error is calculated for each cross-section in panel. In last and also third stage, panel test statistics are calculated.

Maddala and Wu (1999) had developed Fisher type test that combines probability values of unit root test for each cross-section. Test which has no parameter has 2n degree of freedom (n shows the number of countries in the panel). Test statistics are shown as follow:

$$\lambda = -2 \sum_{i=1}^{n} log_e (p_i) \sim x^2_{2n(d.f.)} \quad (4)$$

Choi (2006) had obtained another test statistic.

$$Z = \frac{1}{\sqrt{n}} \sum_{i-1}^{n} \phi^{-1} (p_i) \sim N(0,1) \quad (5)$$

ϕ^{-1} is the opposite of normal cumulative distribution function.

Table 2. Panel Unit Root Test Results

Level	**Levin, Lin and Chu**		**Maddala and Wu**		**Choi**	
Variables	Stat.	Prob.	ADF Fisher Statistics	Prob.	Stat.	Prob.
lnGDP	-0.2480	0.4021	5.197	0.9829	3.009	0.9987
lnoil	-0.2200	0.4129	10.551	0.7208	2.225	0.9870
$lnCO_2$	0.1168	0.5465	9.567	0.7931	2.112	0.9827
First Difference						
lnGDP	-3.1988	0.0007***	32.434	0.0035***	-3.134	0.0009***
lnoil	-5.3386	0.0000***	47.340	0.0000***	-4.562	0.0000***
$lnCO_2$	-3.8889	0.0001***	42.791	0.0001***	42.791	0.0001***

Note: ***, **, * indicate significance level of 1%, 5% and 10% respectively.

In every applied three-unit root test statistic, when series are tests whether they are stable or not, it had been determined that economic growth, oil consumption and CO_2 emission data which are used in the application are stable in their first differences for 1995 and 2017. Therefore, it had been seen that all data become as stable with first differences and they do not have unit root.

2.2. Panel Cointegration Test

The existence of a relation between variables in long-term has been found by cointegration analyzes. As a result of panel data analyzes, cointegration analysis that is established on the assumption which all series are integrated from first degree has been applied to

examine the relation between series by using Johansen Fisher panel Cointegration test. Johansen fisher panel cointegration test which is panel version of individual Johansen cointegration test has based on summation of individual Johansen maximum eigenvalues and p-values of trace statistics. If p_i is p value which is obtained for cross-section 'i' from individual cointegration test, test statistics for panel under null hypothesis is as follows:

$$-2\sum_{i=1}^{n}\log(p_i) \sim X_{2n}^2 \quad (6)$$

Cointegration test results in Johansen type panel has depend on lag number of VAR system (Hossain, 2011:6995).

Table 3. Lag Length Criteria Results

Lag Length	LogL	LR	FPE	AIC	SC	HQ
0	-493.921	NA	2.589	9.4651	9.5410	9.4958
1	571.603	2049.866	4.71e-09	-10.659	-10.355*	-10.536*
2	584.508	24.0905*	4.38e-09*	-10.733*	-10.202	-10.518

Johansen cointegration test is sensitive to lag length. Therefore, lag length of models had been specified with "lag length criteria". While doing this finding, it is important that criteria defines the least value. Hence it had been decided that lag length is 2. The reason of choosing this length is that Akaike information criteria is the one which defines the minimum value among all information criteria (Akaike AIC, Schwarz SC and Hannan-Quinn HQ) as seen from Table 3.

Table 4. Panel Cointegration Test Results

Johansen Fisher Panel Eşbütünleşme Testi				
Sıfır Hipotezi	İz Testinden Oluşturulan Fisher İstatistiği	Olasılık	Maksimum Özdeğer Testinden Oluşturulan Fisher İstatistiği	Olasılık
None	347.2	0.0000***	315.5	0.0000***
At most 1	84.01	0.0000***	67.09	0.0000***
At most 2	30.01	0.0076	30.01	0.0076**

Note: ***, **, * indicate significance level of 1%, 5% and 10% respectively.

Cointegration test results have shown that variables are cointegrated in long term since H_0 hypothesis is rejected under 0.01 significance level. Being of series as integrated has shown that they are related in long term.

In the case of that cointegration exists between variables used in application, if two variables are cointegrated, it has showed endogeneity problem between explaining variables and error terms. To distinguish this problem, three methods have been recommended as FMOLS, CCR and DOLS (Berke, 2012:251).

Table 5. Panel FMOLS Results

Variables	**Coefficient**	**Standard error**	**t-statistic**	**Possibility**
Lnoil	0.0374	0.0175	2.1356	0.0344**
$\ln CO_2$	0.9725	0.0621	15.6541	0.0000***
R^2	0.9739			
Düzeltilmiş R^2	0.9724			

Note: ***, **, * indicate significance level of 1%, 5% and 10% respectively.

According to FMOLS results, coefficient of each two variables are significant as positively and statistically. An increase happened in oil consumption as 1% has increased the economic growth as 0.037% in E7 countries while increase in CO_2 emission as 1% increases as 0.97%.

Table 6. Panel DOLS Results

Variables	**Coefficient**	**Standart Hata**	**t-statistic**	**Possibility**
Lnoil	0.0396	0.0193	2.0452	0.0438**
$\ln CO_2$	0.9966	0.0645	15.4465	0.0000***
R^2	0.9899			
Adjusted R^2	0.9842			

Note: ***, **, * indicate significance level of 1%, 5% and 10% respectively.

According to DOLS results, coefficient of each two variables are significant as positively and statistically. An increase happened in oil

consumption as 1% has increased the economic growth as 0.039% in E7 countries while increase in CO_2 emission as 1% increases as 0.96%.

3. CONCLUSION

Oil which is one of essential energy resources of economic development process have played a key role in that many countries passed important thresholds and some countries struggled with financial crises in relevant process. The basic reason is that country economies have obtained the most of their energy needs from oil and oil derivatives.

The purpose of this research is to examine how and which direction oil consumption affects these countries' economic growth in E7 countries as known as China, India, Brazil, Russia, Indonesia, Mexico, and Turkey. For this purpose, oil consumptions of countries that are used in the study had been examined with the help of panel data analysis by using CO_2 emission and gross national product data in between years of 1995 and 2017. In the research, firstly existence of unit root in variables had been searched by the help of LLC, Maddala Wu and Choi panel root tests. It had been seen that series are stable in first differences of each three applied tests. Since variables are stable in first difference, cointegration test had been applied to series and cointegration had been found among variables. Then, FMOLS and DOLS had been used to guess the coefficients of cointegration. According to FMOLS results, it had been found that an increase happened in oil consumption as 1% increases economic growth as 0.037% in E7 countries while it increases as 0.96% according to DOLS

results. That coefficients are significant and positive as statistically has emphasized the importance of oil consumption in these countries.

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CHAPTER 6:

Turkish Economy and Financial Crisis through the Period 1995 -2018

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INTRODUCTION

In the last ten years, the Turkish economy has seen many changes. These fluctuations have showed many serious figures; for instance major interest, high inflation & price, and negative budget & balance of payment. In addition, the Turkish economy was affected by an earthquake in 1999, international crises, such as the Asian-Pacific crises in 1997, and The Russian crises 1998. However in the last four years there was a lower inflation, a lower interest & price, moreover a high growth national product.

A study project will focus on the Turkish economy indicators, and economic crises from 1995 to 2018. In addition this essay will give us how is improving the Turkey. Moreover there is more knowledge about Turkey for foreign enterprises.

The project has been organized in a way; a profile of Turkey, a growth of Turkish economy, the economic crises of Turkish economy, the new economic policy of Turkish economy for the crises solution, an investment subsides' system of Turkey for foreign enterprises

The first section of this essay can give a profile of Turkey, such as size, population, national resources, and a leading role of the region.

Section two provides an overview of economic outlook of Turkey in 1995 to 2018 & an economic climate, an economic indicator, such as; gross national product, foreign trade figure, price and inflation rate, and balance of payment.

Section three presents how many crises there are in Turkey in the last ten years, for example, financial crises of Turkey in 2001. In addition how it is affected in the Asian Pacific crises and the Russian economic crises.

Section four gives a new economic policy of Turkish economy. This chapter includes the rules of IMF solution, the economic and financial discipline for budget, and integration of EU. Moreover it is next ten years what is going the Turkish economic indicatory.

This project concludes some useful knowledge about the Turkish economy, such as state, some economic organization and company.

1. COUNTRY PROFILE

1.1. Geography

Turkey is located between two old continents, Asia and Europe. One part of Asia is named the Anatolian Plateau, the other part of Europe is named the Eastern Thrace. Europe and Asia meet Istanbul, which is a biggest city in Turkey, it has canal between Black Sea and Marmara Sea, this canal is named Bhosphorus. The other canal is the city of Çanakkale, which is between Marmara Sea and Mediterranean Sea, it is named Dardanelles.

Turkey is the birth place of many great civilizations, such as Hittite, Greeks, Roman, Byzantium, and Ottoman, this means these regions have been the center for commerce and culture due to it connected Asia, China, Europe, and the linking of Africa with

Mediterranean Sea. Turkey is 814,578 square kilometers. The Anatolian Plateau is bordered by the Black Sea to the north, the Aegean Sea and the Marmara Sea to the West, and the Mediterranean Sea to the south.

Turkey has a coastline of 8,000 kilometers, and area border of 2,573 kilometers. The country is neighbor to European and Asian countries; Greece, Bulgaria, Georgia, Azerbaijan, Armenia, Iran, Iraq and Syria.

Turkey is composed of seven geographical regions determined in line with the highly different and varying unique climatic and ecologic conditions. These regions are the Marmara Region, the Black Sea Region, the Mediterranean Region, the Eastern Anatolia Region, the Southeastern Anatolian Region, the Aegean Region and the Central Anatolian Region.

There are three main climatic zones in Turkey. The northern coast of Turkey, in particular the Black Sea Region, has a mild climate and is rainy throughout the year, temperatures is not very low in winter and not very hot in summer. Western and southern coasts of the country have a climate of mild winters and hot, dry summers. The climate in Central Anatolia shows harsh climatic features with cold and snowy winters followed by hot and dry summers (Rustow, 1968).

Ankara, which is the capital city, is situated in the center of the country. On the other hand Istanbul is the biggest city, and also financial and industrial metropolitan in Turkey. The other big cities are Izmir, Adana, Bursa, Antalya, Manisa, Eskisehir, Gaziantep,

Samsun, Trabzon, and Mersin. Adana, Bursa, Manisa, Eskisehir and Gaziantep, which have many industrial companies, are in the land. The others 5 cities have a harbor for commerce and tourism.

1.2. Population

Nowadays, Turkey's population is 820 million people. Nearly 70% of the population has lived in cities. The main religion of the Turkish people, with 99% ratio, is Islam. However, Turkey is a secular state, where freedom of worship for non-Muslims is protected. Among the non-Muslim population are Greek Orthodox, Armenian Christian and Jewish people. Needless to say, Turkey is the only Islamic country that has separated state and religious matters by law.

The official language of the country is Turkish. All documents that are to be submitted to the government authorities must be prepared in Turkish. Primary educations are 8 years. High schools teach English, French, German and Italian as primary foreign languages.

Nowadays Turkey has got nearly two hundred universities, (70 per cent state, 30 percent provide), university education is high quality. As a result of the significant efforts that have contributed for improving the overall educational level in last two decades, the literacy rate is over to 90 per cent.

The increase in the overall schooling rates, from primary schools to universities, is contribute to developing the background for the formation of the well-educated, hard-working Turkish labor force of the future.

1.3. National Resources

Turkey has a massive geographic and strategist area in the word, which is the bridge of Europe, Asia and Africa. Turkey's Land is some of European part, some of Asian part. In addition it connects Africa with Mediterranean Sea.

Its population is bigger than many European country, most of them are very young. In addition, the people resources are very dynamic power and well educated skills. Turkey has nearly hundred universities, moreover some universities established above a hundred year ago and most universities started educating fifty and sixty years ago.

Turkey has produced significant quantities of iron, it has also energy sources for water. Coal and lignite are more widely stock, it is producer natural gas and oil Trakya and Eastern Anatolia. A hydro electric potential was gradually realized in 1950 and 1960 with the construction of dams (Thornburg 1968).

Turkey has produced the traditional goods, such as creal, sugar, wines, olives, graphs, teas, tobacco, cotton and many foods.

Turkey has very popular many sectors; for instance, tourism, textiles, packing, marble, agro, leather, and ceramic industries.

Now, Turkey has an energy corridor for Caspian Sea's oil reserve, last month, it opened new pipe line from Baku to Ceyhan where is Mediterranean Sea, it is near Syrian board.

1.4 Leading Role in the Region

Turkey enjoys a unique location bridging Europe and Asia. Turkey's proxy to the emerging markets in the Middle East and Central Asia expands the potential market size as an export platform.

Turkey's linguistic, religious and cultural ties with the Turkic republics in Central Asia and Caucasia have a special value and privilege (Toksoz 2002). Turkey has the unique opportunity to establishing a very close economic cooperation with these countries and in providing technical expertise, investment and trade cooperation to help exploit their vast resources of oil, natural gas and precious metals.

Turkey stands as the perfect gateway for the foreign investors searching for business opportunities in the Balkans (Greece, Bulgarian Romanian), Caucasia (Georgian, Armenian, Azerbaijan), Middle East (Syrian, Iranian, Iraq), and Central Asia.

There is a considerable business volume in terms of trade with Russia and Black Sea countries.

2. GROWING of THE TURKISH ECONOMY

2.1. Economic Outlook

Turkey has seen a remarkable transformation in all sectors of the economy since 1984 which has adopted liberal economic policy.

In the period from 2003 to 2017 its gross national product (GNP) rose up continuously. In the last four years GNP has grown by 79.8 per cent, in other words it increased by 5.7 per cent each year in

average. Moreover, Turkey's per capita of GNP increased over USD 10.600 in 2017, which Turkey has seen this growth first time.

The decline in inflation was from 70 per cent to 6 per cent levels in the last decade which means that it reached its target of single digit.

A foreign direct investment raised by 1 billion in 2018 that in total FDI has amounted nearly to USD 13 billion. Most European, Americans and Japanese companies have made investments in different sectors both in production and service.

In the year of 2018, Turkey's total amount of foreign trade was USD 391 billion. Import figures were USD 223 billion which 70 per cent of the goods purchased from the countries in the EU, such as Germany, Italy, the United Kingdom, France and Spain. The figure for Export was USD 168 billion in which 60 per cent sold to the EU countries, the rest was to the Middle Eastern countries & the US.

Turkey's economic performance in the last decade was export oriented growth strategy. It has executed a massive economic transformation from closed economy, in other words it has passed to a competitive market economy (Rittenberg 1998).

2.2. Economic Indicators of Turkey

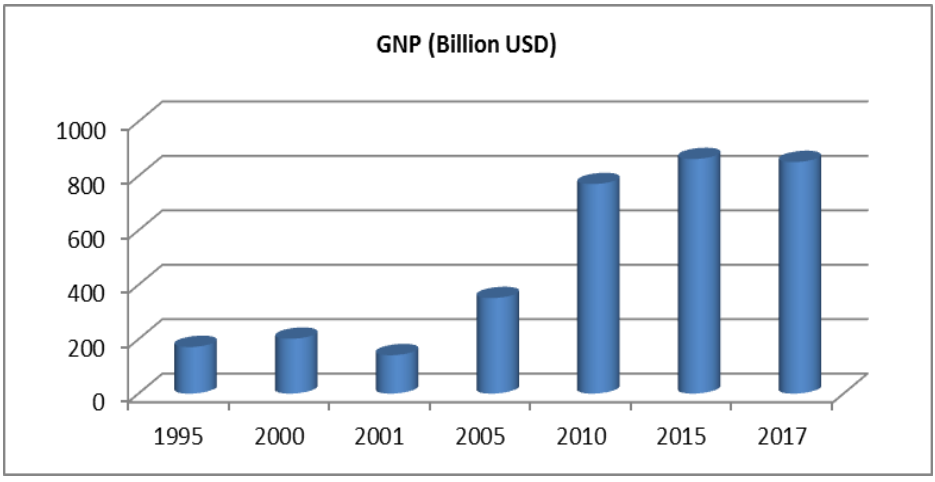
2.2.1. Gross National Product

The Turkish GNP grew by 7.4 per cent in 2017 mainly because of the sharp increase in private fixed investment spending and household consumption expenditure.

In 1995, Turkish GNP was USD 171.7 billion; the GNP per capita equaled USD 2782 and a growth 8.0 per cent. In 2000 these indicators were USD 201.4 billion of the GNP, USD 2987 of a GNP per capita, and 6.3 per cent of the growth. On the other hand in 2001 the GNP was USD 141.0 billion, the GNP per capita USD 2102, and the growth was -9.5 per cent. This year, Turkish economy was in financial crisis.

This graph 1 shows the gross national product of Turkey. The horizontal axis represents years (from 1995 to 2017) the vertical axis gives billion USD of the GNP of Turkey.

Graph 1: Gross national product of Turkey between 1995 - 2017



Resources: SBB, 2019.

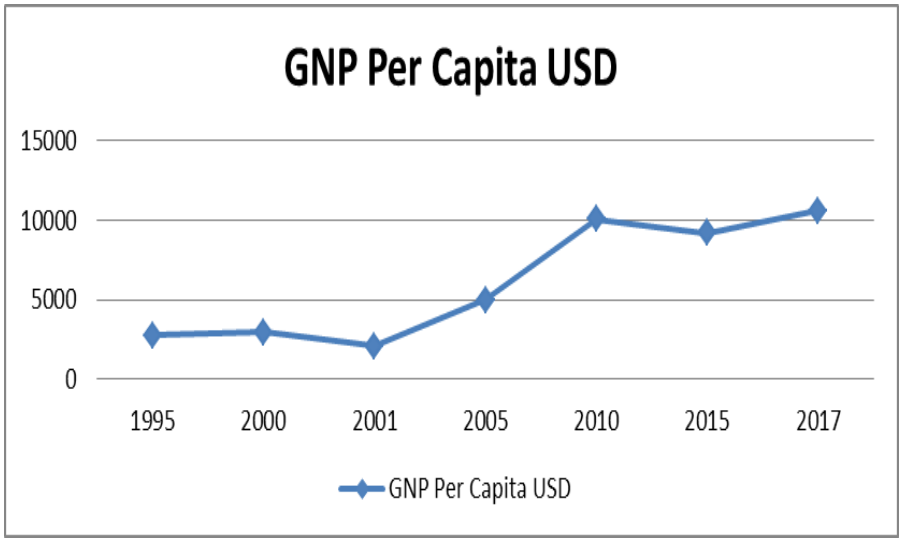
In the last ten years, the GNP of Turkey rose some years, and decreased some years. From 1995 to 1998 there was a slight increase. Then this figure remained steady for 2 years. During these years there was a Russian and Asian Pacific financial crises. These crises affected

Turkey, because Russia and Turkey are close countries the each other for import and export.

In 2001, there was financial crisis in Turkey. The GNP fell sharply. In other words the Turkish economy was 25 per cent smaller than in 2000. In the last four years, it increased year by years, from 2001 to 2017 it rose dramatically. As can be seen this positive situation continued into the next period.

Graph two represents the GNP per capita USD of Turkey. This horizontal axis gives years between 1995 and 2017. The vertical axis shows GNP per capita USD of Turkey.

Graph 2: The GNP per capita USD of Turkey



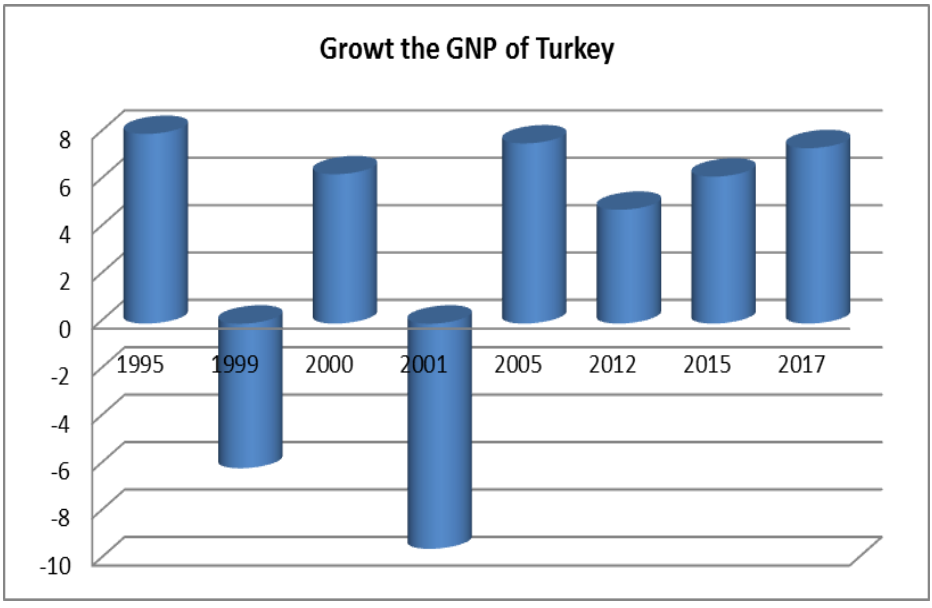
Resources: SBB, 2019.

As can be seen graph two is as similar as graph one. The GNP per capita remained stable from 1995 to 2001, after that from 1998 to 1999 there was a sharp decreased, this year it was an earthquake in

Turkey, before two year Turkey was affected by Russian and Asian Pacific financial crises. 1999 to 2000 was a plateau. The special year in 2001 was a financial crisis in Turkey, this year the GNP per capita decreased dramatically, from nearly USD 3000 to USD 2100. This decrease equals about 30 per cent. Then, from 2001 to 2017 it was a sharp rise. Nowadays GNP per capita of Turkey is USD over 10600.

This graph three shows the growth of the GNP per cent of Turkey from 1995 to 2017. The horizontal axis shows years between 1995 and 2017. The vertical axis represents the growth of GNP per cent.

Graph 3: Growth the GNP of Turkey



Resources: SBB, 2019.

The growth of the Turkish economy was a dramatic decline in 1999 and 2001, an economic crises in the country was affected by the

Russian crisis and the earthquake of north western Turkey. This region is Istanbul, Kocaeli and Adapazari where are the most factories, industrial companies, in other word it is a developing region.

From 1995 to 1999 the growth economy showed a fluctuated figure. From 2001 to 2017 it was a sharp rise. This positive situation after years continued.

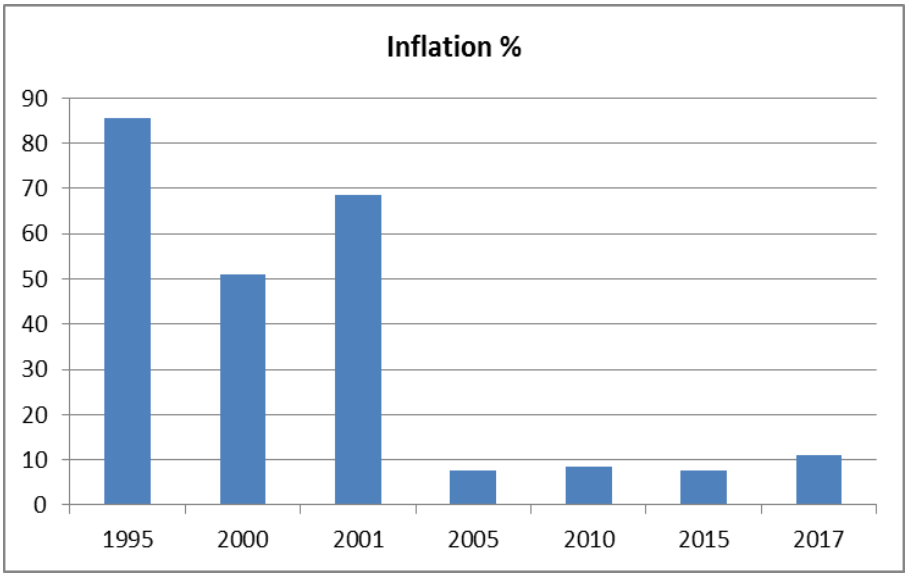
2.2.2. Changes in price levels

In 1995 wholesale prices annual average was 85.6 per cent. A consumer price levels annual average was 88.0 per cent, and the GNP deflator was 87.2 per cent. In 2000 these indicators were 51.1 per cent, 54.9 per cent, and 51.3 per cent. After 2001 inflation decreased significantly. Turkey experienced the lowest inflation levels from 2003 to 2017. In addition this year can be as same as level last year. Predictors of Turkey will see lower level in the next ten years.

Graph four shows the inflation rate of Turkey. The horizontal axis represents years (from 1995 to 2017). The vertical axis illustrates the inflation per cent.

Twenty year ago, the inflation of Turkey was a very high level figure, for instance some year it was a over 80 per cent, some year it was a over 70 per cent, and some year it was a over 50 per cent.

Graph 4: Inflation per cent from 1995 to 2017



Resources: SBB and TUIK, 2019.

Nowadays, an inflation of Turkey is under 10 per cent, because the Turkish government has executed a new economic policy, it is against the inflation. These new improvement can be success in the next years.

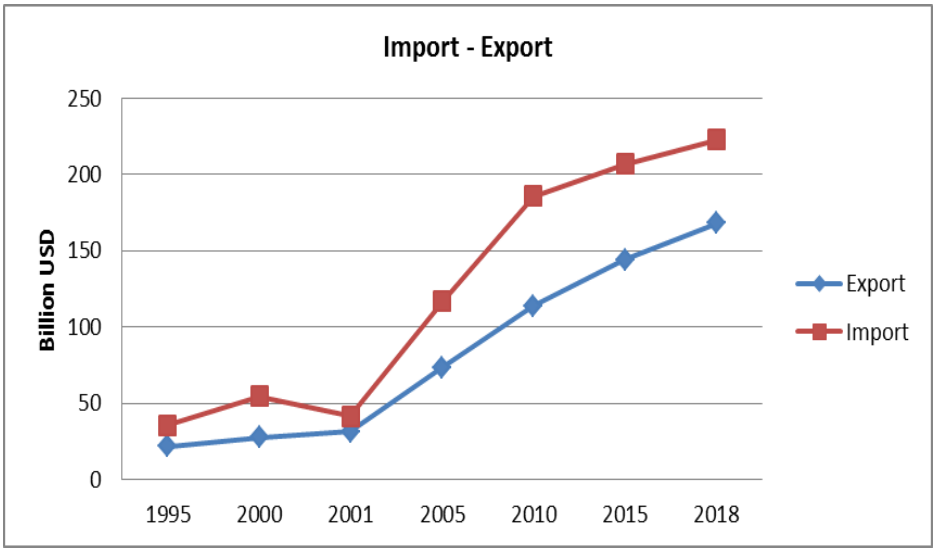
2.2.3. Foreign trade figures

In 1995 when exports realized USD 21.6 billion, imports amounted to USD 35.7 billion. On the other word, foreign trade balance was -14.1 per cent, moreover foreign trade balance/GNP was -8.2 per cent and current account balance/GNP was -1.4 per cent.

In 2018, both exports and imports reached an all time high. Exports increased by nearly 20 per cent and realized USD 168 billion, while imports rose by 16 per cent and amounted to USD 223 billion.

Graph five illustrates a foreign trade, such as imports and exports (from 1995 to 2018). The horizontal axis shows year, and the vertical axis represents a billion USD.

Graph 5: The import and export of Turkey (1995-2018).



Resources: TUIK, 2019.

The Turkish's export remained stable between 1995 and 1999, after it rose slightly from 2000 to 2002, after that it increased sharply from 2003 to 2005, because the new reform policy effected to the export. The Turkish's import rose slightly from 1995 to 1997, after it decreased slightly from 1998 to 2000, then it rose sharply in 2001,

after it declined sharply in 2002, after that it increased dramatically from 2002 to 2018

Nowadays the total of trade in Turkey is nearly USD 391 billion, import amount USD 223 billion, export is USD 168 billion.

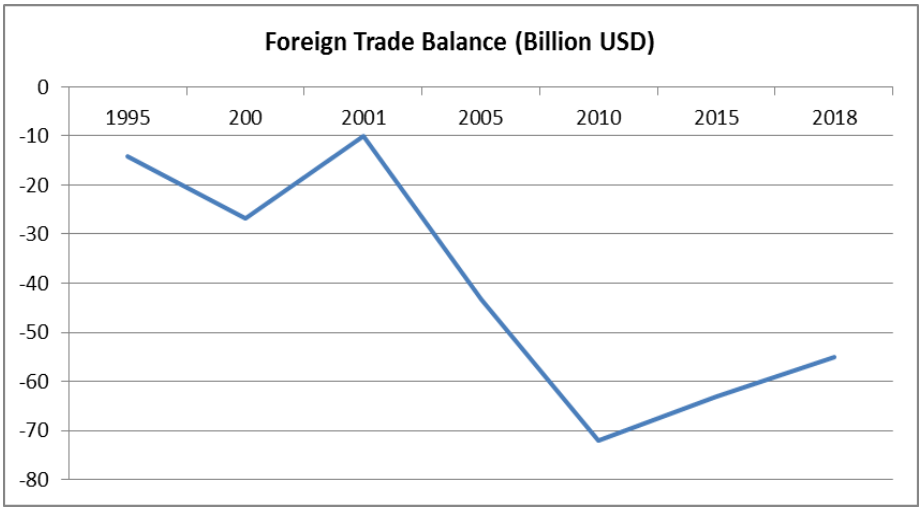
2.3.4. Balance of Payments

In 2001 and 2002, balance on goods and services were positive, in the other hand after three years they were negative. From 2001 to 2005 Turkey needed credit and debit. Therefore it had a high debit from IMF. Moreover it has taken from portfolio investment & direct investment.

In 2001 the net error and omission was a negative USD 1.671 billion. After years, it was a positive figure.

Graph six shows the foreign balance of Turkey from 1995 to 2018. The horizontal axis represents year (from 1995 to 2018), the vertical axis illustrates per cent of the trade balance.

Graph 6: The foreign trade balance of Turkey (1995-2018).



Resources: TUIK, 2019.

The Turkish trade balance was negative every year. In 1995 it was a minus USD 15 billion. In 2005 it was the minus USD 40 billion. From1995 to 1997 trade balance rose slightly, after 1998 to 1999 it decreased gradually, then it increased sharply in 2001, after that from 2001 to 2002 it decreased dramatically again, and it rose dramatically from 2002 to 2018.

These foreign balance trade of Turkey shows us, Turkey need a foreign investments or need barrow money from international market.

2.3. The Economic Indicators of Turkey & European Union

This table below shows EU countries economic indicators in 2013. These indicators are the growth of GNP (per cent), inflation (per cent), and the GNP per capita (USD)

Table 1: Economic indicators of EU

Countries	GNP (%)	Inflation (%)	GNP Per Capita (USD)
Belgium	0.8	1.7	46.779
Germany	0.8	1.6	44.010
Greece	-4.2	-0.8	21.645
France	-0.1	1.6	43.000
Italy	-1.5	2.0	34.000
UK	0.7	2.7	38.002
Czech Repl.	0.3	2.3	19.243
Hungary	0.0	3.2	13.344
Poland	1.3	1.9	13.075
Bulgaria	1.2	2.1	7.585
Romania	1.8	4.8	8.775
Turkey	4.0	5.3	11.318

Resources: ISO 2018

In 2013, the growth of the GNP in Turkey was 4.0 per cent. This year an inflation was 5.3 per cent, and the GNP per capita was USD 11.318, on the other hand the member of the EU countries, such Western Europe, growth of GNP were below 2.0 per cent, an inflations were below 2.5 per cent, and the GNP per capita were over USD 34.000. In addition all of the the new members, as the Eastern Europe's countries, the growth of the GNP was below 2.0 per cent, inflation was below 4.8 per cent and the GNP per capita was over USD 7.582.

As can be seen the economic indicators of Turkey are as similar as Europe's countries.

3. FINANCIAL CRISES OF TURKEY

In 2001, there was a financial crisis Turkey. It affected external and internal economic events, such as; currency collapse, a balance of payment, banking.

This crisis' first factor was external dimension. This means after the Asian crisis affected to Russia's exports. Turkey and Russia are nearly two closed countries, which Turkey has bought a natural gas from Russia, and it has sold textiles and foods. Therefore, Turkish exports were affected by the Russian's crisis until 2001. Turkish economy has been vulnerable from foreign trade (Onis 2003).

Secondly, currency collapsed in November 2000 & February 2001, because foreign and domestic investors pulled out sums of money from the Turkish domestic market, which its name is Istanbul Stock Exchange.

Thirdly, the balance of the payment's crisis, in the other words, the commercial bank of Turkey did not pay outside debt, because they had to open short position in foreign currencies. This means, they barrowed from international market. It is also short term & low rates, and they invested in government bonds. This massive investment was long term, high rates. Essentially, banks were barrowing short term money to hold long term Turkish government bonds. They took the market risks (Tunc 2003).

Fourthly, Turkish foreign trade balance was negative for a long time. This means, the Turkish imports were bigger than exports.

Consequently, the Turkish government had to barrow money from inside or outside's countries and investors.

Fifthly, growth of the GNP in Turkey increased a high rate, whereas inflation was above 70 per cent since 1985.

Overall, both internal and external imbalances were important in Turkish economic crisis in 2001. The currency increased immediately about two times. Banking sector did not pay to outside loan, because the Turkish government did not pay to bonds. They were a long term (Tunc 2003).

This process took about one year. Consequently nearly twenty one banks stopped, and got out from the banking sector, and unemployment soared.

IMF was the critical actor in this crisis, the EU was decisive for the first time, and the World Bank was secondary actor.

4. SOLUTIONS & POTENTIAL GROWTH IN TURKISH ECONOMY

The solution of the economic crisis in Turkey in the start of 2002 can be attributed to several factors. One of these was IMF policies. Main factor this economic crisis solved by the rules of the IMF. It initiated a number of target & precautions. This success was the direct result of IMF policies, which they were a stand by agreement. This stand by agreement consisted of many policies (Tunc 2003).

First policies related Turkish's budget. A long time, the Turkish's budgets did not equal. This means the expenditures of

budget were bigger than income. Turkish government decreased the expenditures and increased the tax.

Second policies simplify monetary, in the others words a currencies was free, which they were not fixed. New currency policy affected the imports, and they rapidly decreased.

Third policies linked various structural reforms, such as working life, a subsides of farmer and industries.

The fourth policies were inflation. After this policy, the inflation decreased in Turkey. Now it is 8 per cent.

After IMF policies, the Turkish economy's all indicators showed a success' figures, such as, the growth of The GNP, per capita of the GNP, the payment of balance and foreign trade balance.

If Turkey can join the EU union, and economy, it will increase all economic indicators.

CONCLUSION

Turkey managed to sustain moderately high rates of economic growth over a period of five decades. Turkey also has managed to combine moderate growth and significant industrial transformation since 1980 (Odekan 1988). In the last ten years, the Turkish economy has seen many changes. In 2001, there was a financial crisis. This time many companies stopped producing & trading, and unemployment soared. This panic finished in 2002.

Turkey economic indicators have improved the last four year. After that Turkey merged to the member of the EU in 2005. If this

positive conjuncture can continue, Turkish economy will grow in the few next years.

Turkey has many resources for foreign and domestic investors, because there is many an advantage for product and trade. Turkey is like a bridge Asian and European continent, this means consumers market is near there. Now Turkey is a corridor for gas and petrol pipe line. In addition, Population of Turkey is very young and well educated. Moreover it is a big market for consumers. There is not bureaucracy for foreign and domestic firms, and money transfer is basic from the Turkish bank to outside bank. Turkey is uniting to the EU in five years.

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CHAPTER 7:

The Effect of Asymmetric Information Problem on Markets

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1. INTRODUCTION

Asymmetric information approach is a modern theory that aims to explain financial crises and has emerged in recent years. Asymmetric information is commonly described in the literature as a characteristic of the credit market (Bhattacharya & Thakor, 1993: 2; Van Damme, 1994: 14). Developments and problems in financial markets also affect the overall economy. Information asymmetry existed in financial markets and its macroeconomic effects were found as a result of studies.

From the 18th century onwards, many economists became aware of the effects of incomplete information on the economy and financial markets. For example, Adam Smith observed that when firms increased interest rates, the best borrowers were with drawn from the market and he stated that if the lenders knew the risks exactly, they would be able to solve the problem by loading a risk premium to the debtor. One side of transactions in financial markets is likely to have less information about the transaction than the other, in order to make the right decision. Here, some economic units in the market more than the others than the knowledge of the situation is called asymmetric information (Şimşek & Karakaş, 2007: 21).

Although there has been some piece of knowledge on knowledge economics, the first model study of limited information based markets is Akerlof (1970) 's classical analysis of lemon market. George Akerlof (1970) explained the information asymmetry and the adverse selection problem resulting from the situation in the second

hand car market. Akerlof (1970) assumes that there are four different cars in the automobile market for a better understanding of the issue: new and used cars and good and bad (lemon) cars. The new car may be good or bad; second-hand cars can also be good or bad (lemon). Individuals who buy a new car in this market do not know that the car can be good or bad. But, with the possibility of q, they know that the car is good, with the possibility of 1-q, that the car can go bad. The individual having a certain car for a while will have a new idea about the quality of that car. For example; have a new possibility that the car is bad. This estimate is closer to truth from the previous estimate. Information asymmetry occurs at this stage: The seller has more information about the car than the buyer. Since the buyer can not reveal the difference between good car and bad car, good and bad cars should be sold at the same price. Very clearly, a good car with a bad car does not have the same value. Therefore, the good car owner will be trapped. Good car owner, beyond the car's value can not get, the car in his hand can not get the expected value of a new car. As a result of this analysis, Akerlof states that information asymmetry will cause adverse selection, good car owners will withdraw from the market and the market will remain in bad cars.

The section that includes the identification and development of asymmetric information constitutes the introduction section. In the second section, the problems of asymmetric information in economy and markets are given. In the last section; suggestions were made about the solution of the problem.

2. Problems of Asymmetric Information Problem

In a transaction taking place in financial markets, while one of the parties to the transaction has sufficient knowledge, one of the parties is defined as the lack of sufficient knowledge causes tothe emergence of three basic problems such as information asymmetry, adverse system in the financial system, the problem of representation and moral hazard and these problems cause that credit institutions apply for methods such as credit rationing (Mishkin, 1992: 164).

A. Adverse Selection

Reverse Selection is the problem that arises from asymmetric information and occurs before the process is performed. We can explain how a reverse selection came about through a simple example : Suppose that there are two different qualities (good and bad) gum which supplied on the market. The share of chewing gum in the market is p and 1-p. Every potential buyer considers buying a chewing gum, but has no idea of the quality of these gums. The value that all buyers attribute to the gum is the same: the value attributed to the gum which is not of good quality or the cost to the buyer is w^l, the value attributed to the good quality gum or the cost to the buyer is w^h and hence $w^h > w^l$. Each vendor knows the value of the gum he sells: the value of the gum which is not of good quality isv^l and the value of the gum which is of good quality is v^h and $v^h > v^l$. Therefore, $v^l < w^l$ is not good quality chewing gum; $v^h > w^h$ is the

gum of good quality for the seller. If there were separate markets for good and non-good chewing gum; For non-good chewing gums, it would be acceptable for both the buyer and the seller at a location between v^l and w^l. Of course, in this case, the market would be in balance. If buyers do not have sufficient knowledge of quality and the market is not well regulated, non-good chewing gum vendors seeking profits will supply their goods in the good chewing gum market. In this case, the good and not good chewing gum market will turn into a single market and a single price for both gums will be formed. In this case, the value that good gum sellers assign to their goods will be more than the average value of the buyers (Fidan, 2011: 45).

The inverse selection problem poses problems that may adversely affect the markets. These problems are encountered when one of the parties in the market is unable to observe the type or quality of the goods. This occurs in relation to a contract where the information is known to one side and is not known to the other party. As a result, the second party has to bear the cost (Erdoğan, 2008: 6).

Reverse selection is the problem created by the asymmetric information phenomenon prior to the realization of a transaction in a market. Individuals who want to find loans in the markets where economic units and fund surpluses are in need of a fund may hide some of the negative features that they think will prevent them from finding funds or may show them differently. Thus, they can obtain the amount of funds they want without paying a risk premium and at a low cost. The existence of such a situation in financial markets may

cause funders to be reluctant to lend. In order to be able to be informed in a different way than with the idea, those who raise funds can claim their funds at a very high cost by demanding a risk premium. In this case, people who look for a good debt in the market with really good features can not be separated from others, they can not be affected by the negativity they can be affected (http://www.bayar.edu.tr/).

B. Agency Problem

The problem of representation; is an information problem arising from the fact that one of the parties fails to control the results of such authority when it delegates authority to some people in order to perform certain economic transactions on behalf of itself in a economic relationship.

There are two sides of the agency relationship. One of them is boss who delegates the power of representation to the broker and the other is the patron agent patron who carries out economic transactions by using his or her authority on behalf of the boss.

The basis of the agency relationship is based on the appointment of one or more persons tospecific person or contacts as an intermediary for specific activities. In this relationship, the boss is considered to be the party that transfers the decision making power to certain amounts of intermediaries. The decision of the representative affects both sides. This relationship is now inevitable due to growing

economic scales and can be at the center of many economic problems (Jensen & Meckling, 1976: 41).

C. Moral Hazard

The moral hazard that usually occurs in financial markets; the credit can be defined as the risk of damaging the lender's interest by using the loan in an undesirable way or in a way that is undesirable (Aras & Müslümov, 2004: 60). For a better understanding of the moral hazard, a simple example can be given in the credit market: Let's assume that entity a requests a loan to be used in the financing of the project submitted to bank B, the bank finds the project feasible and worthy of financing. In the event that entity A uses the credit received for the project in the financing of the credit debt to bank C, instead of using the B bank for the financing of this project and the request and knowledge of the Bank, moral hazard arises. In this case, entity A probably will not be able to repay the credit received for the project. As a result of asymmetric information, the moral hazard that banks may face while issuing loans is the result of the asymmetric information, which reduces the credit appetite of banks and is one of the reasons why banks go to credit rationing (Mishkin, 1992: 165).

2.1. ASYMMETRIC INFORMATION PROBLEMS IN MARKETS

2.1.1. Insurance Market

The problem of asymmetric information was found the greatest echo in the insurance market after the used automobile market, where Akerlof carried out its first work on asymmetric information. The most important contribution in this study is the "equilibrium in competitive insurence markets" published by Stiglitz and Rotshchild in 1976. In this study, Stiglitz and Rotcschchild showed that the competitive market could not be established due to asymmetric information in the insurance market (Rothschild & Stiplitz, 1976: 630). There are two cases in an insurance market where information is symmetrical. These are; realization of insured risk and not realization insured risk. As can be seen, two basic information problems arise in a market where there is a difference in information between the insurance company and the customer. The first occurs before the insurance contract is issued and the insurance company cannot determine the actual risk level of the client. In other words, it is not possible to select low-risk customers from the high and low risk groups in the market, but instead selects high risk customers by making an incorrect choice. This problem is known as reverse selection problem as in other markets (Öztürk, 2006: 63).

2.1.2. Factor and Foreign Exchange Markets

In the factor markets, the state and legally established non governmental organizations control the wages of the labor force, which is one of the most important, when the markets in which the price of production factors are determined. Therefore, asymmetric information in these markets is less effective than others can be thought. However, factors such as capital and natural resources are not organized under the labor market as a competition-based structure. Therefore, the importance of information in these markets will emerge asymmetrically. In other words, the effects of asymmetric information in these markets will always be seen regardless of market size (Çetinkaya, 2012: 57).

Foreign exchange markets, known as the markets in which money is purchased and sold outside the national currency in each country, are also affected by asymmetric information. However, since these markets are closely monitored by the Central Banks, Economic Based NGOs and Investment Consultancy Companies, short lived informations which are constantly changed are in the foreground Asymmetric information also affects these markets (Çetinkaya, 2012: 56-57).

2.1.3. Asymmetric Information in the Credit Market

Microeconomics theory predicts that individuals are always able to supervise their activities when they are aware of all the features of the products and services they obtain and when they need to take an action. However, the fact that the level of knowledge of the participants in the financial markets is different and the cost of the control and implementation of the contracts causes the asymmetric information problem, prevents the financial markets and institutions from performing their functions. Asymmetric information problem in the credit market is one of the main reasons of financial instability due to problems such as reverse selection and moral hazard (Müslümov & Aras, 2005: 60).

Two main problems arise in the nature and distribution of information in the credit market. These basic problems occur before or after the transaction, as in other markets. The first is the adverse selection problem that arose because lenders did not have enough information about all the necessary features of the borrowers before the loan contract was made. The entrepreneur who has lent money from the credit institution has a healthier and more knowledgeable information about the expected return of the investment project. Under the conditions of full competition, this information, which will have a fundamental impact on the debt relationship, must be present equally on both sides. The second problem arises after the credit is given and the credit risk is changed due to certain activities of the borrower but these activities are called the moral hazard because they

cannot be known by the lender. This information problem, which leads to moral hazard, stems from "hidden activity" (Heider, 2003: 30).

2.1.3.1. Credit Rationing

The effectiveness of information systems, which is one of the basic characteristics of effective markets, is the most important factor in the credit and capital markets besides the other markets. The high number of participants in these markets prevents the establishment of effective information systems and increases the uncertainty in the markets. Due to uncertainty, the banking sector faces many crises. The uncertainties that hinder the information flow mechanism of the financial system interfere with the transfer of resources to efficient investment opportunities and can lead to economic instability and banking crises through asymmetric information problems (Öztürk, 2006: 74).

Credit rationing is a method developed by credit institutions against adverse selection and moral hazard problems; although the creditors want to give more interest rates, the credit institutions refuse to allocate and use credit (Jaffee & Russell, 1976: 651). Credit rationing can occur in two ways (Mishkin, 1992: 218-219): First, despite the loaner suppose high interest rate, the credit institution establish that no credit; the second one; the credit institution is the establishment of credit under the amount requested by the enterprise requesting credit. Credit institutions go to the loan rationing, which

leads to a new balance in the credit market outside the balance of Walrasian (Stiglitz & Weiss, 1981: 397).

2.1.4. Asymmetric Information in Capital Markets

In its most general definition, the capital market is the market faced by medium and long term funding supply and demand. The medium and long term, which are typical of capital markets, cover investment processes of more than one year. Capital market funds are generally used to finance long term and high scale investments of enterprises. As in other financial markets, the resources of the capital market are the savings of the savings owners.

Accordingly, the capital market acts as a financial intermediary by transferring the funds obtained from the savings holders to the enterprises that aim to finance their investments. Other basic functions undertaken by capital markets are:

- Liquidity
- Funding the economy
- Propagate capital ownership to the community
- Being an indicator of the economy (Guidance on Capital Markets and Stock Exchange Guidelines, 2001: 3).

In the neoclassical economic theory, the capital market plays an indispensable role between consumers and producers. According to the theory, the stock market offers signs for companies to make the right investment decisions. If individuals are not informed about the

possibilities of different events or the relative benefits of different investment opportunities, prices will be randomly distributed and the stock market will not be able to fulfill its function as an investment instrument (Stiglitz, 1981: 1).

There are two opposing views on the information contained in the stock exchange. One, if the market works well, and therefore the prices reflect the values, there will be no incentives to have knowledge, and so there will be no knowledgeable market equilibrium. In contrast, Hirscheifer states that there are strong incentives to gain knowledge in a real stock market. Situations likely to occur, for example, those who know which stocks will rise and which will fall, may increase capital gains beyond their own functions.In case of insufficient incentives or the companies that think that the costs will increase, instead of investigating the right information, they will use insufficient information in the market (Stiglitz, 1981: 3).

If knowledge differences are serious in the capital market, there is a negative change in the perception of the paticipations of the effectiveness of the capital market. The most important effect of this is that the market has insufficient transactions to provide liquidity. The impact and extension of information differences are influenced by laws and regulations. It offers formal exchanges, securities commissions and corporate laws, rules and regulations.However, there is a cost to provide information, and securing supplying the

appropriate amount of information and information differences does not affect the market (Wurgler, 2000: 188).

Reverse selection problems affect the ability of equity and bond markets to transfer funds from savings holders to borrowers through self determination. First of all, how the problem works in the stock market can be seen with an example. Firms seeking funds from external sources to finance investment opportunities are naturally faced with adverse selection problems, as they are more knowledgeable about their activities than outside investors. Outside investors perceive their insiders' desire to sell overvalued stocks and react negatively when firms announce new issuance. Myers and Majluf (1984) found that the problem of adverse selection was more intense when firms exported stocks to finance their investments. Thus, companies issue shares when only their borrowing capabilities are exhausted.Stiglitz and Weiss (1981), however have shown an adverse selection problem leading to rationale in borrowing financing. Thus, firms that cannot obtain the funds they need through borrowing are looking for the issuance of shares. Thus, there is a riddle in financing by borrowing and equity (Heider, 2002: 80).

3. Conclusion and Recommendations

The asymmetric knowledge approach examining the impact of the financial structure on economic activity focuses on the difference in knowledge of different parties in a financial contract. The borrower has a more advantageous position than the lender because he has more information about his investment. It is therefore ready to take on

more risks. Asymmetric information is effective in terms of size, product and competition on markets. The fact that one of the economic parties has a superior knowledge than the other allows it to be able to direct the operation in the market in favor of one of the parties. This situation prevents an effective communication network between the parties, hampering the market system.

Asymmetric information problem and related problems decrease the efficiency of markets and cause serious problems in the operation of financial markets. The basic intermediary functions of the markets are deeply affected by the asymmetric information problem. In particular, defective information systems in the market, which can lead to the formation of a complex problem of information that can fundamentally affect the existence of the financial claim and make it dysfunctional, may not only shape the financial institutions and contracts, but also yield significant macro results.

The criterion of trust which is the basic criterion of increasing the efficiency of the market; by providing public disclosure function, it provides efficiency and stability in the market, facilitating the supply and demand of funds and enabling investors to motivate the environment they find safer. The main characteristic of the market is that it is based on trust. One of the mechanisms directly contributing to the security of the market is the provision of independent external and internal audit. In addition, the information presented to the investor in the evolving communication environment is timely and the information reflected in the prices is importantfor the firms that are

traded in markets or the intermediary function of the investor. Due to the dynamic nature of the economy and the increasing number of investors with high level of knowledge, both the issuers of the securities issuers and the intermediary institutions are obliged to make new leaps. Firms should immediately announce financial information necessary for investors and not limited by law. Intermediary institutions should go to lighting their investors by giving weight to periodical bulletins, even if their customers are not required by law.

It is not possible to say that the market is active in Turkey. Because there are issues in such as some organizations can affect the market, the efficiency of the process is at low levels topics. However, in some respects it is seen that developed markets show their characteristics. In order to ensure the full and correct effectiveness firstly the trust systems hould be implemented. The basis for providing the right information for individuals and companies seeking information is thus laid. It will help to increase the effectiveness of individuals or firms to obtain such information from private authorities instead of spending time and money on of individual access to information.

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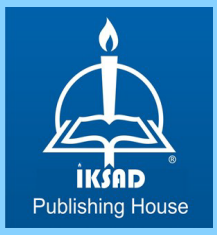

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