The Determining Factors of Youth Unemployment in Developing Countries: The Case of Turkey

Erşan SEVER*, Arif İĞDELİ
Aksaray University, Faculty of Economics and Administrative Sciences, Department of Economics, Turkey

Abstract

The problem of unemployment depends on the demand structure and volume of the production system, which is the redistribution mechanism. The results of unemployment analysis of each country show that the young population is the most affected segment in this group. Because the economic and social factors as well as the problems in the labor market constitute a critical threshold in the transition from the younger generation education process to the business life. In this direction, unemployment emerges as an important macroeconomic problem that is common among young people and needs to be solved recently. This problem is not only the case of developing countries but also the developed countries. Because unemployment and especially the social and psychological aspects as well as the economic dimension of youth unemployment are increasing the importance of this issue. In this study, the determinants of youth unemployment, which are more prominent in developing countries, and their impact on youth unemployment, have been tried to be examined with the help of the Johansen co- integration test and error correction model, taking advantage of the 1988-2016 period data. The results of the analysis indicate that economic crises will reduce youth employment and increase in per capita income will decrease young unemployment problem in long term. However, adult labor unemployment, level of openness and foreign direct investment have had a negative impact on young employment in the long run.

Keywords: Youth Unemployment, Turkey, Economic Problem

Gelişmekte Olan Ülkelerde Genç İşsizliğinin Belirleyici Unsurları: Türkiye Örneği

Özet

İşsizlik problemi, yeniden dağıtım mekanizması olan üretim sisteminin talep yapısı ve hacmine bağlıdır. Her ülkenin işsizlik analizi sonuçları, genç nüfusun bu grup içerisinde en çok etkilenen kesim olduğunu göstermektedir. Çünkü ekonomik ve sosyal unsurlar ile birlikte iş gücü piyasasındaki problemler genç neslin eğitim sürecinden iş hayatına geçiş evresinde kritik eşiği oluşturmaktadır. Bu doğrultuda işsizlik günümüzde gençler arasında sık görülen ve çözüm üretilmesi gereken önemli bir makroekonomik sorun olarak karşımıza çıkmaktadır. Bu sorun sadece gelişmekte olan ülkelerin değil aynı zamanda gelişmiş ülkelerin de karşı karşıya kaldıkları bir olgudur. Özellikle de genç işsizliğin ekonomik boyutunun yanında sosyal ve psikolojik yönlerinin de olması, konunun önemini artırmaktadır. Bu çalışmada, özellikle gelişmekte olan ülkelerde daha belirgin olan genç işsizliğinin Türkiye'de belirleyici unsurları ve bunların genç işsizliği üzerindeki etkileri 1988-2016 dönemi verilerinden yararlanılarak Johansen eş bütünleşme testi ve hata düzeltme modeli yardımıyla incelenmeye çalışılmıştır. Analiz sonuçları ekonomik krizlerin genç istihdamı azaltıcı, kişi başına gelir artışlarının ise uzun vadede genç işsizlik problemini düşüreceğini ifade etmektedir. Bununla birlikte yetişkin işgücü işsizliği, dışa açıklık seviyesi ve doğrudan yabancı yatırımların uzun vadede genç istihdamı olumsuz etkilediğini göstermektedir.

Anahtar Kelimeler: Genç İşsizliği, Türkiye, Ekonomik Sorun

INTRODUCTION

The problem of unemployment is one of the main macroeconomic targets of the developed and developing countries in the world recently. The unemployment problem is general and the dimensions of unemployment are different according to the development level of the countries. In developed countries, there is often a problem of creating employment opportunities for young people and women, often long-term and structural unemployment is widespread. In the developing countries, problems arising from the intensification of the young population and problems that cannot be recorded mainly in the working life under the conditions of underemployment are mentioned [24].

In this context, the issue of employment of the young population is the common problem of all countries in the world. The multifaceted effects of youth unemployment are a matter of fact. Employment of a well-coordinated young population is an important source of support for social and economic development. However, due to various reasons such as demographic structure, education system, economic crises and economic policies, the size of youth unemployment are almost double the normal unemployment rate in the world. The joblessness of young people causes the production potential in the economy to be lower than it should be. In addition, after the psychological troubles of young people who cannot find job, harmful substance use, theft and physical illness increase? In fact, the young population suffering from the difficulty of finding jobs on domestic conditions has to migrate to other countries through legal or illegal ways.

For this purpose, the main axis of our study is the reasons that uncovered the youth unemployment. At the beginning, conceptual explanations of youth unemployment were done, followed by years of development of young unemployed, taking into account the development status of the countries of development. The causes of youth unemployment, the theoretical approach and the literature studies are the main reasons for the presentation. In the last part of the study the determinants of youth unemployment in Turkey can be analyzed with Johansen co-integration test and vector error correction model.

UNEMPLOYMENT: CONCEPTUAL APPROACH

In the 19th century, lazy individuals who were unable to find jobs due to lack of skills or lack of jobs and bad habits were evaluated in the unemployed class. In this respect, the main cause of unemployment in the relevant period is the individual's own problems. But the change in social lifestyles

has brought change in some definitions. The concept of unemployment is redefined along with the economic and social changes along with the industrial revolution, which is considered a milestone of change in the production process [11].

There are two definitions of unemployment, person and community based. Persons who are ready to work and are not employed in a job with the desire and ability to work are considered within the unemployed personally. The inability to use the production facilities and the wasted situation are expressed in the social unemployment group [32].

According to the decision adopted at the 19th International Business Statistics Conference, unemployment is the situation in which people who are in the age of employment, engaged in activities to be employed for a certain period of time, and employed if they are given a job opportunity at the moment. In addition, there are unemployed people who have not made any job searches in the past but have contracted to join the job market in the coming period. The lack of employment here refers to a short period of time in the measurement of work, a period of at least one hour of paid work or self-employment during the reference week. The job search activity includes activities aimed at finding a job in the last four weeks, establishing an enterprise or agricultural workplace. These include part-time, informal, temporary and seasonal employment in domestic or foreign settings [17].

In countries including the European Union, unemployed persons who are enrolled in unemployment, employment, or workers' assistance branches are covered by those who are unemployed and those who are willing to transfer to another job at any time. Accordingly, the criterion for being ready to work in a job is to be registered in the labor bureaus. However, in practice, more detailed conditions such as the duration of the job wanted, the continuity of the job, and the time of the unemployed seem to be taken into account [4].

We can say that there is a linear relationship between the level of coherence of the economic policies applied by the countries and the levels of employment. The fact that the economic policies are right for the individuals who want to work at the current wage levels accepted in the market, and the opposite situation, that is, if the individuals who do not want to work, cannot find job, the policies that are followed are wrong and inadequate [1, 2].

However, the high rate of population growth and technological transformation means living in a job running status of all individuals who want to work in countries such as Turkey continued its upward trend validity of the theoretical level, it is almost impossible to find its counterpart in practice. In this respect, it is necessary to take this situation into consideration in the approach to unemployment in the related economies.

The definition of unemployment made by Turkey Statistics Institution is "*The employer has used at least one job search channel in the last three months to search for work that is not in employment during the reference period (non-profit, casual, paid or unpaid, and has no job) all persons in the era of non-institutional work that can do so include the unemployed population*" [34].

Among the unemployed individuals, those between the ages of 15-24 are defined as young unemployed. It can be shown.

In the context of cultural, institutional and political elements, the age of separation from compulsory education is regarded as the lowest age limit for "young". The upper age limit can vary from community to community. Most countries, especially European countries, regard the 14-25 age group as young."Young Employment Policies" in the UK are based on age groups of 16-18, while those in the north of Italy are 14-29, and those on the south of Italy are 14-32. 12-25 in Australia, 15-40 in Malaysia, and 06-30 in Nigeria are categorized in the young population. In the United States and Britain, the 16-24 age groups are considered as young, Turkey is also 15 to 24 age range, "young" is accepted definition for. In the ILO and Eurostat data, the 15-24 age range is also used in the definition of young population [21].

Unemployment analyzes in the age groups show that the young population under 25 represents the most affected population group. The integration from the school to the younger generation labor market represents one of the most critical and immediate problems of labor market functioning with significant economic and social impact. Sometimes young people start to work in business areas that are not important in their appearance and lower than their qualities, but they can go into inefficient working periods at other times. This situation can remove them from society [5].

Undoubtedly, the young population is one of the most important sources for the socio-economic development of a nation. This population category has the courage and energy needed to present innovative ideas and progressive mechanisms in all socio-economic areas. Although they do not have the necessary experience, young people have the capacity to absorb new knowledge and skills quickly and adapt themselves to the standards of the employer company in a short period of time. Another issue that needs to be addressed here is that young people are generally healthy and able to work longer than adults [5].

Employment of young people contributes to the development of the national economy in proportion to the total increase in demand in the form of capital. On the other hand, research has contributed to the increase in aggregate demand, as younger workers tend to spend a larger share of the income to buy goods and services. In addition, the tendency to save money in the context of assessing earnings among younger employees also contributes to an increase in investment expendable capital for the economy [5].

In contrast, young people who have completed the education process in recent years have problems in their willingness to contribute to the production process and that the young population is experiencing a noticeable increase in the level of unemployment.

DEVELOPMENT OF YOUTH UNEM-PLOYMENT IN THE WORLD AND TURKEY

Reducing unemployment to acceptable levels and / or continuity at this level are among the core macroeconomic targets of all economies. But one of the problems faced by both developed and developing economies during the last quarter century is youth unemployment.

Factors such as new economic policy approaches, the weakening of the syndicate and the multinational companies seeking cheap labor in the direction of reducing labor costs have brought the unemployment to the problem of developed and developing countries in particular. On the one hand, countries are struggling to adapt to the developments experienced in production and information technology, and on the other hand in an effort to employ the volume-winning workforce in parallel with population growth [6].

According to international statistics, in the period 2007-2012, 3.4 million increases in the unemployment of young people in the world. In economic terms, young

unemployment is also hampering labor market instability, rising costs of social assistance, compensation for education and professional formation investment costs as well as the base of the tax rate base. On the other hand, unemployment among young people is not only the problem of the concerned unemployed but also the family and society in general. Failure to find a job leads to the destruction of human capital and to the increased risk of certain diseases such as malnutrition, stress, depression and even heart problems [5].

The long-term unemployment of young people is an obstacle to take responsibility for their transition to adulthood and to keep track of developments in their field due to the exclusion of the educated workforce from production. In addition, the decline of expectations of recruitment can lead to psychological and family problems. As a result, skill decline in the workforce raises the level of social unrest. So much so that political marginalization and lack of trust in the political system, due to very long unemployment, are becoming widespread among young people. On the other hand, young people who are alienated from collective and democratic processes can turn to suicide and become individuals who serve crime economy [21].

On the other hand, young people are able to think of unemployment as failure and defeat. This emotion, which is evident in young people, can affect behavioral disorders by affecting their mental health. As a result, the development of fragility, uselessness and laziness in individuals is becoming a source of their exclusion from society [21].

In this context, efforts to solve the problem of unemployment faced by young people in all countries are important in terms of continuing social well-being as well as in the social sense that production will offer a positive lap of economic sense.

The following graph shows the development of youth unemployment between 1991-2016 in Turkey and World. It is seen that the proportion of young unemployment at the highest level is in the European Union. While some regression has been observed over the last three years, this rate is still above 20%. Here we can say that after years of economic crisis, there is a serious rise in the rate of youth unemployment. Young unemployment, which has entered a rising trend after the economic troubles in Europe at the beginning of the 1990s, has also increased since the last global financial crisis. It rises to the highest level in the European Union countries in terms of the period examined by 26% in 2013.Among the countries covered, it is observed that in the countries belonging to low income group, the level of youth unemployment is below 10% in average. It is possible to explain this from two different perspectives. The first is that the employment problem of the workforce, especially the young workforce, remains at a lower level than other countries, as a significant part of the production of these countries continues to be labor intensive and population movements for the cities do not gain much. The second is that compared to other countries, the informal situation in the mentioned countries is higher in these countries.

Graph 1: **Youth Unemployment**
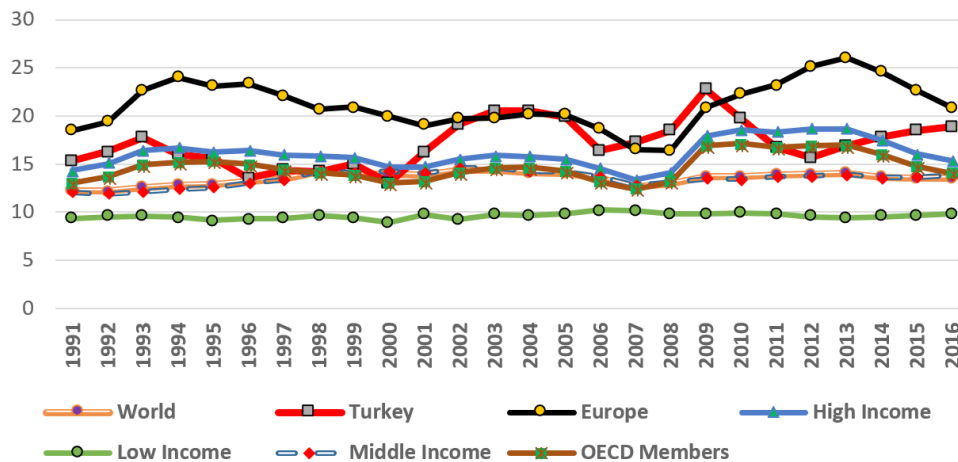
Source: [36]

When we look at the young unemployment development in Turkey since 1991, we tend to see a declining trend in some years but especially since 2000 it increases. Since 2013, it has seen an increase every year, reaching 18.9% in 2016. There are several factors for the proliferation of youth unemployment in Turkey.

Structural changes occurring in the economy, especially after 1980 in Turkey and the transformation is triggered by the increasing youth unemployment. The high growth performance achieved after the transition from labor intensive production to technology intensive production along with the economic development process does not provide the expected increase in employment. At the same time, migration from the countryside to the city is also intensified and the increase in the population is the reason for the growth of the existing employment problem.

Another one of the reasons that triggered the formation of youth unemployment in Turkey will meet the needs of the labor market is undoubtedly the education system is regulated in line. One of the most important problems of lack of skills in the report of the International Labor Organization suffering from employment in Turkey and it is emphasized that the skills mismatch. Vocational schools, universities and lifelong education and skills development programs have not been successful in meeting the need for skilled labor, which is becoming more evident, especially with the transition from agriculture to industry and services [15].

When we look at the years of youth unemployment as development after the crisis, we can say that youth unemployment did rise in Turkey. This increase is more evident after the February 2001 crisis and the global economic crisis that began in 2007.The youth unemployment rate, which was 13% in 2000, increased from 16% in 2001 to 2004 in the following years and was 20.5% in 2004. Similarly, youth unemployment rose from 16.4% in 2006 to 22.8% in 2009.

E. Sever and A. İğdeli /IJSES, 8 (1): 75-83, 2018

Graph 2: **Total Unempployment and Youth Unemployment(%)**
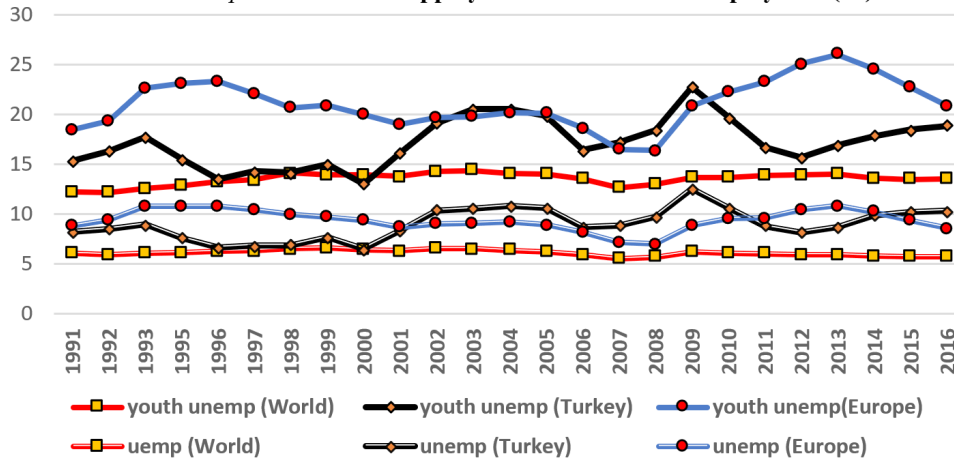
The total unemployment rate and the development of youth unemployment rates are important in the context of seeing the distribution of unemployment among age groups. As you can see from the graph above, in the globally both the youth unemployment rate has increased and the gap between total unemployment and young unemployment has started to open gradually. Therefore, the problem of young employment has become a matter of priority than the problem of adult employment. In 1991, the total unemployment rate was 6% and the youth unemployment rate was 12.2%. When we arrived in 2016, the unemployment rate in the world was 5.74%, while the youth unemployment rate was 13.56%. In EU member countries and Turkey opened in the same way it is seen that the gap between youth unemployment and total unemployment over time. While Turkey showed a fluctuating trend increase in the special combination of both total unemployment, youth unemployment, we can state that the exhibit. Besides, in 1991 there was a total unemployment rate of 8.2% and a youth unemployment rate of 15.3%, while the total unemployment rate was 10.3% and the youth unemployment rate was 18.9% in 2016.

THE REASONS OF YOUTH UNEMPLOYMENT

The factors that cause the young unemployment to take place can be examined in two dimensions, macro and micro. The general structural characteristics of countries where young people live, demographic situation, implementation mistakes or inadequacies in education and labor market policies, minimum wage practices and analysis of situations in the face of economic fluctuations or crises represent a macro level approach. Moreover, the tendency of young people to work, ethnicity and the first entry to the market, as well as individual and characteristic features of employers in some conditions causes unemployment, also determination of situation to unemployment show the micro approach [24].

Total Demand-Oriented Issues: The decline in total demand has also reduced the demand for labor. As a result, there is a decline in the level of demand for the young workforce. In this direction, general demand and fluctuations in the labor market are triggering an increase in young unemployment [30, p.81]. In the global crisis period of 2008-2010, the number of young unemployed increased from 73.5 million to 77.7 million. In addition, the youth

unemployment rate in European countries increased 4.5 points in the same period [10].

There are several reasons for having higher incentives to influence the level of youth unemployment compared to adults, in the face of changes in total demand. In terms of supply, young people are more likely to leave the workplace than older workers. In general, young people make changes as soon as conditions allow them to find suitable jobs after entering the first job. The opportunity cost of doing this is lower for young people. Because opportunity costs are lower, they require less skill, and they need a job at a lower level to support a family. In a survey of the US and other countries, it was observed that young people between the ages of 16 and 25 passed consecutively to seven-eight jobs that they moved more easily. In addition, during the Asian crisis, % 75 of the dismissed people in Japan are young [25].

Although the direction of supply has some aspects to explain the sensitivity of young unemployment, it does not doubt that the demand side is also influential in the formation of young unemployment. Young workers have lower expertise and are less costly than adults due to the fact that the operators are folded at the cost of acquiring skills. Moreover, young workers are less likely to be subject to the legislation on employment protection. Labor-intensive laws have been subject to a certain period of certain gains. Compensation for out-of-pocket payments is increasing over the period of employment. For this reason, the cost of leaving work for recent entrants will be lower [25].

According to the idea that economically demanding dimension is gaining importance, the demand for young people is falling below the expectations in economic recession and stagnation periods, thus increasing youth unemployment. When the young issue is addressed in terms of labor supply, attention is drawn to the lack of the young labor force [16, 3].

Education System Problem: Education is the first component of job-seeking capital, which is shown to be the most important factor that affects the long-term effects of individual's employability and time of exposure to unemployment. In a country, the level of education and economic performance act in harmony with each other. The educational contribution increases the accumulation of human capital. Income is one of the main elements of stable economic growth and therefore income growth represents

human capital accumulation. While the knowledge and skills gained through education increase the employability of people, they also increase their contribution to the fact that they have presented rising economic trends to economic development [24].

It is very important to structure the education system that will prepare the young people for the world and the working life and realize the transition from the education to the employment process smoothly. When educational systems are structured, each country's own cultural, social, economic and political background to which the system will be applied; it is also necessary to pay attention to the demographic and labor force structure at the same time [24].

One of the most important problems of youth unemployment in today's world is education. The problem of the quality of the young workforce and the level of skill does not matching in the labor market is also the cause of supply-side youth unemployment. This incompatibility includes both technical and non-technical skills. Employers want to see non-technical characteristics such as numerical skills, literacy, initiative ownership and compatibility in the individuals they work with. It is problematic for young people who do not have these features to find work. This problem can be solved by matching the skills provided by the education systems of the countries with the skills demanded in the labor market [15].

Problems Arising from Political Preferences: Labor market policies carried out by countries can influence younger individuals. On the other hand, like the EU young unemployment in countries, where unions are effective and wage-rigorous, is at a size to be considered. In this context, it is proposed that young people should gain policies to produce work experience and to have more flexible working conditions of the labor market so that they can increase their chances of finding a good job. If there are temporary jobs in the market, young people will eliminate their shortage of work experience through these temporary jobs. A workforce policy that will include temporary jobs offers an important opportunity for young people to try out employers as the young people have the opportunity to undertake a step-by-step job in the ideal job setting period for them, to get low wages for their employers considering low productivity. Unemployment benefits, which provide income security on the labor market from the other side, extend unemployment or job seeking periods. Surveys show the existence of a positive relationship between unemployment level and duration and unemployment benefits in Western European countries [2].

Demographic Issues: After World War II, birth rates in many countries have increased rapidly. This increase was incentivized in some countries and without incentives in some countries. Over time, workforce supplies have passed the demand for work force. In addition, the increase in the level of participation of low-paid housewives in the workforce has been instrumental in bringing them to the forefront as an alternative to the young workforce. The fact that female workers are more mature and more disciplined than their younger workforce, has led employers to women employment and the young workforce has been adversely affected by these developments.

In a survey of 15 OECD countries, the relative increase in the level of 10% in the young population has increased youth unemployment relatively by 5% and by 1% at the rate level. Let's assume that 20% of young people are unemployed in a given country. If the young population increases by 10%, the youth unemployment rate will rise to 21% [24].

Wage Policy Problem: In an economy, when the comparing between young people wage and adult wage, if the money earned by young people is higher than that of adults, then the desire for adult employment gains weight and younger workers are adversely affected. This assumption, however, is due to the close substitution of young and adult workers. This may not be true on many occasions, especially with expert workers. If the young person and the adult person are at a complementary dimension in the workplace, the level of wage of the young person as a reflection of their different expertise may not influence the adults. In such a scenario, both young and adult wages will be adversely affected by other input costs [25].

DETERMINANTS OF YOUTH UNEMPLOYMENT: LITERATURE ANALYSIS

Studies that analyze the determinants of young unemployment can be said to be shaped in general terms as GDP growth, foreign direct investment, inflation, population growth rate, migration, economic crises, education level, openness level, investments and political practices. The following are some of the findings from the studies to determine the youth unemployment and the findings obtained.

Kabaklarlı and Gür (2011) [19], benefiting from the monthly data, have investigated the relationship between fixed investment, economic growth, inflation and productivity with youth unemployment 2005-2010 period in Turkey. The research findings show that there is a long-term relationship between variables. Long-term inflation and productivity have a positive impact on youth unemployment. In addition, the economy shrinks and crises raise youth unemployment. In addition, economic growth and fixed capital investments negatively affect the level of youth unemployment.

Demidova and Signorelli (2012) [9], conducted a survey between 2000 and 2009 with the help of data from 75 Russian provinces, indicating that a higher level of regional development has reduced total unemployment and youth unemployment. Immigration and family structures as well as outward openness also appear to be an impressive element on youth unemployment.

Marelli et al. (2013) [22], have investigated the causes of youth unemployment using fixed panel analysis techniques based on developed countries over the last thirty years. The survey results show that economic growth, economic liberalization, labor market reforms, the growing share of part-time employment and active labor market policies have reduced unemployment and improved job market performance. When the worse conditions for young people are considered, the results of the research emphasize the importance of various policies and reforms that have a relatively higher effect on youth unemployment.

Msigwa and Kipesha (2013) [23], conducted research to examine the determinants of youth unemployment in Tanzania and to propose solutions to reduce the problem. In the study, multiple nominal logistic regression models (MLM) were used to analyze determinants of unemployment in Tanzania. The findings of the study showed that Tanzania included gender, geographical location, education, skill and marital status as important factors. Young men have a higher chance of becoming unemployed than young women. The geographical location of young people has been found

to be an important factor that young people living in urban areas are likely to be five times more unemployed when employed. There is a possibility that young people in the urban area will be five times more likely to be unemployed than in rural areas. On the other hand, those who did not finish primary school and who finished but did not go ahead were found to be less likely to be unemployed. Because these people are more likely to work in unregistered places. It has been determined that unskilled young people tend to be unemployed by about 2.3 compared to younger specialists. In addition, marital status is also important for employment. It has been shown that single and married young people are more likely to be employed than widows and separated laps.

Çondur and Bölükbaş (2014) [6], investigate the relationship between labor market and youth unemployment with using quarterly data between 2010 to 2010 time period in Turkey. According to the results of the Granger causality test, there is a causality relation from young unemployment to GDP and from inflation to young unemployment. In addition, a causality relationship from inflation to young unemployment and GDP has been identified. With this result of the changes occurring in Turkey in GDP and PPI it can be said that directly and indirectly affect youth unemployment.

Danacica (2014) [8], explored the causes of youth unemployment using micro data for different time periods for Romania and Hungary. In studies, distances between sexes affect employment or re-employment. This difference is mostly in Hungary. Because the number of educated women in Romania is more than men. However, low level Romanian and Hungarian unemployed people should be considered. In this context, politicians should increase the quality of young working power and support young people to receive education. Highly educated individuals in Romania are separated from their jobs, but are then able to find positions in other jobs that are compatible with their own training and expertise. However, graduates of vocational education institutions are more disadvantaged in terms of job change and employment than those who graduated from normal educational institutions.

Sayre et al. (2015) [28], investigated the determinants of youth unemployment for the Qatar economy. Qatar unemployment is low compared to regional standards, but unemployment for the first time is more intense among job seekers than in other Arab countries. This article addresses the factors that affect unemployment when young Qataris first entered the labor market. The effects of policies on youth employment were explored by using data between 1995 and 2014. In order to model the duration of unemployment, a unique data set was created with a predominantly 2,000 Qatar youth. This data was collected during September and October 2014, and asked about the transition from school to work, as well as typical labor market indicators. Using nonparametric models of unemployment duration, the relationship between different characters and the length of unemployment duration for job seekers for the first time was investigated. Personal education and gender have been achieved for Qatar as the most important factor to determine the duration of unemployment.

Günaydın and Cetin (2015) [15], investigate the effect of real per capita income, trade openness, inflation and foreign direct investment on youth unemployment in the 1988-2013 period of Turkey. In this direction, the effects of the related variables were investigated by using the ARDL model and the Granger causality test. Real income, trade openness and direct investments have a negative impact on youth

unemployment both on a long and short term basis. In the long run, there is a two-way causality relationship between young unemployment and direct foreign capital. In addition, long-term inflation, per capita income and commercial openness have led to one-way Granger causality to young unemployment.

Dagume and Gyekye (2016) [7], investigated the causes of youth unemployment in rural areas in the Vhembe region in South Africa with data from four local authorities. The socio-economic reasons of young unemployment were investigated by means of binary logistic regression, starting from 580 samples. According to this, young people who have received education (skills) and gained work experience are less likely to become unemployed. In this context, emphasis is placed on the importance of apprenticeship training as well as skills training opportunities for young people to solve the problem of unemployment.

Sam and Pokhariyal (2016) [27], tested the long-run determinants of young unemployment in the Kenyan economy using the ARDL model, with the help of time-series data from 1979 until 2012. An increase in the number of influential units increases the young population by 1.1%, while an increase in one unit of direct foreign investments reduces youth unemployment by 0.00024%. Past unemployment has a negative effect on youth unemployment by 0.12% in the current period. On the other hand, the 1% increase in the GDP value increases the youth unemployment level by 0,0056%.

Sertkaya and Okur (2016) [31], investigated the effect of inflation rate, gross domestic product and higher education enrollment rate on young unemployment between 1988 and 2014. According to the results of co-integration test, the 1% increase in the inflation rate increases the youth unemployment rate by 0.08%. An increase of 1% in GDP raises the youth unemployment rate by 1.54%. On the other hand, an increase of 1% in the ratio of higher education institutions reduces youth unemployment by 1.32%. In addition, one-way Granger causality relation from economic growth, inflation and high school enrollment rate to young unemployment was found.

METHODOLOGY and ANALYSIS

In empirical analysis, youth unemployment rate (15-24 age group (YU)), per capita income (PCI), adult unemployment rate (AUR), openness level (OL) ((export + import) / GDP), foreign direct investment (FDI) and crisis dummy (DUM) variables are used. The study was conducted with the help of annual data for the period 1988-2016. The relevant variables were compiled from the web site of the Ministry of Health and Human Services. Natural logarithms of variables other than the crisis dummy variable were taken in the study.

In the first phase of the study, the stability test was performed. In the time series analysis, the series must be in a stationary state. In the case of working with variables that do not carry this condition, a false regression problem may arise and the results do not express the real relation [14]. The stability of the time series is realized by unit root test analysis. Stability (integration) research is generally done by Dickey-Fuller (ADF), Phillips-Perron (PP), Kwiatkowski, Phillips, Scmidth and Shin (KPSS). In this study, the stationarity test was conducted using the Phillips-Perron (PP) method.

In the second stage, Johansen's joint testing was conducted using the most similarity approach. The Johansen co-

integration test results from the VAR (Vector Auto Regression) estimation, which includes the levels and differences of the non-stationary series. The VAR model to be constructed for the Johansen co-integration test, with a vector containing series Z, X, and Y, when we consider two series, such as the non-stationary X and Y, can be written as

In the equation Γ_i, (i = 1,2, ..., k-1) is the parameter matrix of the variables that represent the delay of the first difference of the Zt vector. Π expresses the parameter matrix for the levels of variables. represents the error terms of the VAR model. The Johansen co-integration test aims to determine the rank of the matrix Π. Here, if the rank of the matrix Π is zero, there is no co-integration relation between the series forming the Z vector. If the rank of the matrix Π is one or more, then there is a co-integration relation between the series which brings the Z vector to the square. In other words, rank value indicates the amount of co-integrated relation. In the Johansen method, co-integration between the non-stationary series is performed with trace and maximum eigenvalue statistics. The trajectory test examines the rank of the matrix Π and examines the null hypothesis, which expresses the number of co-integrated vectors, either r equals, or the smallness of r. The maximum eigenvalue statistic tests the hypothesis that the number of co-integrated vectors r is zero, r + 1, according to the alternative hypothesis. If the test statistics are greater than the threshold

values at certain significance levels, then the zero hypothesis is rejected, otherwise it is accepted [26].

In the third phase, the VEC (vector error correction) model was established and short term dynamics were investigated. The error correction mechanism developed by Engle and Granger is also unbalanced. The error correction model performs dynamic analysis in short term between variables. The dependent variable is realized by the regression equation between the lagged values of the dependent and independent variables and the error term of the long-run relationship. However, the error correcting mechanism between co-integrated series may not work in some cases [33]. In this context, the two variant VECM models are written as follows:

In the equation, ECT is the error correction coefficient, p is the ideal delay length. The fact that the ECT coefficient value is negative and statistically significant, indicates that deviations between the series with the co-integration relation between them in the short term will come to a balance in a certain period in the long term [13].

In the first phase of the study, the stability tests of variables were done. According to the results of stationarity tests, it is understood that all series become stable at I (1) level.

Table 1. Unit Root Test Results

Variables	Test Level	Equation Type	Test Statistic	Result
YU	Level	PP(12)	$\tau_{c,t}$ = -2,157	I(1)
	First Difference	PP(5)	τ = -4,714	
AUR	Level	PP(2)	$\tau_{c,t}$ = -2,173	I(1)
	First Difference	PP(3)	τ = -4,579	
PCI	Level	PP(1)	$\tau_{c,t}$ = -1,334	I(1)
	First Difference	PP(1)	τ = -4,714	
FDI	Level	PP(1)	$\tau_{c,t}$ = -2,196	I(1)
	First Difference	PP(1)	τ = -5,254	
OL	Level	PP(6)	$\tau_{c,t}$ = -2,187	I(1)
	First Difference	PP(5)	τ = -4,362	
MacKinnon (1996) one-sided critical values; $\tau_{0,05}$= -1,953 $\tau_{c\ 0,05}$= -2,971 $\tau_{c\ t,\ 0,05}$= -3,580				
The values in parentheses indicate lag lengths.				

A series of co-integration tests, that were not stationary at the same level, were conducted in the long run by Johansen co-integration test.

Table 2. Johansen Co-Integration Test Results

Trace Test				Maximum Self Test			
H_0	H_1	Test Statistic	% 5 Critical Value	H_0	H_1	Test Statistic	%5 Critical Value
r=0	r≥1	98,061	76,972	r=0	r =1	39,713	34,805
r≤1	r≥2	58,347	54,079	r≤1	r =2	21,446	28,588
r≤2	r≥3	36,901	35,192	r≤2	r =3	19,230	22,299
r≤3	r≥4	17,671	20,261	r≤3	r =4	14,192	15,892

In the Johansen co-integration tests, the VAR analysis was used to determine the appropriate lag length. The "1" lag model, which the Akaike criterion deems appropriate, has been worked on. "1" lagged co- integration test results reject the null hypothesis that there is no integration between variables (r = 0) at the level of 5% significance.

Table 3. Normalized Coefficient of Integration Coefficients

YU	OL	FDI	AUR	PCI	C
1,0000	-0.2753	-0.0840	-0.5716	0.4165	-4.3046
	(0.079)	(0.025)	(0.069)	(0.058)	(0.458)
Standard errors are given in parentheses.					

The coefficients of the explanatory variables of export and import demand function normalized according to co-integration relation are presented in Table 3. Accordingly, the 1% increase in personal income level has decreased by 0.41% over youth unemployment. On the other hand, the rate of adult employment, foreign direct investment and openness increased by 1%, increasing by 0, 57%, 0, 08% and 0, 27% respectively in the level of youth unemployment.

In this context, the intense competition for integration with the world economy, along with the outsourcing, increases the demand for more qualified individuals. However, since a significant portion of the young population is not at the desired level of expertise and skill, we can say that the demands of technology-intensive businesses tend towards adults who have gained expertise in their field, not young people.

$$\Delta YU = \alpha_0 + \sum_{i=1}^{n} \beta_{1i} \Delta D_{t-n} + \sum_{i=1}^{n} \beta_{2i} \Delta FDI_{t-n} + \sum_{i=1}^{n} \beta_{3i} \Delta AUR_{t-n} + \sum_{i=1}^{n} \beta_{4i} \Delta PCI_{t-n} + \beta_{5i} DUM_1 + \delta_1 ECT_{i-t}$$

Table 4. Error Correction Model Results

Lag Number	ECT	YU	OL	ΔFDI	ΔAUR	ΔPCI	C	DUM
0	**-0,7121**						-0,0106	**0,1301**
	(0,300)						(0,027)	(0,057)
	[-2,334]						[-0,385]	[2,251]
1		0,1082	0,1486	-0,0237	-0,0073	0,0265		
		(0,344)	(0,387)	(0,042)	(0,321)	(0,161)		
		[0,314]	[2,170]	[-0,563]	[-0,022]	[0,1645]		
Standard errors are shown in parentheses, and t statistics are shown in square brackets.								

The results obtained based on the error correction analysis are presented in Table 4 above. As Table 4 also shows, 71.2% of the variance on young unemployment disappears in the first year. It was observed that the economic crisis variable also increased youth employment in the short run.

CONCLUSION

In general, unemployment is defined as the situation in which persons between 15-24 years of age who are involved in the age of work and make an effort to be employed within a certain period of time and can be employed when a job opportunity is given at the moment. Young unemployment is the one of the main economic problems in developed and developing countries. In 1991, unemployment rate was 6.1% and the youth unemployment rate was 12.2% in the world. Unemployment rate continued to remain flat during the period from 1991 until the year 2016, with a slight decline of 5.7%.The youth unemployment rate increased slightly too around 13.6% during the same period. While the youth unemployment rate is rising all over the world, the gap between unemployment and youth unemployment rates has also begun to open gradually. This situation also remains valid for the EU member states and Turkey. The current conditions indicate that the issue of youth employment should be a trend at a higher priority than the problem of adult employment.

Young unemployed people are delaying their transition to adulthood by taking responsibility, causing the production of the country and the loss of income of the individual, as well as the inability to follow developments in their own field due to the exclusion of the educated workforce from production. In addition, the lack of employment opportunities which can create psychological and family problems, is a source of radical behavior exhibitions of people.

There are many reasons why young people are unemployed, including macro and micro size. Young unemployment can vary due to the contraction in total demand, as well as from demographic conditions, wrong or inadequate labor market policy implementation, the education system and economic crises.

The determinants of youth unemployment between 2008 and 2016in Turkey can be analyzed with Johansen co-integration test and vector error correction model in this study. The results of the analysis show that economic crises will reduce youth employment and increase in per capita income will decrease young unemployment problem in long term. However, adult labor unemployment, level of openness and foreign direct investment have had a negative impact on young employment in the long run. From this, we can conclude that the intensive recruitment of technology-intensive recruitment by entering into the world does not have the tendency to recruit a young worker whose expertise and skill levels are not sufficient.

REFERENCES

[1] Aren S. (1975). **İstihdam,** Para ve İktisadi Politika, Bilgi Yayınevi, Ankara.

[2] Aslan B. Y. (2014). *"Türkiye'de Genç İşsizliğe Yönelik Bir Alan Araştırması: Üniversite Öğrencileri Arasında Kaygı ve Umutsuzluk Düzeylerinin Belirlenmesi"*, Çalışma ve Sosyal Güvenlik Bakanlığı Uzmanlık Tezi, Ankara.

[3] Bayraktar S & **İncekara** A. (2013). *"Türkiye'nin Genç İşsizlik Profili",* Çalı**şma İlişkileri Dergisi, Ocak 4**(1), s. 15-38**.**

[4] Bozdağlıoğlu.Y. U. (2008). *"Türkiye'de İşsizliğin Özellikleri ve İşsizlikle Mücadele Politikaları",* **Kırgızistan Manas Üniversitesi Sosyal Sosyal Bilimler Dergisi, 20, s.45-65.**

[5] Condratov I. (2014), *"Determinants of Youth Unemployment: A Survey of The Literature"* Ecoforum 3(2), p. 124-128, http://www.ecoforumjournal.ro/index.php/eco/article/download/105/78, (Accessed: 02.07.2017)

[6] *Çondur* F. & Bölükbaş M.(2014). *"Türkiye'de İşgücü Piyasası ve Genç İşsizlik-Büyüme İlişkisi Üzerine Bir İnceleme",*Amme İdaresi Dergisi, 47 (2), s. 77-93.

[7] Dagume M. A & Gyekye A. (2016). *"Determinants of Youth Unemployment in South Africa: Evidence From The Vhembe District of Limpopo Province"*. Environmental Economics, 7 (4), p.59-67.

[8] Danacica D. E. (2014), *"Determinants of Youth Unemployment Spells and Exit Destinations in Romania and Hungary"*, Acta Oeconomica, 64 (3), p. 335–356.

[9] Demidova O. & Signorelli M. (2012). *"Determinants of Youth Unemployment in Russian Regions",* Post-Communist Economies, 2, p.191-217

[10] Ebaidalla M. E. (2016), *"Determinants of Youth Unemployment in OIC Member States: A Dynamic Panel Data Analysis",* Journal of Economic Cooperation and Development, 37 (2), p.81-102, http://www.sesric.org/pdf.php?file=ART15032301-2.pdf. (Accessed:12.07.207)

[11] Erol, H., **Özdemir** A & Yurdakul M. (2010). "*Türkiye'de İşsizliğin Yol Açtığı Olumsuz Sonuçların Giderilmesinde 4447 Sayılı İşsizlik Sigortası Kanununun İşlevi*", TİSK Akademi, 5 (10), s. 6-37.

[12] Freeman, R. (1979). "*Why is There a Youth Labor Market Problem"*, NBER Working Paper No.365, National Bureau of Economic Research, Cambridge.

[13] Göçer, İ. (2013). *"Türkiye'de Cari Açığın Nedenleri, Finansman Kalitesi ve Sürdürülebilirliği: Ekonometrik Bir Analiz"* Eskişehir Osmangazi Üniversitesi İİBF Dergisi, 8(1), s. 213-242

[14] Gujarati, N. D. (1999). Basic Econometrics. McGraw-Hill, Inc. New York

[15] Günaydın D. & Çetin M. (2015). "*Genç İşsizliğin Temel Makroekonomik Belirleyicileri: Ekonometrik Bir Analiz*", Pamukkale Üniversitesi SBE Dergisi, 22, s.17-34.

[16] Gündoğan N. (1999). *"Genç İşsizliği ve Avrupa Birliğine Üye Ülkelerde Uygulanan Genç İstihdam Politikaları"*, Ankara **Ün**v. SBF Dergisi, 54 (1), s. 63-79

[17] ILO, "*Key Indicators of Labor Market*", Ninth Edition, http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_498929.pdf (Accessed: 04.07.2017)

[18] ILO, "*Key Indicators of The Labor Market*" http://kilm.ilo.org/2011/download/kilm09EN.pdf (Accessed: 04.07.2017).

[19] Kabaklarlı, E., & Gür, M. (2011). "*Youth Unemployment Problem in Turkey and Analysis of Economic Determinants with Co-integration Model"*, 1-16. http://www.tcmb.gov.tr/yeni/iletisimgm/esra_kabaklarlimurat_gur.pdf. (Accessed: 04.07.2017)

[20] Kalkınma Bakanlığı, "*Ekonomik ve Sosyal Göstergeler"*, http://www.kalkinma.gov.tr/Pages/EkonomikSosyalGostergeler.aspx, (Accessed: 20.07.2017)

[21] Karabıyık İ. (2009), *"Avantaj ve Dezavantajları ile Genç İşsizliğinin Değerlendirilmesi*", Erzincan Üniversitesi Hukuk Fakültesi Dergisi, (13), s.293-320

[22] Marelli, E., Choudhry, Tanveer M., & Signorelli, M. (2013). "*Youth and total unemployment rate: the impact of policies and institutions*". Rivista Internazionale Di Scienze Sociali, 121 (1), p. 63-86

[23] Msigwa R. & Kipesha E. F. (2013). "*Determinants of Youth Unemployment in Developing Countries: Evidences from Tanzania*", Journal of Economics and Sustainable Development, 4 (14), p. 67-77.

[24] Murat S. & Şahin L. (2011). AB Uyum Sürecinde Genç İşsizliği, İstanbul Ticaret Odası, İstanbul.

[25] O'Higgins N.(2001). "*Youth Unemployment and Employment Policy: a Global Perspective", MPRA Paper No: 2369,* https://mpra.ub.uni-muenchen.de/23698/1/MPRA_paper_23698.pdf, *(*Accessed: 14.08.2017)

[26] Saatçioğlu C. & Karaca C. (2004). *"Döviz Kuru Belirsizliğinin İhracata Etkisi: Türkiye Örneği",* Doğuş Üniversitesi Dergisi, 5 (2) s. 183-195.

[27] Sam S. O. & Pokhariyal G.P. (2016). *"Modelling Economic Determinants of Youth Unemployment in Kenya".* Journal of Emerging Trends in Economics and Management Sciences (JETEMS), 7(1), p. 31-38.

[28] Sayre E., Benmansour N. A. & Constant S. (2015), "*The Determinants of Youth Unemployment in Qatar"* Topics in Middle Eastern and African Economies, 17 (2), p..216-249.

[29] Schmid, G. (2013). *"Youth Unemployment in Korea: From a German and Transitional Labour Market Point of View",*IZA Policy Paper No. 63**.** Bonn.

[30] Seçer, B. (2006). *"Uluslararası Boyutuyla Genç İşsizliği ve Gençlere Yönelik İstihdam Politikaları"*, TİSK Akademi Dergisi, 1 (2).

[31] Sertkaya, Y., & Okur, A. (2016). "*Türkiye'de Genç İşsizliğinin Belirleyicilerine Yönelik Ekonometrik Bir Analiz".* Ardahan Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, *3*, 155-168.

[32] Talas, C. (1997). Toplumsal Ekonomi: Çalışma Ekonomisi*,* İmge Kitabevi Yayınları, Ankara, 1997

[33] Tarı, R. &Yıldırım D. Ç. (2009), "*Döviz Kuru Belirsizliğinin İhracata Etkisi: Türkiye İçin Bir Uygulama"*, Yönetim ve Ekonomi Dergisi, 16 (2), p.95-105.

[34] TUIK, (2014), "*Tanım ve Kavramlar",* http://www.tuik.gov.tr/MicroVeri/HHBTKA2014/turkce/metaveri/taniim-ve-kavramlar/index.html, (Accessed: 12.08.2017)

[35] TUIK, *Temel* **İstatistikler**, http://www.tuik.gov.tr/PreTablo.do?alt_id=1007, (Accessed: 20.07.2017)

[36] World Bank, *Data Bank*, http://databank.worldbank.org/data/home.aspx, (Accessed: 20.07.2017)