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A RESEARCH ON THE IMPACT OF THE EDUCATION LEVEL ON UNEMPLOYMENT IN TURKISH ECONOMY[1]

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ABSTRACT

One of the biggest problems of all developed and developing economies is unemployment. New unemployed people joining the economy before employment is provided to the existing unemployed causes permanent the unemployment problem. In the fight against unemployment, each country develops policies according to its own labor market characteristics. In the study, the relationship between the differences in education level and the job type of individuals, searched job, their status in the last job, the job search time and the reasons for leaving the job is analyzed. In this respect, this study aims to identify important issues that policy makers should consider in the fight against unemployment. The results of the study revealed that the higher the education level, the longer the job seeking period of the individuals.

Keywords: Unemployment, searched job, job search time, education level, Chi-square analysis
Jel Classification: E24, J21, J64

EĞİTİM SEVİYESİNİN TÜRKİYE EKONOMİSİNDEKİ İŞSİZLİK ÜZERİNDEKİ ETKİSİ ÜZERİNE BİR ARAŞTIRMA

ÖZET

Tüm gelişmiş ve gelişmekte olan ekonomilerin en büyük sorunlarından biri işsizliktir. Mevcut işsizlere istihdam sağlanmadan ekonomiye yeni işsizlerin girmesi, işsizlik sorununun kalıcı olmasına neden olmaktadır. İşsizlikle mücadelede her ülke kendi işgücü piyasası özelliklerine göre politikalar geliştirir. Araştırmada bireylerin eğitim düzeyi ile aradıkları iş şekli, aradıkları iş, son işteki durumları, iş arama süreleri ve işten ayrılma nedenleri arasındaki ilişki incelenmiştir. Bu bağlamda, bu çalışma politika yapıcıların işsizlikle mücadelede dikkate almaları gereken önemli konuları belirlemeyi amaçlamaktadır. Araştırmanın sonuçları, eğitim düzeyi ne kadar yüksekse bireylerin iş arama süresinin de o kadar uzun olduğunu ortaya koymuştur.

Anahtar Kelimeler: İşsizlik, aranılan iş, iş arama süresi; eğitim seviyesi; Ki-kare analizi
Jel Sınıflandırması: E24, J21, J64

[1] This work is produced by the first author's Ph.D. thesis.

1.GİRİŞ

Unemployment in Turkey and in the world has taken a growing problem. Unemployment causes many economic, social and psychological problems for individuals. All over the world, new policies are produced every day to solve the unemployment problem.

The economic, social and political conditions of a society shape the education system of that country. Because the aim of education is to raise individuals who are suitable for the demands and needs of the society. On the other hand, education should provide individuals with the knowledge, skills and habits needed by the economy. Increasing the level of education is important both for the individual and the society. Increasing the education level of the person increases his / her productivity, which reduces the risk of being unemployed and increases the quality of life with direct and indirect returns. However, unfortunately, if the education system is not set up correctly, the opposite results can be appeared.

Turkey is one of the countries with high rates of unemployment, which are particularly affected by the problem of unemployment in the fairly young population. Most young people in Turkey turn to higher education in order to increase their chances of employment. Whether education is not the solution to the unemployment problem is an issue that is discussed in Turkey as well as in the world for a long time. The aim of this study is determinate the effects of the increase in education level on the risk of individual's unemployment in Turkish Economy. In other words; this study will investigate how the increase in the level of education on affect of individual's unemployment. In this context, in the study, first, some unemployment statistics will be given belong Turkish and the World Economies. Then, some studies in the relevant literature will be mentioned. At the end of the paper, statistical analysis will be made on education and unemployment variables and these analyzes will be interpreted.

2. AN OVERVIEW OF EMPLOYMENT IN TURKEY AND IN THE WORLD

OECD, which has 37 developed and developing countries as members, is an international economic organization. The OECD, which aims to support sustainable economic growth, reduce unemployment, ensure financial stability, contribute to the economic developments of countries, and help the development of world trade, provides economic and social statistical data and makes comparative analysis of these data and makes predictions. In this part of the study, unemployment in Turkey and OECD member countries and presenting relevant data in education, employment will be given information about the overall appearance.

Employment rates by educational attainment of men in Turkey by years are given in Table 1. When the table is examined carefully, it is observed between 2004 and 2018 that the employment rate of primary school graduates increase from 15.5% to 80.2%, the employment rate of general high school graduates increase from 58.9% to 64.9%, the employment rate of vocational high school graduates increase from 69.5% to 74.5%, the employment rate of university and equivalent graduates increase from 75.9% to 78.3%. On the contrary, it is observed that the employment rate of illiterate men decreased from 40.3% to 27.7% during the period discussed. If it is noticed, when the employment rates of men according to their education level are examined, it is observed that the employment rate of only illiterate men decreased, while the employment rate of men who graduated from other education levels increased.

Table 1: The employment rate in Turkey, according to the education level and years (%) (15+ years) (Men)

Years	Illiterate	Primary School	High School	Vocational High School	Universities and other higher educational institutions
2004	40,3	15,5	58,9	69,5	75,9
2005	37,7	22,9	59,2	72,0	76,9
2006	34,9	25,6	58,8	72,3	76,3
2007	32,3	30,7	57,7	72,7	76,4
2008	31,0	34,8	58,3	72,9	76,0
2009	30,6	34,3	58,7	70,8	75,1
2010	31,8	39,5	59,5	72,7	77,5
2011	33,7	44,2	63,1	74,4	78,8
2012	30,6	45,0	62,8	74,5	78,9
2013	29,8	47,9	63,8	75,2	79,8
2014	29,0	54,9	64,4	74,0	78,5
2015	27,4	61,8	64,5	74,9	79,6
2016	26,8	71,1	63,7	74,5	78,8
2017	28,8	78,6	64,4	73,7	79,0
2018	27,7	80,2	64,9	74,5	78,3

Source: TURKSTAT, Labor Force Statistics

In Table 2, the rate of employment by education level of women in Turkey has been given over the years. When Table 2 is examined, it is observed that the employment rate of women with university (and equivalent) degrees is higher than women with other education levels. While the employment rate of primary school graduate women in 2004 was 9.4%, in 2018, this rate increases significantly and reached 28.3%. On the contrary, a dramatic increase or decrease is not observed in the employment rates of women who graduated from other education levels in the period under consideration.

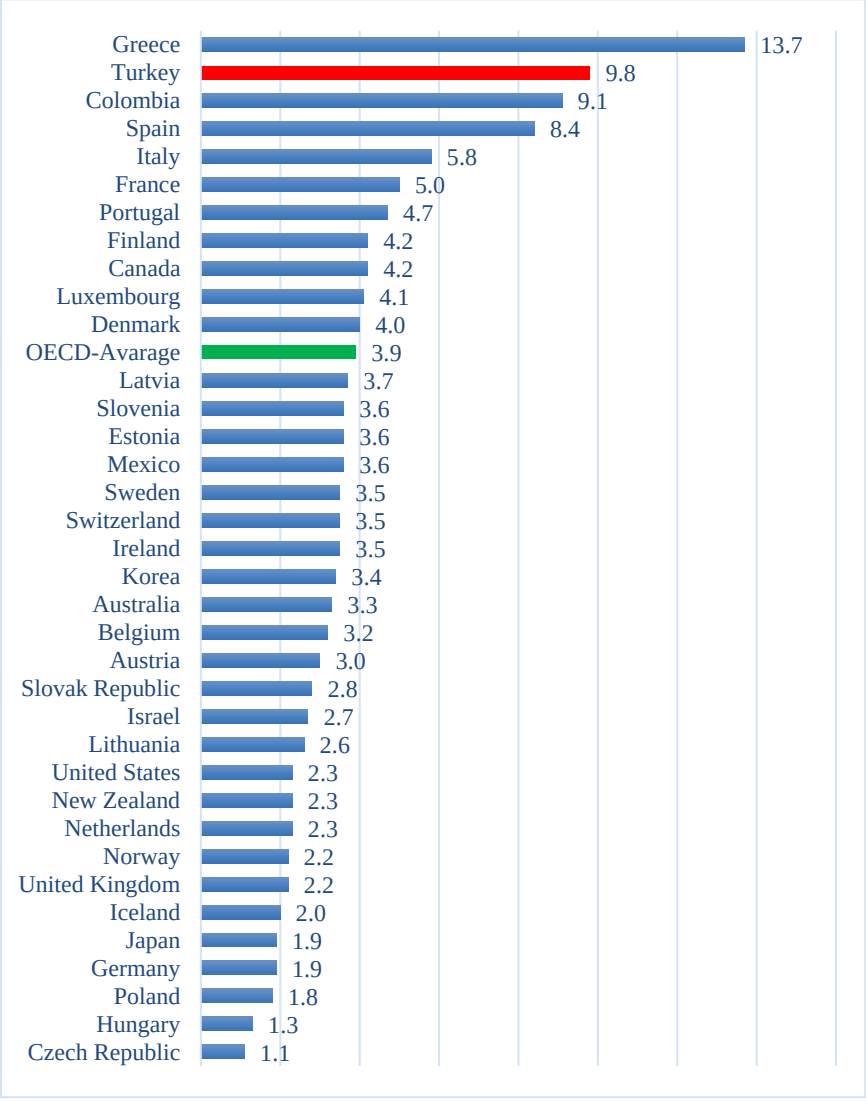
Table 2: The employment rate in Turkey, according to the education level and years (%) (15+ years) (Women)

Years	Illiterate	Primary School	High School	Vocational High School	Universities and other higher educational institutions
2004	16,3	9,4	20,1	28,9	58,3
2005	15,3	10,6	20,6	28,0	59,4
2006	14,5	11,6	21,5	28,6	59,9
2007	14,2	13,7	22,1	28,8	59,8
2008	14,2	14,5	23,1	30,4	60,0
2009	14,5	14,7	22,4	29,0	59,3
2010	15,9	16,6	22,8	30,8	59,7
2011	16,8	18,2	23,8	31,3	60,1

2012	16,5	18,0	24,8	30,7	60,4
2013	17,0	18,1	25,6	31,3	61,3
2014	15,5	20,7	25,8	32,1	60,3
2015	15,6	23,8	26,0	33,4	59,9
2016	14,7	27,8	26,6	32,9	59,3
2017	15,4	28,6	27,0	33,8	59,3
2018	15,5	28,3	27,7	33,8	59,4
Source: TURKSTAT, Labor Force Statistics					

Taken together Tables 1 and 2, it is clear that the employment rate of men is higher than that of women at all educational levels. For example, in 2018, the employment rate of illiterate women is 15.5%, while the employment rate of illiterate men is 27.7%. Similarly, while the employment rate of women with higher education in the same year is 59.4%, the employment rate of higher education graduate men is 78.3%.

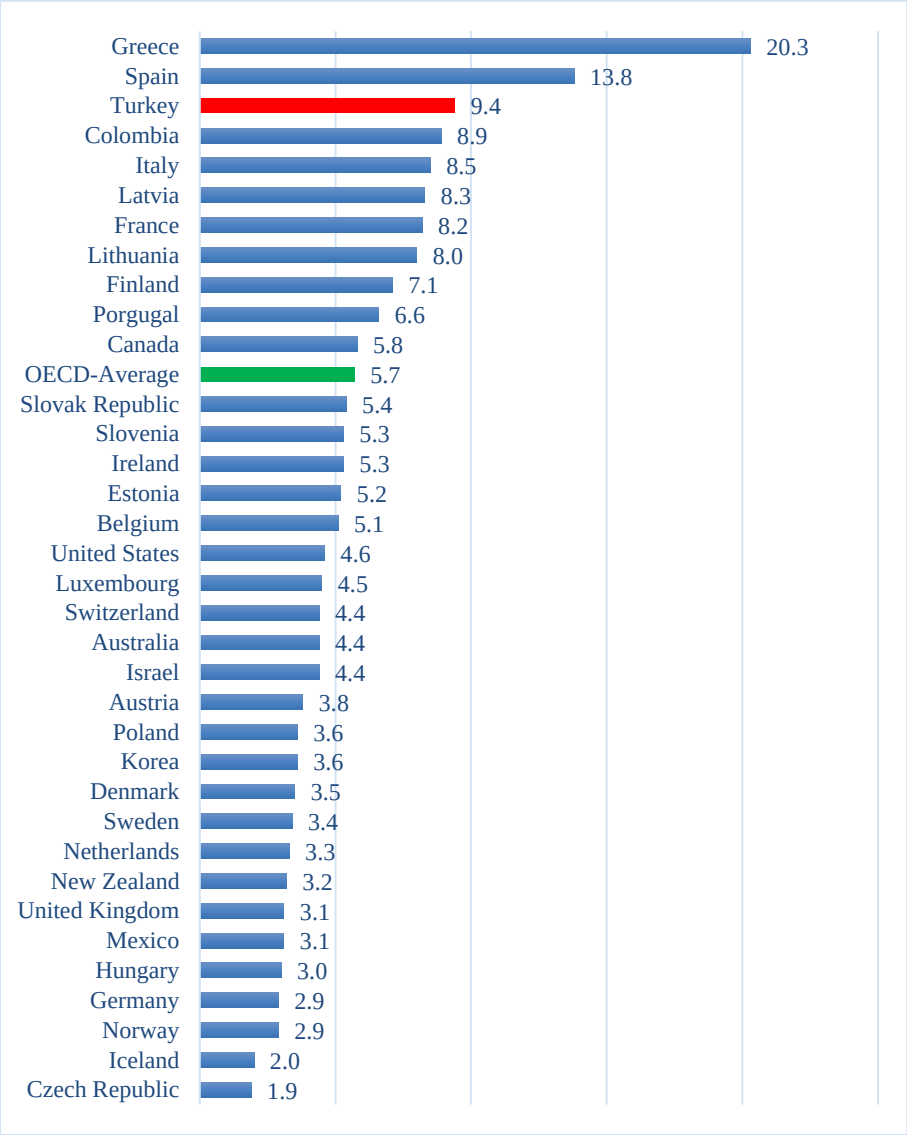
Graphic 1: The unemployment rates of graduate from tertiary education in OECD countries, % of 25-64 years-olds, 2018



Source: (OECD)

Graphic 1 shows the unemployment rates of graduate from tertiary education in OECD countries in 2018. When the graphic is analyzed, it is seen that the OECD average is 3.9% and the lowest rate is in the Czech Republic with 1.1%. In contrast, Greece has the highest unemployment rate with 13.7%, and Turkey is located ranks second with 9.8%. These data are, in fact, many scholars and columnist for years expressed by the author in Turkey "need to revise the structure of higher education" proves the correctness of the idea.

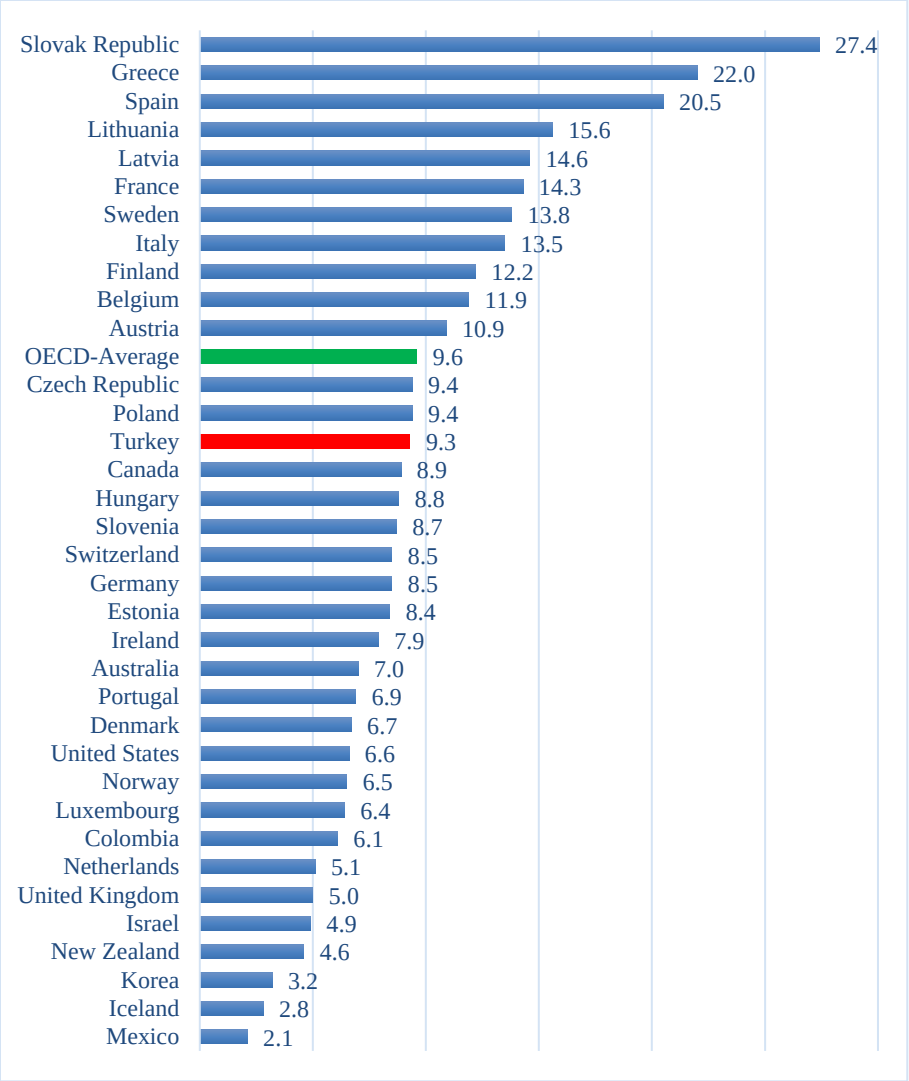
Graphic 2: The unemployment rates of graduate from upper secondary (non-tertiary) education in OECD countries, % of 25-64 years-olds, 2018



Source: (OECD)

Graphic 2 shows the unemployment rates of graduate from upper secondary (non-tertiary) education in OECD countries in 2018. When the graph is analyzed, it is seen that the OECD average is 5.7% and the lowest rate is in Czech Republic with 1.9%. The highest rate of unemployment rates for high school graduates is in Greece with 20.3%. Spain ranks second with 13.8%, Turkey is placed in the third rank with 9.4%.

Graphic 3: The unemployment rates of graduate from below upper secondary education in OECD countries, % of 25-64 years-olds, 2018



Source: (OECD)

Graphic 3 shows the unemployment rates of graduate from below upper secondary education in OECD countries in 2018. When the graph is analyzed, it is seen that the OECD average is 9.6% and the lowest rate is in Mexico with 2.1%. The highest rate of unemployment rates for less than high school graduates is in Slovakia with 27.4%. Greece ranks second with 22.0%. Unlike the previous graph, Turkey is located below the OECD average of 9.3% unemployment rate.

When Graphics 1, 2 and 3 considered together, while the unemployment rate of the upper secondary (non-tertiary) graduates and tertiary graduates are more than the OECD average, the unemployment rate of below upper secondary graduates is less than the OECD average. It is clear that this remarkable issue should be taken into consideration by policy makers when creating employment policies.

3. LITERATURE

In this part of the study, a few selected studies addressing the relationship between education level and unemployment are included by examining the literature.

Biagi and Lucifora (2008) investigating the effects of educational change on unemployment for a number of European countries; they stated that there is a negative relationship between the level of education and the probability of being unemployed, and in addition, they inferred that individuals with higher education have a greater advantage in wage negotiation.

Riddell and Song (2011) investigating the re-employability of education among unemployed workers in the USA, based on the data obtained from the 1980-2005 Current Population Survey (CPS) and the 1980 Census; he found that additional training significantly improves re-employment success among the unemployed. When the effect of additional education on re-employment rates is analyzed; it was observed that the highest effect was at 11-13 and 15-16 years of education, it was average for individuals with more than 16 years of education, and it was lower than the average for individuals with less than 11 years of education. It has been found that graduating from high school increases the probability of being re-employed by about 40%, while an additional one-year education increases this probability by about 4.7%.

Kostova and Kotevska argued that the increase in education level does not reduce the possibility of being unemployed, and it was argued that education policy in Macedonia should be shaped according to the needs of the labor market (Kostova & Kotevska, 2011).

Erdem and Tugcu (2012) were discussed the relationship between higher education and unemployment in Turkey between the years 1960-2007. In the study, it was argued that using an education policy to reduce unemployment in the short term will increase the number of educated unemployed in the long run.

Selim et al. (2014) analyzed the socio-economic variables affecting the unemployment between 2007 to 2010 using the income and living conditions survey research data of Turkey Statistical Institute (TURKSTAT). When the effect of education level on individuals' employment was examined; it was determined that as the level of education increases, the probability of unemployment increases. In addition, it was emphasized that the group with the highest rate of unemployment is university graduates and university graduates are 13,013 times more likely to be unemployed than illiterate individuals. In addition, it was stated that increasing the level of education decreases the probability of being unemployed for men, while for women, increasing the level of education increases the probability of being unemployed. Moreover, it was stated that increasing the level of education decreases the probability of being unemployed for men, while for women, increasing the level of education increases the probability of being unemployed.

Blinova et al. (2015) investigated the determinants of reducing youth unemployment in Russian regions with data obtained from the Russian Federation Federal State Statistics Service (Rosstat). Statistically significant relationships were found between youth unemployment rate and social, economic and demographic characteristics of the region. They argued that employment policies should be determined by considering the characteristics of the region to be implemented. It was determined that uneducated individuals are at higher risk of being unemployed and secondary school graduates who do not want to continue their education

increase the youth unemployment rate by joining the unemployed. It was observed that vocational training reduces the risks of youth unemployment in Russian regions[2].

Lavrinovicha et al. (2015) examined the impact of education on unemployment and income in the Latvian economy for the period 2002-2013. In the process of interest, it was determined that the higher the education level of the individual, the higher the probability of being employed in the labor market. In addition, while the average income of the population was 26 Latvian Lat in 2002, it was observed that the average income increased to 70 Latvian Lat in 2013 with the increase in the education level across the country.

Klein (2015) who examining the relationship between education and unemployment in West Germany from the 1970s to the present, found that the unemployment rate of the individuals who graduated from vocational high schools is lower than those who graduated from general high schools.

Novella and Duvivier (2015) observed that the rate of turnover of individuals with a high level of education was lower than those with a low education level in the period 2002-2009 in Belgium.

Rajmohan and Abeysekera (2016) emphasized the incompatibility between the expectations in the labor market and the skills individuals gain in education in Sri Lanka. It was claimed that this incompatibility is the reason why an increase in the education level of the individual does not reduce the probability of being unemployed.

There are many indicators that can measure the quality of education. PISA, which is applied internationally by the OECD, is one of the important indicators in this matter. Examining the relationship between youth unemployment and the quality of education in the European Union member countries, Özcan et al. (2016) found that the rate of youth unemployment in countries that failed the PISA test results applied in different periods was higher than the countries that were successful in the test. Under the assumption that countries with low PISA test scores have lower education quality than other EU member countries, it has been determined that the youth unemployment rate is higher than the countries with high test scores and is above the EU average. In the light of these results, it was concluded that there is an inverse relationship between the quality of education and youth unemployment in EU member countries.

Another study examining the effect of education quality on unemployment was studied by Hall (2016). The researcher investigated whether taking more general education reduces the risk of future unemployment between 2008-2010 in Sweden. Although no evidence that participating in a longer and more general vocational program reduced the risk of experiencing unemployment was found, students having higher drop-out rates attending vocational high schools with a more general curriculum was found. As a result, students with poor knowledge could lead to a worse labor market was asserted.

The European Commission reported that in 2016, people with only basic education were almost three times more likely to live in poverty or social exclusion than those with higher education. It was stated that only 44.0% of the young people who have an education below the high school level are employed. In addition, in the general population, the unemployment rate of individuals with only basic education is 16.6%, while the unemployment rate of individuals with higher education is 5.1% (European Comission, 2017).

[2] For the classification of the regions of Russia, see (Blinova, Bylina, & Rusanovskiy, 2015, p.527).

Pointing out that the higher the education level, the higher the probability of being unemployed, Apaydın (2018); During 2006-2016, he compared unemployment figures in Turkey and OECD countries. He explained the reasons for underemployment of women, which has now become a chronic problem, as a patriarchal social structure and migration from rural to urban areas.

In the studies of Sart and Turguter (2018); Taking the data of 2015, they concluded that the rate of workforce with higher education is higher than the rate of workforce with secondary education in OECD countries.

Öztürk (2018) stated that education level is the most important factor determining employment participation rate in regions where service and industry sectors are developed.

As a result of his research conducted during the period of 2004-2016, Bağcı (2018) observed that as the education level increases in developed countries, the unemployment rate decreases, and in developing countries the unemployment rate increases as the education level increases. The reason for this distinction is attributed to the difference in unemployment types seen in developed and developing countries.

Abdioğlu and Albayrak (2018), during the period 1988-2015 in Turkey, youth unemployment, education, examined the relationship between economic growth, and was determined that long-term relationship between the variables. In addition, it was determined that a 1% increase in the number of higher education graduates will create a decrease of 1.0543% in the number of unemployed young people, and a 1% increase in GDP will decrease youth unemployment by 0.4802%.

Kanyilmaz Polat and Bacak (2018), who conducted a questionnaire for unemployed people who graduated from higher education in Çanakkale province, when examining the education levels of the participants, determined that the largest share was composed of undergraduate graduates with 60.6%. In addition, when examining the relationship between the duration of unemployment and education level, they determined that individuals with associate degree programs had the highest share with 44.4%.

Bayır and Şahin Kutlu (2019), who examine the impact on university education and vocational training to youth unemployment in the 1988-2017 period in Turkish economy, found that university education and vocational high school education reduced youth unemployment in the long term, and reduced youth unemployment in the short term in the first year, but the effect tended to balance in the following years.

Clark and Lepinteur (2019) in their study, analyzed the relationship between adult unemployment experience, childhood conditions and family history, using employment history data from British Cohorttudy to calculate the total unemployment experience of an individual from the time he left education to the 30 age. They found that success in education and good behavior at the age of 16 reduced youth unemployment experience. Also, for women, emotional health at the age of 16 was found to be a strong indicator of unemployment experience. It was observed that children who grow up with unemployed parents often continue to be unemployed. As a result, it was suggested that adult unemployment experience is passed down across generations. In addition to these, they also attempted to provide evidence of the social norm effect: They found that children with less advantageous backgrounds experienced both more adult unemployment and less affected in terms of well-being.

Using data between 15/12/2015 and 14/12/2016, Papadakis et al. (2020) found a statistically significant relationship between unemployment and education level in the Greek

economy, and they stated that the highest unemployment rate was in individuals with ISCED 3-4 (high school and post-secondary non-tertiary education graduates) education level with 64%. On the other hand, they found that the highest employment rate was in individuals at ISCED 1-2 (primary and secondary education) level with 24.4%.

In the light of national and international literature review; It is seen that the effects of education level on unemployment differ according to the internal dynamics of the countries considered, the development levels of the countries, and the time period covered by the analysis.

4. DATA AND METHODOLOGY

The questionnaire used in the study, was designed by Turkish Statistical Institute (TURKSTAT) and was applied to 374 thousand 172 people. The results of the **2018 Household Labor Force Survey** obtained by requesting information from TURKSTAT will be examined with the help of statistical analysis. SPSS v.27.0 package program is used for the analyzes.Chi-Square Independence Test is applied in order to determine whether there is a relationship between two categorical variables or whether these variables are interdependent. Thus, The Chi-Square Test of Independence was used to test whether the variables we discussed in the study were interrelated or not.

Hypotheses used in chi-square analysis as follows:

H_0: There is no statistically significant relationship between the variables x and y.
H_1: There is statistically significant relationship between the variables x and y.

If the p value obtained as a result of the chi-square analysis is less than $\alpha = 0.05$ significance level, the H_0 hypothesis is rejected. In other words; it is obtained that there is a statistical relationship between the variables considered. If the calculated p value is greater than 0.05; H_0 hypothesis cannot be rejected, and it is concluded that there is no significant relationship between variables.

Table 3: Chi-square analysis table between the searched job type and education level variables

			Education Level					
			Primary School	High School	Vocational High School	University	Post Graduate	Total
Searched Job Type	Full Time	Count	8553	1958	1932	4238	184	16865
		Column %	92,50%	90,50%	92,70%	96,10%	96,30%	93,20%
	Full time but could be part time if not found	Count	344	51	81	83	3	562
		Column %	3,70%	2,40%	3,90%	1,90%	1,60%	3,10%
	Part Time	Count	130	101	49	34	1	315
		Column %	1,40%	4,70%	2,40%	0,80%	0,50%	1,70%
	Does not matter	Count	224	54	23	55	3	359
		Column %	2,40%	2,50%	1,10%	1,20%	1,60%	2,00%
	Total	Count	9251	2164	2085	4410	191	18101
		Column %	100%	100%	100%	100%	100%	100%

2 cells (% 10) have expected count less than 5. The minimum expected count is 3,32. Chi-Square Test Statistics χ^2= 22,968 and Significant Level (p) = 0,000

In order for Pearson's Chi-square test to be applied, the percentage of each cell's theoretical frequencies less than 5 should not exceed 20% (Gürsakal, 2013). The searched job type variable originally had 5 categories, but since above-mentioned requirement could not be met, the category "Part time but could be full time if not found" was combined with the category "Does not matter". When Table 3 is examined, it is seen that there is a statistically significant relationship between the variables searched job type and education level. Again, it is seen that individuals with all education levels are looking for full-time jobs with a rate of over 90%.

Table 1: Chi-square analysis table between the searched job and education level variables

			Education Level					
			Primary School	High School	Vocational High School	University	Post Graduate	Total
Searched Job	Managers	Count	50	52	31	177	16	326
		Column %	0,50%	2,30%	1,40%	3,90%	7,90%	1,70%
	Learned profession members	Count	57	136	245	1912	152	2502
		Column %	0,60%	6,00%	11,40%	41,90%	75,20%	13,40%
	Mechanics, Technicians and Assistant Learned Profession Members	Count	129	186	273	746	6	1340
		Column %	1,40%	8,30%	12,70%	16,30%	3,00%	7,20%
	Employees Working at Office Services	Count	351	499	384	1134	16	2384
		Column %	3,70%	22,20%	17,90%	24,80%	7,90%	12,80%
	Service Employees and Salespersons	Count	2756	782	647	418	9	4612
		Column %	29,00%	34,80%	30,10%	9,20%	4,50%	24,70%
	Qualified Agriculture, Forestry and Fisheries Workers	Count	104	5	4	10	2	125
		Column %	1,10%	0,20%	0,20%	0,20%	1,00%	0,70%
	Craftsmen and Workers of Relevant Work	Count	1870	158	254	71	1	2354
		Column %	19,60%	7,00%	11,80%	1,60%	0,50%	12,60%
	Plant and Machine Operators and Fitters	Count	1261	172	139	43	0	1615
		Column %	13,20%	7,70%	6,50%	0,90%	0,00%	8,60%
	Elementary Occupations	Count	2941	258	173	54	0	3426
		Column %	30,90%	11,50%	8,00%	1,20%	0,00%	18,30%
Total		Count	9519	2248	2150	4565	202	18684
		Column %	100%	100%	100%	100%	100%	100%

2 cells (% 4,4) have expected count less than 5. The minimum expected count is 1,35. Chi-Square Test Statistics is χ^2= 11247,310 and Significant Level (p) = 0,000

When Table 4 is examined, it is seen that there is a statistically significant relationship between the job searched and education level variables. Primary school graduates are mostly looking for "elementary occupations", high school and vocational high school graduates is mostly looking for the job that "service employees and salespersons", and higher education graduates is mostly looking for the job that "learned profession members".

Table 2: Chi-square analysis table between the status at the last job and education level variables

			Education Level					
			Primary School	High School	Vocational High School	University	Post Graduate	Total
Status at the Last Job	Paid or Casual	Count	31213	6839	6505	9006	492	54055
		Column %	65,60%	83,60%	89,00%	91,90%	91,80%	73,70%
	Employer	Count	453	128	90	171	20	862
		Column %	1,00%	1,60%	1,20%	1,70%	3,70%	1,20%
	Self-Employed	Count	6020	393	308	281	18	7020
		Column %	12,70%	4,80%	4,20%	2,90%	3,40%	9,60%
	Unpaid Family Worker	Count	9861	824	408	344	6	11443
		Column %	20,70%	10,10%	5,60%	3,50%	1,10%	15,60%
Total		Count	47547	8184	7311	9802	536	73380
		Column %	100%	100%	100%	100%	100%	100%

0 cells (% 0) have expected count less than 5. The minimum expected count is 6,30. Chi-Square Test Statistics χ^2= 5107,742 and Significant Level (p) = 0,000

When Table 5 is examined, it is seen that there is a statistically significant relationship between the status at the last job and education level variables. While 65.6% of the participants who graduated from primary school declared their status in their last job as "paid or casual", 20.7% declared their status in the last job they worked as "unpaid family worker". Among the participants with other education levels, the rate of those who declared their status as "unpaid family workers" in their last job is much lower than primary school graduates. The vast majority of the participants at all educational levels declared their status at the last job as "paid or casual".

Table 3: Chi-square analysis table between the job search time and education level variables

			Education Level					
			Primary School	High School	Vocational High School	University	Post Graduate	Total
Job Search Time	1-3 months	Count	4275	891	943	1463	66	7638
		Column %	47,40%	41,10%	45,80%	32,80%	33,70%	42,70%
	4-6 months	Count	1718	425	388	877	28	3436
		Column %	19,00%	19,60%	18,90%	19,70%	14,30%	19,20%
	7-9 months	Count	502	140	140	323	17	1122
		Column %	5,60%	6,50%	6,80%	7,20%	8,70%	6,30%
	10-12 months	Count	1366	375	352	875	38	3006
		Column %	15,10%	17,30%	17,10%	19,60%	19,40%	16,80%
	13-+ months	Count	1161	336	234	919	47	2697
		Column %	12,90%	15,50%	11,40%	20,60%	24,00%	15,10%
Total		Count	9022	2167	2057	4457	196	17899
		Column %	100%	100%	100%	100,%	100%	100%

0 cells (% 0) have expected count less than 5. The minimum expected count is 12,29. Chi-Square Test Statistics χ^2= 364,916 and Significant Level (p) = 0,000

When Table 6 is examined, it is seen that there is a statistically significant relationship between the job search time and education level variables. Examining the job search time according to the education level of the participants, 33.8% of primary school graduates, 35.3% of vocational high school graduates, 39.9% of high school graduates, 47.2% of university graduates and 52% of postgraduate graduates 1 of them declare that they have been looking for a job for more than 7 months. It can be seen from these data that as the education level increased, the rate of individuals who declared that they had been looking for a job for more than 7 months increase.

Table 7: Chi-square analysis table between the reason for leaving from job and education level variables

			Education Level					
			Primary School	High School	Vocational High School	University	Post Graduate	Total
Reason for Leaving from Job	Job was temporary, came to an end	Count	20898	3306	3149	3508	116	30977
		Column %	44,00%	40,40%	43,10%	35,80%	21,60%	42,20%
	Was working seasonally	Count	3419	251	184	146	4	4004
		Column %	7,20%	3,10%	2,50%	1,50%	0,70%	5,50%
	Dismissed / Liquidated / Bankrupted	Count	4181	765	659	1157	127	6889
		Column %	8,80%	9,30%	9,00%	11,80%	23,70%	9,40%
	Not satisfied with job	Count	3484	969	883	1501	82	6919
		Column %	7,30%	11,80%	12,10%	15,30%	15,30%	9,40%
	Own illness or disability	Count	6473	295	256	266	14	7304
		Column %	13,60%	3,60%	3,50%	2,70%	2,60%	10,00%
	Looking after children or incapacitated adults in the family	Count	1523	419	379	659	52	3032
		Column %	3,20%	5,10%	5,20%	6,70%	9,70%	4,10%
	Her spouse's request / Due to marriage	Count	1656	388	320	481	12	2857
		Column %	3,50%	4,70%	4,40%	4,90%	2,20%	3,90%
	Education or training	Count	2097	1059	771	522	21	4470
		Column %	4,40%	12,90%	10,50%	5,30%	3,90%	6,10%
	Retirement (including early retirement)	Count	3430	626	610	1333	97	6096
		Column %	7,20%	7,60%	8,30%	13,60%	18,10%	8,30%
		Count	147	36	67	128	5	383

	Military service	Column %	0,30%	0,40%	0,90%	1,30%	0,90%	0,50%
	Other	Count	239	70	33	101	6	449
		Column %	0,50%	0,90%	0,50%	1,00%	1,10%	0,60%
Total		Count	47547	8184	7311	9802	536	73380
		Column %	100%	100%	100%	100%	100%	100%

2 cells (% 3,6) have expected count less than 5. The minimum expected count is 2,80. Chi-Square Test Statistics χ^2= 5892,201 and Significant Level (p) = 0,000

When Table 7 is examined, it is seen that there is a statistically significant relationship between the reason for leaving from job and education levels variables. Regardless of the education level of the participants, the highest reason for leaving from job is the completion of the temporary job. In addition, as the level of education increases, the rate of those who leave job because their job is a temporary job decreases. The highest rate among those who quit because of dissatisfaction with their job is seen in individuals with a university or postgraduate degree. Looking at the education level of individuals who leave their jobs to take "looking after children or incapacitated adults in the family", it is seen that individuals having postgraduate graduates has highest rate. 23.7% of primary school graduates and 23.7% of postgraduate graduates stated that they leave their jobs due to "Dismissed / Liquidated / Bankrupted".

Table 8: Chi-square analysis table between the field of the last education level graduated and employment status variables

			Employment Status			
			Employment	Unemployment	Not in the Labor Force	Total
The field of the last education level graduated	Education	Count	6473	672	2666	9811
		Column %	12,0%	9,6%	11,6%	11,7%
	Arts	Count	1140	253	998	2391
		Column %	2,1%	3,6%	4,3%	2,9%
	Humanities	Count	3652	417	2461	6530
		Column %	6,8%	6,0%	10,7%	7,8%
	Foreign Languages	Count	618	115	301	1034
		Column %	1,1%	1,6%	1,3%	1,2%
	Social and Behavioural Science	Count	2441	408	891	3740
		Column %	4,5%	5,8%	3,9%	4,5%
	Journalism and Information	Count	145	38	73	256
		Column %	0,3%	0,5%	0,3%	0,3%
	Business and Administration	Count	13366	1878	5538	20782
		Column %	24,8%	26,8%	24,0%	24,8%
	Law	Count	871	83	286	1240
		Column %	1,6%	1,2%	1,2%	1,5%
		Count	311	63	86	460

	Biology, Environment and Relateds	Column %	0,6%	0,9%	0,4%	0,5%
	Physical science	Count	693	114	211	1018
		Column %	1,3%	1,6%	0,9%	1,2%
	Mathematics and Statistics	Count	330	32	127	489
		Column %	0,6%	0,5%	0,6%	0,6%
	Information and communication technologies	Count	1030	190	519	1739
		Column %	1,9%	2,7%	2,3%	2,1%
	Engineering and engineering works	Count	10983	1042	2691	14716
		Column %	20,4%	14,9%	11,7%	17,5%
	Manufacturing and processing	Count	2278	276	1505	4059
		Column %	4,2%	3,9%	6,5%	4,8%
	Architecture and construction	Count	1928	248	626	2802
		Column %	3,6%	3,5%	2,7%	3,3%
	Agriculture, forestry and fishing	Count	896	111	267	1274
		Column %	1,7%	1,6%	1,2%	1,5%
	Veterinary Medicine	Count	365	25	58	448
		Column %	0,7%	0,4%	0,3%	0,5%
	Health	Count	3331	445	1322	5098
		Column %	6,2%	6,4%	5,7%	6,1%
	Welfare (Social Services)	Count	880	301	1267	2448
		Column %	1,6%	4,3%	5,5%	2,9%
	Personal Sevices	Count	1185	210	818	2213
		Column %	2,2%	3,0%	3,5%	2,6%
	Occupational health and transportation services	Count	262	47	86	395
		Column %	0,5%	0,7%	0,4%	0,5%
	Security Services	Count	644	38	269	951
		Column %	1,2%	0,5%	1,2%	1,1%
Total		Count	53822	7006	23066	83894
		Column %	100%	100%	100%	100%

0 cells (% 0) have expected count less than 5. The minimum expected count is 21,38. Chi-Square Test Statistics χ^2= 2945,697 and Significant Level (p) = 0,000

It is observed from Table 8 that there is a statistically significant relationship between "the field of the last education level graduated" and the "employment status" variables. When Table 8 is analyzed, it is see that the three most employed fields are respectively "business and administration", "engineering and engineering works" and "education". Interestingly, the fields with the highest unemployment rate are also "business and administration", "engineering and engineering works" and "education", respectively.

5. CONCLUSION

Unemployment is not only a problem for developing countries but also for developed countries. Many reasons such as labor surplus resulting from the increase in the population, unfair distribution of income, decrease in labor demand caused by technological developments, wrong economic policies applied, unregistered employment, investment costs increase unemployment as well as making unemployment permanent.

All over the world, new policies are produced every day to solve the unemployment problem. While determining the policies to be implemented against unemployment, the qualification of the workforce and education policies should be taken into consideration. The transformation of the workforce into human capital with education is a determinant that increases macroeconomic performance (Apak, Sarıdoğan, & Uçak, 2007).

As a result of the analyzes made in this study, when the relationship between the status at the last job and education level variables is examined; it is observed that the vast majority of the participants at all educational levels declared their status at the last job as "paid or casual". Also; While 65.6% of the participants who graduated from primary school declared their status in their last job as "paid or casual", 20.7% declared their status in the last job they worked as "unpaid family worker". It has been observed that among the participants with other education levels, the rate of those who declared their status as "unpaid family workers" in their last job is much lower than primary school graduates. When the relationship between the searched job and education level variables is examined; it was observed that primary school graduates are mostly looking for "elementary occupations", high school and vocational high school graduates is mostly looking for the job that "service employees and salespersons", and higher education graduates is mostly looking for the job that "learned profession members". Considering the relationship between the reasons for the participants to leave their jobs and their education level, it is seen that the rate of those who quit their jobs due to their temporary job decreases as their education level increases. When the relationship between the job search time of the participants and their education level is examined; it was found that as the education level increased, the rate of individuals who declared that they had been looking for a job for more than 7 months increase. People attach importance to their education in order to increase their human capital throughout their lives. Although it is generally accepted in economic theory that the level of education has a significant share in the risk of unemployment da (Nickell, 1979); (Kiefer, 1985); (Mincer, 1991); When the statistical data are analyzed, it is seen that individuals with a high education level have a high risk of unemployment.

When tertiary education graduates and upper secondary (non-tertiary) education graduates in OECD member countries and individuals unemployment rates compared Turkey's unemployment rate in this area is seen to be much higher (ranked two and three, respectively) than the OECD average. When analyzed unemployment rates of below upper secondary in OECD countries, the unemployment rate in Turkey is below the OECD average, and a bit as compared to other educational levels are observed to have lower unemployment rates. Moreover, findings obtained from the 2018 Household Labor Force survey which is applied to 374 thousand people by Turkish Statistical Institute is parallel with the data about Turkey shared by the OECD.

When the relationship between the department of graduation and employment status is examined; it was observed that the three departments with the highest employment rate are respectively “business and management”, “engineering” and “education”, and the three sections with the highest unemployment rate are also respectively “business and management”,

"engineering" and "education". It is remarkable that the departments with the highest employment rate and the departments with the highest unemployment rate are also the same departments. In this context, it is considered that this paradox has emerged with the fact that young people prefer these occupational groups with the idea that the employment rate is high, and as a result, more individuals have turned to these professions than the market needs. In addition, more than the number of these departments at universities in Turkey it is one of the important reasons for this situation. The way to get rid of this paradox is to organize the education system according to the needs of the labor market. In this context, it is considered that the system should be reorganized by determining a maximum quota of 20-30% more than the labor force required by the market for the departments that have more graduates than the market needs. In this case, both the labor market need will be met and the continuation of a labor market in which qualified individuals in the market will compete to find jobs will be ensured. Thus; it will be ensured that the energy of the young population of the country is not wasted and this energy is shifted to other areas.

The higher education system is the most important tool to meet the qualified labor force needs of countries. The correctly designed education system has the power to transform the young population of the country into an important advantage. Because of the education system in Turkey is not planned correctly, the number of individuals who have graduated from some departmants is greater than the amount demanded by the labor market. Another issue to be emphasized about the education system is; the basic skills and knowledge required by the labor market are not provided by higher education institutions. Although it is an undoubted fact that the only purpose of higher education is not to train staff to meet the needs of the labor market, the form of education that does not overlap with the labor market means the waste of resources. An educational structure sensitive to the needs of the labour force market will both increase the welfare level of the individual in micro sense and contribute to development and international competition in macro sense (Biçerli, 2011).

Career centers should be established at universities that determine employment opportunities for graduated students. These units should keep track of the employment status of their graduating students, and a competitive environment should be created between universities for these units. Short-term courses can be given to students who graduate from departments that provide more graduates than the labor market needs, and these people can be employed in alternative sectors related to their profession.

The educational structure does not meet the expectations of the labor market in Turkey's economy. Education policies should be arranged by taking into account the expectations of the labor market. It is clear that one of the things that needs to be done in the long run is to increase the general education level of the population: However, at this point, it is necessary to emphasize the importance of questioning the quality of education as well as increasing the functionality of technical education.

It is considered that the findings obtained as a result of the analyzes made in the study reveal the important deficiencies of the labor market that should be emphasized and these issues should be taken into consideration by policy makers.

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