**ESAS Social First Chance Programme Demography Project**

# Higher Education and Employment

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## 1. Introduction

The number of higher education graduates is increasing rapidly in the world. In 2018, 40.7 percent of the 20-34 age group of the population of 28 countries of European Union (EU) graduated from higher vocational schools, university or higher.[1] The rate of higher education graduates in this population demonstrated an incline by 9.6 points in the periods between 2008-2018. In Turkey, whose EU candidacy process is ongoing, the rate of higher education graduates of this age increased by 18.5 points from 12.8 percent in 2008 to 31.3 percent in 2018.[2] One of the reasons behind this significant rise in the rate of higher education graduates in Turkey is the 60 percent increase in the student quota of universities partly due to 40 newly opened public universities between 2006-2008.

The rapid increase in the number of higher education graduates raises a question about the labor market outcomes of young people in Turkey. This research aims to explore the labor market outcomes of the youth who recently graduated from higher education in Turkey. First, Turkish Statistical Institute (TurkStat) Household Labor Force Surveys (HLFS) will be used to analyse the educational and employment outcomes of the youth in the age group of 22-27, differentiated according to gender and education levels of higher education and high school education for the years 2004-2018.[3] Differentiation of labor market outcomes according to gender and education levels is necessary for the following reasons: The labor market in Turkey demonstrates significant differences for men and women in terms of indicators of employment and unemployment. Therefore, in order to develop and implement accurate policies, these differences should be well understood. The category of higher education and high school will clarify whether the problems that recent higher education graduates face in the labor market are

[1] Graduates of higher vocational school, college and higher will be defined as Higher Education graduates.
[2] It is calculated by using the Turkish Statistical Institute (TurkStat) Household data.
[3] Since there is no higher education graduation year data in TurkStat Household Survey, 22-27 age range is used to analyse new university graduates instead of 20-34 age range. The 22-27 age group also forms the target group of the First Chance Program.

specific to their group or they are common problems observed in the overall labor force. Analysing 2004-2018 period including 2009 global crisis which has negative effects on the labor market will be beneficial to not only understand the trends in the labor force indicators in the last years but also compare these indicators with the crisis period.

Second, this research aims to explore the employment, unemployment and wage differences between the graduates of Second Tier Universities (targeted by the First Chance Programme, a social investment of Esas Sosyal) and graduates of higher ranked universities (First Tier Universities) where First and Second Tier universities are determined according to the rankings of universities by University Ranking by Academic Performance (URAP)[4]. The analysis in this report will identify any additional problems faced by the graduates of the Second Tier universities in the labor market. For this purpose, IPSOS Research Company survey data will be used. In addition, KONDA Research Company Structure of the Education System and Expectations survey data will be used to examine the socio-demographic differences between the graduates of Second Tier universities and the First Tier Universities and the differences in their labor market outcomes in the medium and long run. Thus, the analysis in the report will help to determine the universities compatible with the objectives of the First Chance Programme.

Finally, in order to clarify whether the complications in the youth employment in our country should be handled Turkey-specific or region-wide, the employment rate of the young higher education graduates in EU 28 countries and the employment rate of the young higher education graduates in Turkey will be compared.

## 2. Overall View: Turkish Statistical Institute (TurkStat) Household Labor Force Surveys and EUROSTAT Data

In this section, the general labor market outcomes of the higher education graduates in Turkey will be examined. In the analyses conducted by using TurkStat Household Labor Force Survey, high school and higher education graduates who are not currently enrolled in education within the 22-27 age are identified as target analysis group. Graph 1a shows the rate of graduation from higher education for *the whole population* in the 22-27 age range whereas Graph 1b shows this rate for *the high school and higher education graduate population* in the 22-27 age range. As can be seen from the graph, graduation from higher education for men and women shows a significant increase across the years. For the 22-27 age population, the rate of

[4] URAP is a non-profit organization that regards forming university rankings for Turkey and the world as a social service. First Tier universities are those with points in the range of 600-850 and Second Tier Universities are those with points in the range of 250-599 according to URAP.

graduation from higher education of men increased from 25.5 percent in 2004 to 54.4 percent in 2018 in the at least high school graduate population (Graph 1b). The rate of graduation from higher education of women increased from 32.3 percent in 2004 to 66.7 percent in 2018 in the population of at least high school graduates (Graph 1b).

In EU 28 countries, the employment rate of the graduates increases parallel to the increase in the rate of higher education graduates. In 2018, 85 percent of those who have graduated from higher education within the last 1-3 years and are no longer in education between the ages of 20-34 in EU countries are employed. Graph 2, compiled from Eurostat 2018, shows the employment rate of the ones who have graduated from higher education within the last 1-3 years and are no longer in education within the age range of 20-34 for EU 28 countries and Turkey. As can be seen in the graph, employment rate in Turkey, at 65 percent is rather low compared to EU countries. The employment rate of our target group which is the higher education graduates who are in the 22-27 age range and not in education has even occurred at a lower rate, at 59.7 percent. This employment rate is found by dividing the number of employees in the group of the higher education graduates who are in the 22-27 age range and not in education by the population of this group.

In Graph 3, the employment status of young men and women with high school and higher education degree who are in the 22-27 age range are analysed separately across the years by using TurkStat Household Labor Force Surveys. In this analysis, those who are still in education are excluded from the analysis. The first remarkable observation in these graphs is that for men, the employment rates of the higher education graduates are below the employment rates of high school graduates whereas the opposite is true for women. A second noteworthy observation is that in the 2004-2018 period, the difference between the employment rate of male high school graduates and the employment rate of male higher education graduates increased unfavourably against the male higher education graduates. In 2013, the employment rate of men graduated from higher education was 71.7 percent whereas in 2018, this rate declined to 67.7 percent and hence decreased by 4 points. Furthermore, it is striking that the 2018 employment rate of higher education graduates is the same as that of the 2009 global economic crisis. The employment rate of young men with a high school degree decreased from 83.1 percent in 2013 to 80.1 percent in 2018 by falling 3 points.

The employment rate of female higher education graduates decreased from 56.4 percent in 2013 to 53.9 percent in 2018. In the same period, the employment rate of female high school graduates increased from 35.6 percent in 2013 to 36.9 percent in 2018. In the period of 2004-

2018, the difference between the employment rates of higher education and high school graduates that favoured the female higher education graduates has decreased.

Graph 4 shows the number of employed people instead of the employment rates for the same age group, again separately for men and women. As the rates of higher education graduates increase, the number of employed higher education graduates also increases inherently. For men, the number of employed higher education graduates has caught up with the number of high school graduates whereas for women, it has surpassed.

Those in employment are composed of four categories as wage earners, self-employed individuals, employers, and unpaid family workers. Self-employed individuals are the ones who own their own businesses and do not employ anyone. Employers, on the other hand, employ at least one person in their businesses. For instance, a small business owner who does not employ anyone is considered as a self-employed individual whereas if s/he employs at least one employee then, s/he is considered as an employer. The workers who work at family businesses like farming without a wage are defined as unpaid family workers. Since First Chance Programme is a paid employment project for young people, it will be accurate to analyse the change in the share of paid workers in total employment across years. In Graph 5, the rates of paid employment of young high school and higher education graduates in the total employment who are in the 22-27 age range are analysed across years. It is noteworthy that, starting from 2013 the rates of paid employment for male higher education graduates are in a declining trend. In 2013, 91.4 percent of the male high school graduates in the 22-27 age range were paid workers whereas in 2018, this rate fell to 87.6 percent, showing a 4-point decrease. At the same period, the employment rate of the paid workers for the young male high school graduates remained the same. The women's rate of higher education graduates in employment within the 22-27 age range decreased from 95.1 percent in 2013, to 93.8 in 2018. This rate was 85.8 for female high school graduates in 2013 and it decreased to 83.8 in 2018. Thus, for women there is no difference in the trend regarding the employment rate of paid workers between high school and higher education graduates.

It is noteworthy that the rates of paid employment of higher education graduates in total employment is decreasing. Graph 6 shows how other employment categories like self-employment, unpaid family worker and employer categories change over the years. The highest increase from 2013 to 2018 for men and women occurred in the category of unpaid family worker. While the second highest increase is realised in the category of self-employment, the category of employer remained the same. It is concerning that the significant amount of the workers employed in the category of unpaid family workers and self-employed individuals who

work without social security is increasing. In 2018, 83 percent of the male higher education graduates aged between 22-27 working as unpaid family workers worked without social security (unreported employment) whereas for women this rate is 86 percent. 28 percent of the young male higher education graduates who are self-employed do not have social security whereas this rate for female higher education graduates is 37 percent. While 7.6 percent of the young male higher education graduates who are wage earners have no social security, this rate for female higher education graduates is 5 percent. When these findings are considered along with the decrease in the rate of paid employment, one plausible explanation is that young people might be switching towards these categories of lower quality jobs due to the difficulties they face in search of paid employment.

In Turkey, the unemployment rate of male higher education graduates is 22 percent which is 10 points higher than the unemployment rate of male high school graduates. In recent years, there has been an increase in the unemployment rate of higher education graduates. As shown in Graph 7, the unemployment rate of male higher education graduates between the age of 22-27 increased from 17 percent in 2013 to 22 percent in 2018. In response to the 5-point increase in the unemployment rate of the male higher education graduates, the unemployment rate of the male high school graduates increased to 12.4 percent by 1.4 points during the same period. The unemployment rate of female higher education graduates in the age range of 22-27 increased from 25.9 percent in 2013 to 29 in 2018. During the same period, the unemployment rate of female high school graduates increased from 20 percent to 21 with only 1-point increase. Graph 8 shows the unemployment numbers for the same age group. While the number of unemployed high school graduates is decreasing, the number of unemployed higher education graduates is increasing rapidly for both men and women.

One of the significant reasons for the increase in the rate of higher education graduates in Turkey is due the 60 percent increase in the quotas of universities along with the 40 newly opened public universities between the years 2005-2009. When the distribution of the increase in quotas is analysed according to fields of study, it is observed that the highest increase has occurred in the social science field and second highest increase has occurred in the engineering field (OSYM Statistics[5]).

Graph 9a and 9b indicate the number of employed according to the graduated department for men and women across years. While social sciences and engineering employment numbers

[5] OSYM is an abbreviation for Measurement, Selection and Placement Centre which is a government organization in Turkey that operates various national level university specific examinations including university entrance exams.

are the first and second for men, for women social sciences and education are in the first and the second place.

Graph 10 panel shows the employment rates for each field across years. For women, the employment rate in the fields of education, healthcare and law is higher than the employment rate of the average higher education graduate in general whereas the employment rate in the field of social science is below the general average. It is remarkable that within the last five years there has been a decrease in the employment rate in the fields of social sciences and healthcare for women and engineering and healthcare for men.

Graph 11a and 11b show the unemployment numbers according to the graduated field for men and women across years. For men, the increase in the number of unemployed for the graduates of social sciences and engineering is significant. On the other hand, for women there is an increase in the number of unemployed for the graduates of social sciences.

Graph 12 panel shows the unemployment rate for each major across years. An increase in the unemployment rates of social sciences graduates is remarkable. While for men, unemployment rate increased from 20 percent in 2013 to 23 percent in 2018, for women this percentage increased from 30 to 35 for the same period. There is also an increase in the unemployment rates of men and women in the healthcare field. The rise in the unemployment rate of men in the field of engineering is striking since it increased from 14 percent in 2013 to 23 percent in 2018.

In summary, in Turkey, unemployment rate of recent college graduates increased significantly across years. The fact that this increase occurred as a result of expansion in certain majors offered by universities along with a continuous trend of expansion in higher education suggest the unemployment rate of college graduates will continue to increase in the near future.

## 3. Comparison of First and Second Tier University Graduates

### 3.1.IPSOS Survey

In this section, the time spent on job search by graduates of the Second Tier Universities (ESAS Social First Chance Programme's target group) will be compared to the graduates of First Tier Universities using IPSOS survey data (household survey, representative sample of 2000+, commissioned by Esas Sosyal in 2015). The data suggests that the probability of unemployed male graduates of Second Tier universities to be unemployed for over one year is 51 percent whereas this probability is 38 percent for the unemployed male graduates of First Tier Universities. The same rate for female unemployed graduates of Second Tier universities

is 53 percent and whereas it is 49 percent for graduates of First Tier Universities. Graph 13 shows these rates. In Table 1, a regression analysis is conducted for whole sample. In this regression, dependent variable is defined as 1 if one searches for job over a year and 0 otherwise. Second Tier variable which is defined as the independent variable is 1 if one graduated from Second Tier university and 0 otherwise. In all analyses, age fixed effect, the indicator of marital status (married or single), and major fixed effects are controlled. First column does not control the URAP ranking of the alma mater whereas in the second column, this ranking is controlled. In both regressions that are estimated with the ordinary least squares method, the coefficient of the Second Tier variable is found positive and statistically significant. In the second regression in which URAP ranking is controlled, the coefficient that is estimated as 0.18 indicates that the probability of Second Tier university graduates searching for a job over a year is 18 percentage points higher than that of First Tier University graduates.

### 3.2.KONDA Survey

This section examines the demographic differences between the graduates of Second Tier universities (ST) and First Tier (FT) universities. Furthermore, differences in the labor market outcomes of the two groups in the medium and long run will be analysed. For these purposes, KONDA Structure of the Education System and Expectations Survey that is conducted on 5-6 November 2017 will be used. The sample of KONDA Structure of the Education System was prepared by stratification of the data on population and educational level of neighbourhoods and villages from the Address-Based Population Registration System, along with the neighbourhood and village results of the general elections dated November 1, 2015. Residential areas are separated as rural/urban/metropolis at first and the sample is chosen based on 12 regions. Within the scope of research, 2642 people were interviewed in their households face-to-face in 164 neighbourhoods and villages of 110 districts including the centre of 27 provinces.

In Table 2 and 3, labor market conditions of ST university graduates and FT university graduates are analysed. In Table 4, differences in family and environmental characteristics of ST university graduates and FT university graduates are examined. In this data set, in order to increase the sample size, the age range of the young university graduates is specified as 22-30. To analyse the differences between the graduates of ST universities and FT universities in the medium and long run, 30-50 age group is also examined (Table 5, 6, 7). Since the samples of the KONDA data set is small, the difference between the averages of these two groups are statistically tested by t-test.

In the younger group, the biggest difference that is the most prominent between ST universities and FT is that ST university graduates have higher probability of being a small shop owner than FT university graduates (Table 2). In the younger group, when the differences between these groups' family and environmental features are considered, it is seen that the parents of FT university graduates have higher educational attainment compared to the graduates of ST universities (Table 4). Moreover, ST university graduates were mostly raised in villages and towns whereas the graduates of FT universities grew in cities.

When we consider the 30-50 age group, it is seen that the probability of female graduates of FT universities to be a civil servant is higher than the probability of female graduates of ST universities (Table 5). It is also noteworthy that the male graduates of FT universities have higher household income than the male graduates of ST universities. The male graduates of FT universities earn 4686 TL as household income per month whereas the male graduates of ST universities earn 3571 TL (Table 6). The difference between average income is statistically significant and economically large. The household income of male graduates of FT universities are 31 percent higher than the household income of ST university graduates. Considering that we examine the 30-50 age group, it is found that there are significant income differences according to the university graduated in the medium and long run. When we consider the family and environmental features of the 30-50 age group, we see that, again for this group, fathers of the FT university graduates are more educated than the fathers' of ST university graduates.

## 4. Turkey- EU Youth Employment Comparison

In parallel with the increase in the graduation rate of higher education in EU 28 countries, the employment rates of the graduates are also increasing. Among the 20-34 age group in EU countries, 85 percent of those who have graduated from higher education in the last 1-3 years and not in education are in employment. In Graph 2, we showed the employment rates of this group for EU 28 and candidate countries. Turkey resembles to Italy and Greece with 65 percent employment rate. In these three countries, the condition of young people living with their parents is quite common.

The employment rates of the individuals who have graduated from higher education within the last 1-3 years among the 20-34 age group in EU 28 countries for 2008-2018 years are shown in Graph 4 using data from Eurostat. In EU 28, on average, the employment rates of higher education graduates are higher than the high school graduates for all years and in the last four years, this rate has shown a regular increase and reached to 85 percent. Graph 15 demonstrates a similar analysis for Turkey. The age range in this graph is shown as 22-27 and covers the

2004-2008 period so that it is compatible with the analyses shown previously for Turkey. It is observed that while the employment rate of higher education graduates is above the high school graduates, the gap between these two rates has closed over the years and reversed after 2013. Contrary to the EU graph, the employment rate of higher education graduates is declining in the recent years. These analyses represent that the decrease in the employment rates of higher education compared to the high school graduates is a Turkey-specific trend.

Between the years 2005-2008, 40 public universities opened and higher education quotas increased by 60 percent (Graph 16). On the contrary in the European countries, the expansion in the supply of higher education has started after World War II. In 1980 and 1990s, a second expansion period occurred in some countries such as England and Italy. Therefore, more recent and rapid increase in higher education supply along with the insufficient increase in the quality of the graduates and demand for graduates resulted in a declining employment trend in Turkey in sharp contrast to European countries.

## 5. Conclusion

In this study, labor market conditions of university graduates in Turkey are analysed in comparison with EU 28 countries. In order to comprehend the difficulties faced by young people who graduated from different universities, the differences between Second Tier university graduates and First Tier university graduates are analysed not only in terms of time spent on job search and career choice for the short run but also household income for the long run.

The study we conducted using the TurkStat Household Labor Force Survey indicates that employment rates of young higher education graduates are decreasing and unemployment rates are increasing. The fact that these indicators are more negative compared to the employment and unemployment rates of the high school graduates provides support for identifying young university graduates as the target group for active labor market policies. The decrease in the employment rate of higher education graduates in the recent years of Turkey is in sharp contrast with the trends in the young population of EU 28 countries.

IPSOS and KONDA Survey data show that Second Tier university graduates are more disadvantageous compared to the First Tier university graduates in terms of time spent on job search, finding jobs in public institutions, and household income. Regarding KONDA Survey Data, the probability of male Second Tier university graduates to be a small shop owner is higher than the graduates of First Tier universities. This result is also significant since it is in parallel to the results from TurkStat Household Labor Force Surveys that showed that there has

been a decrease in wage earners; an increase in unpaid family workers and self-employed workers in the employment of young men with higher education degree. It is also noteworthy that male graduates of Second Tier universities have significantly lower income in the medium and long run compared to the household income of First university graduates.

These results indicate that young people who graduated from Second Tier universities have disadvantage in the labor market and hence these universities are determined in accordance with the program objectives of the First Chance Programme.

There also exist significant differences in the labor market outcomes according to the field of university graduates. In the fields of social science and healthcare, both the unemployment rate of men and women represent an increase within the last five years. The increase in the unemployment rate of men in the engineering field is remarkable. This rate increased from 14 percent in 2013 to 23 percent in 2018. The highest increase in the 2005-2009 expansion in higher education has occurred in the fields of social science and engineering. The highest number of unemployed university graduates for both men and women is among social science graduates. For men, the second highest number is in the graduates of engineering faculty.

## References

EUROSTAT Education and Training Statistics at Regional Level data extracted in March April 2019.

EUROSTAT EU Employment Rate for Tertiary Graduates, 04/07/2019.

Turkish Statistical Institute Household Survey 2004-2018

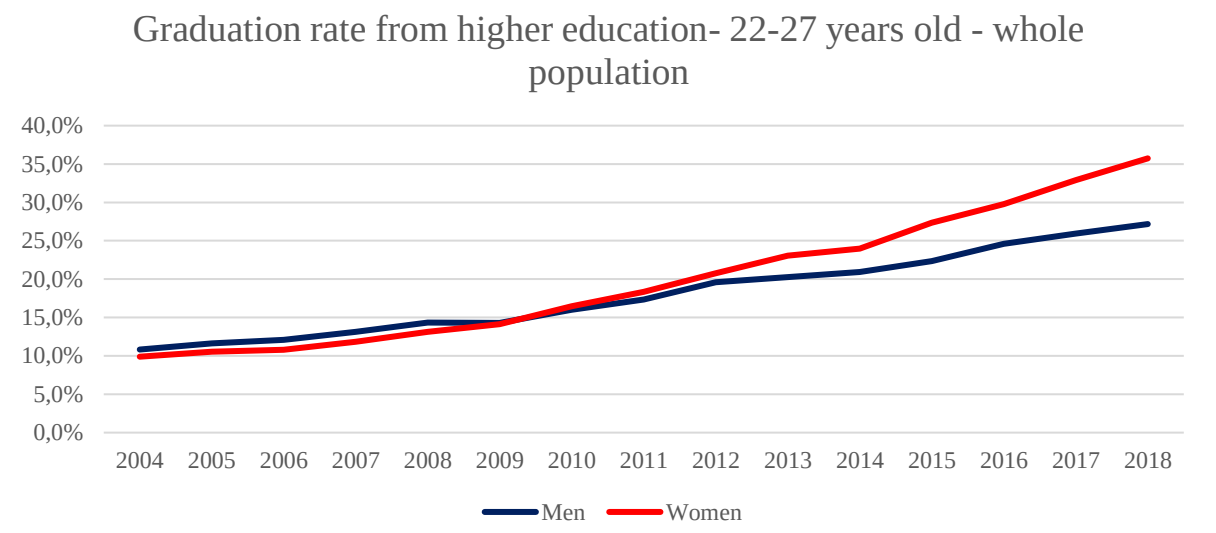
KONDA Structure of the Education System and Expectations

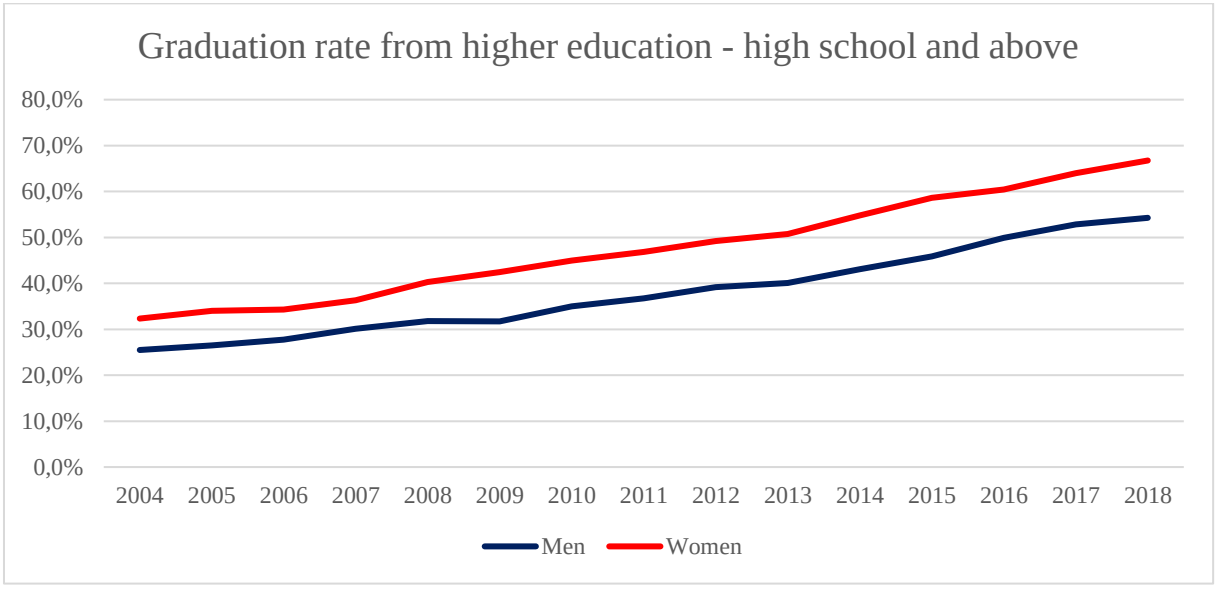
IPSOS Survey

**We thank research assistants Kurnia Açıköz, Merve Demirel and Selin Güngör, İpek Kürekçi for their help.

## Graphs and Tables

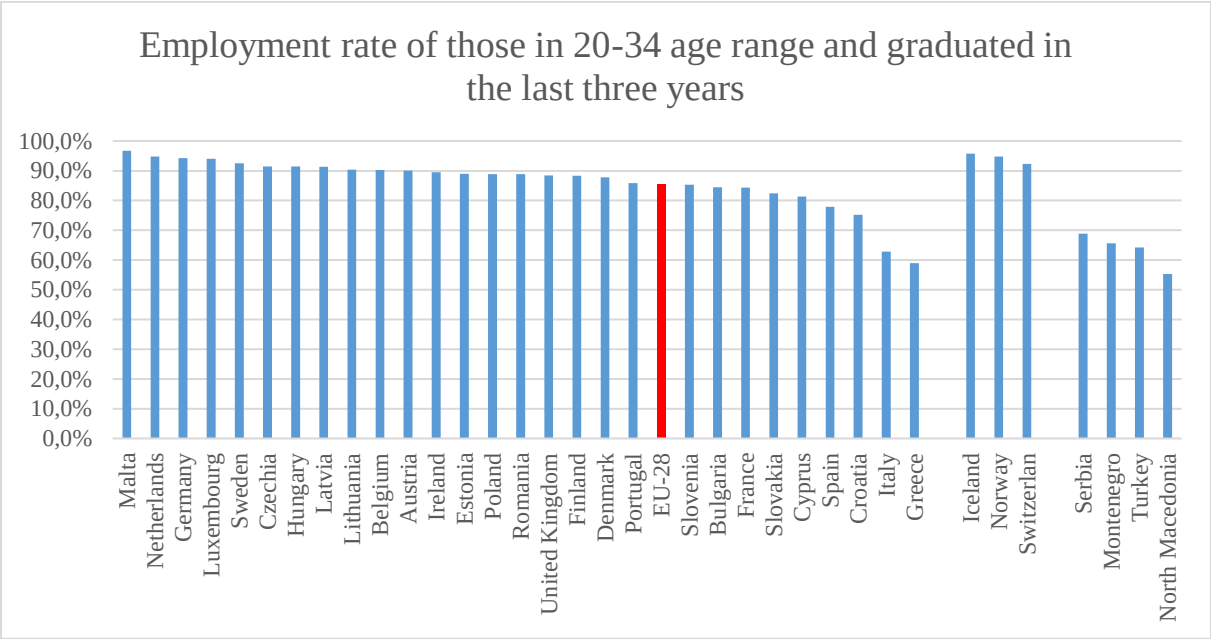
### Graph 1a



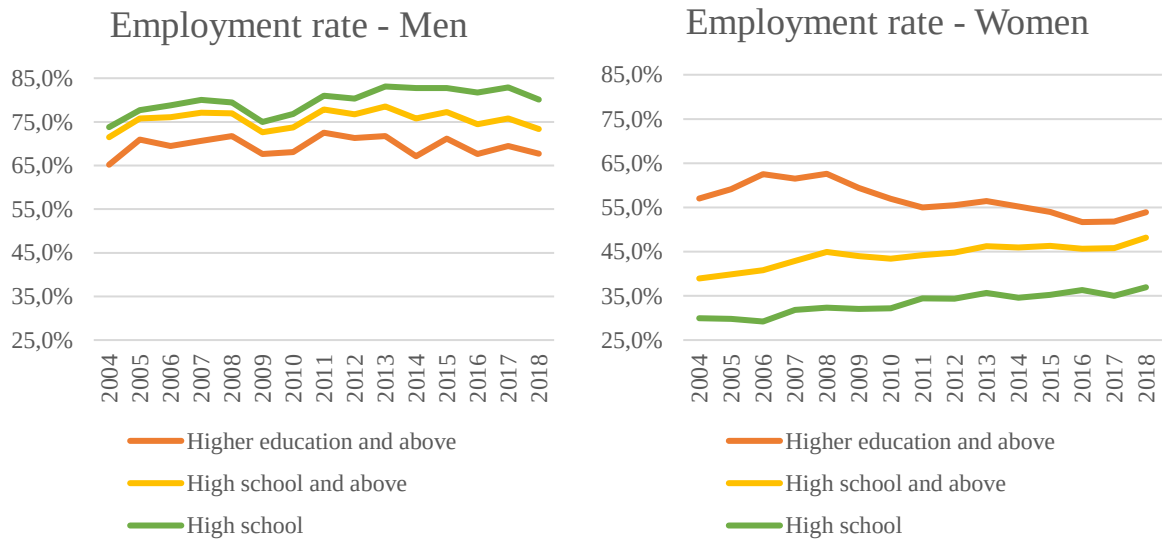

Note: The graph is prepared by using TurkStat 2004-2018 Household Labor Force Surveys raw data. The graduation rate from higher education in the age range 22-27 with at least high school degree.

**Graph 2**

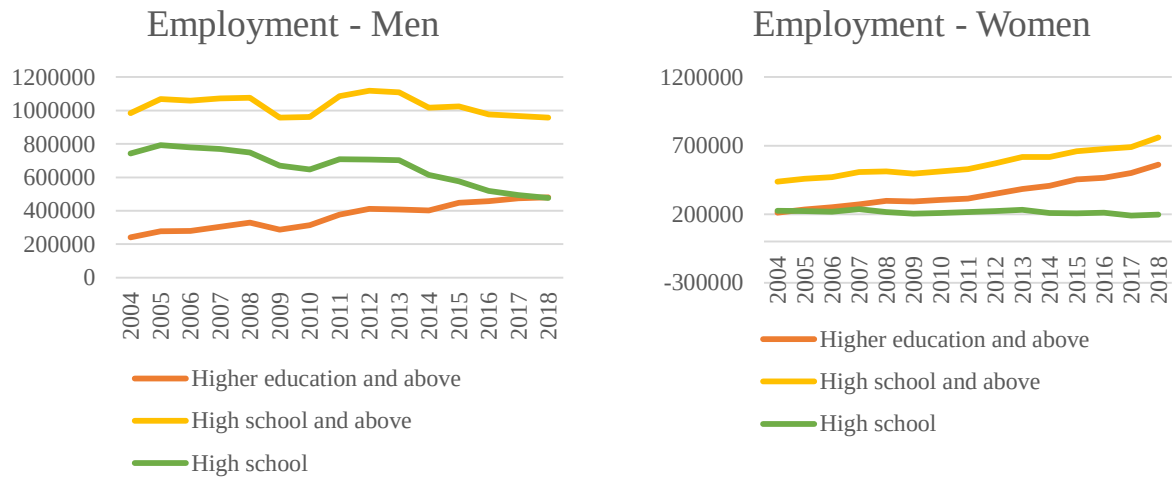



EUROSTAT, 2018

**Graph 3**

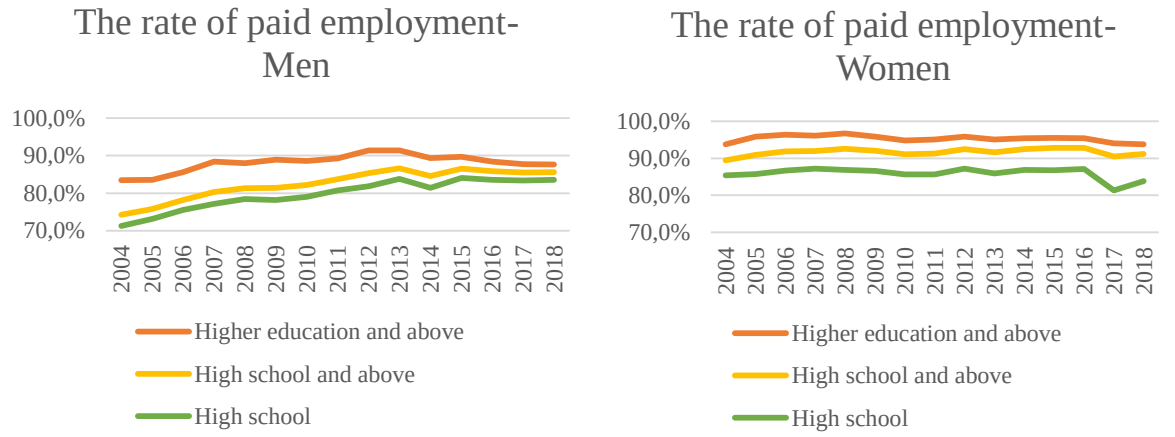


**Graph 4**



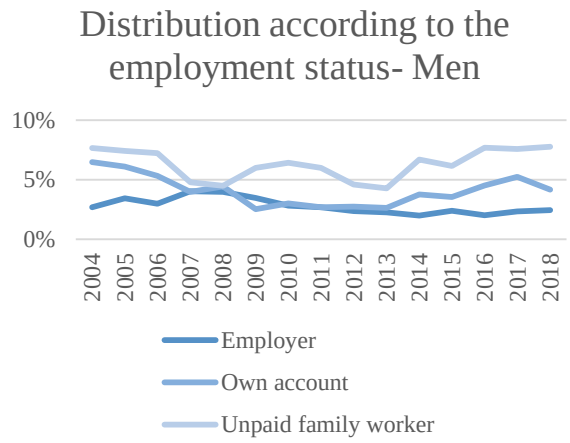

Note: The graph is prepared by using TurkStat 2004-2018 Household Labor Force Surveys raw data. The employment rates of the population between 22-27 and not in education. The employment rate for a group is found by dividing the number of employees in the group by the population of the group.

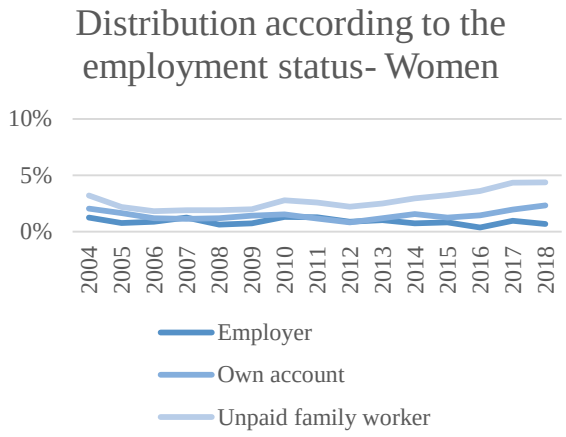
**Graph 5**



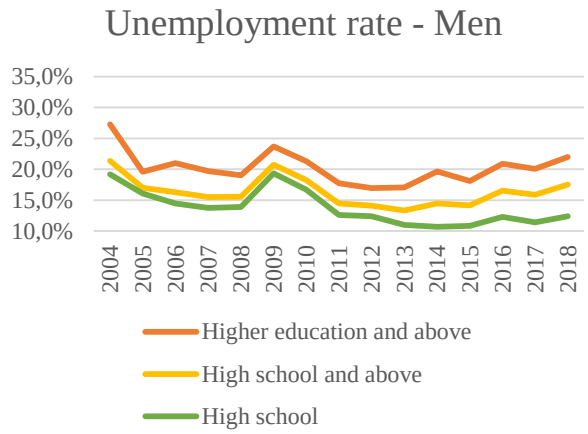

Note: The graph is prepared by using TurkStat 2004-2018 Household Labor Force Surveys raw data. 22-27 age range, not in education, the rate of paid employment in the employed population. It is found by dividing the number of paid employees to the total number of employees.

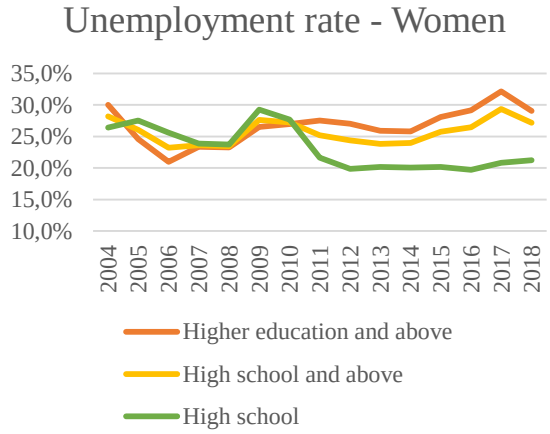
**Graph 6**



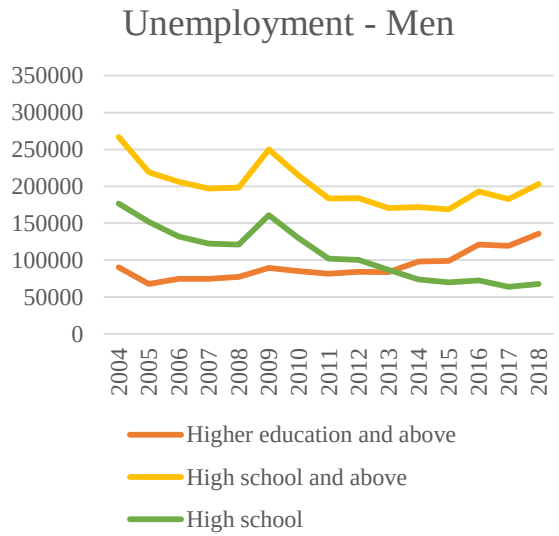



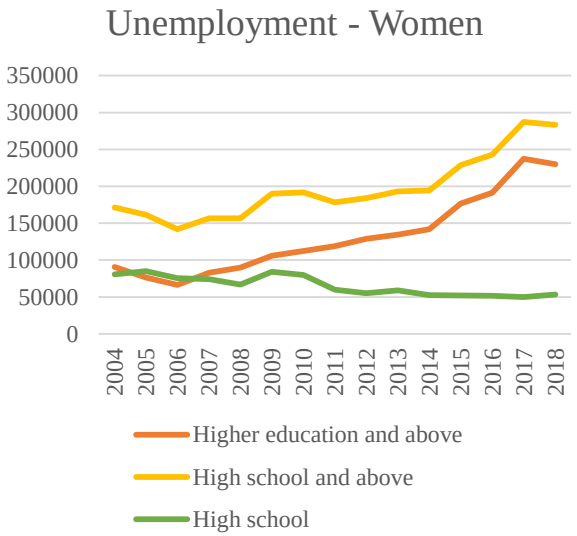

**Graph 7**



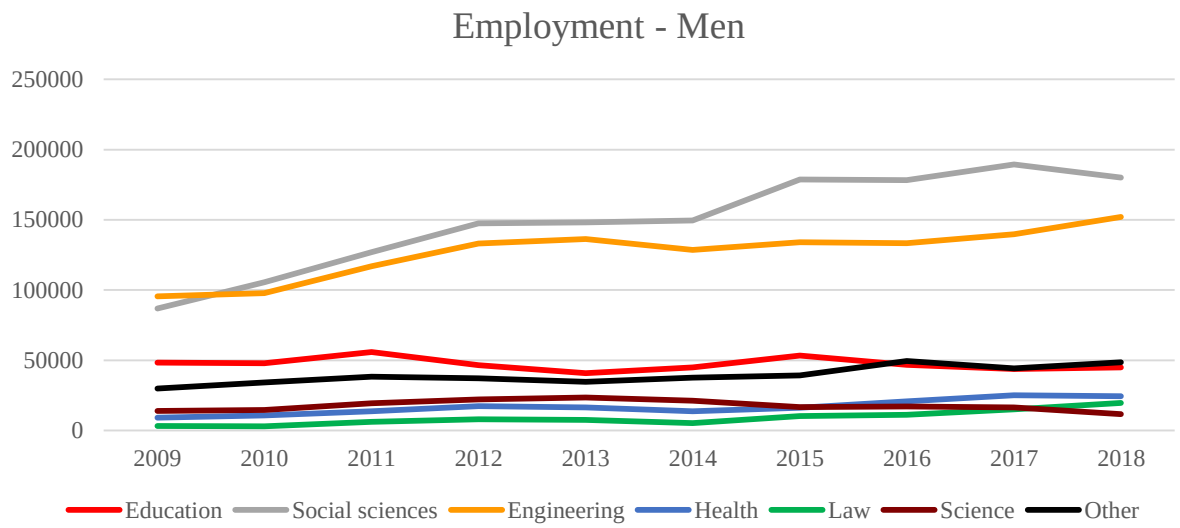

**Graph 8**



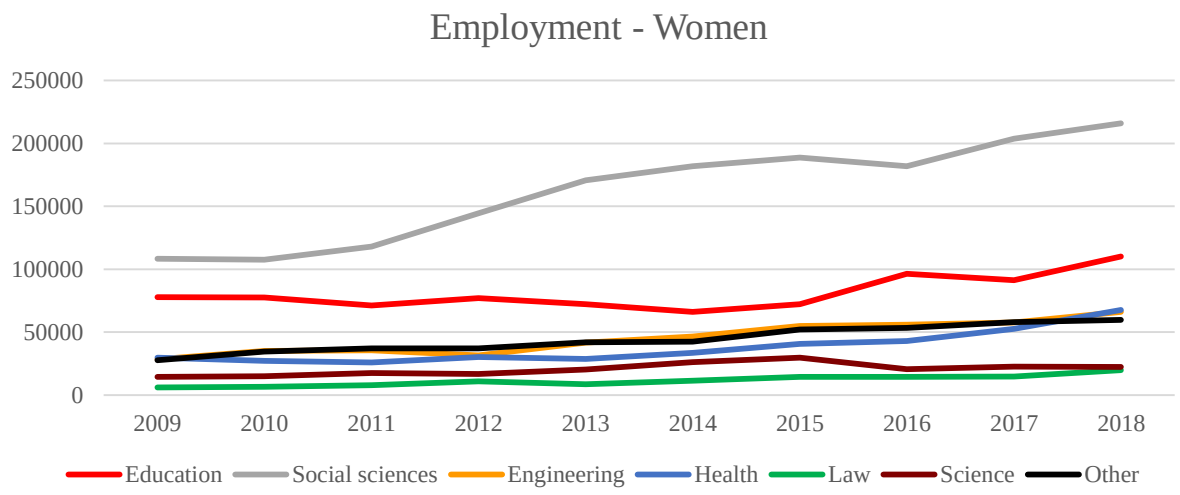



Note: The graph is prepared by using TurkStat 2004-2018 Household Labor Force Surveys raw data. 22-27 age range, the employment rates of group not in education. The unemployment rate of a group is found by dividing the number of unemployed in the group by the number of employees plus unemployed (labor force) in that group.

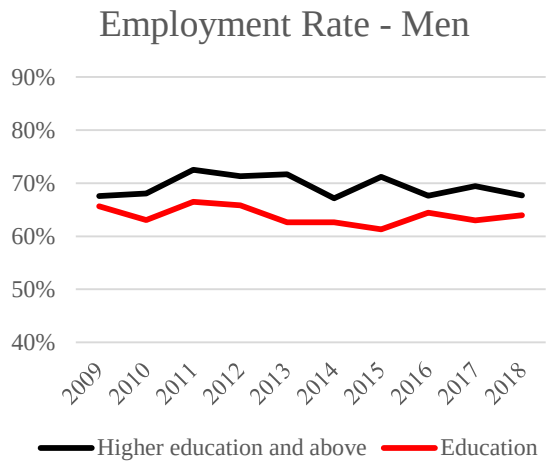
**Graph 9a**

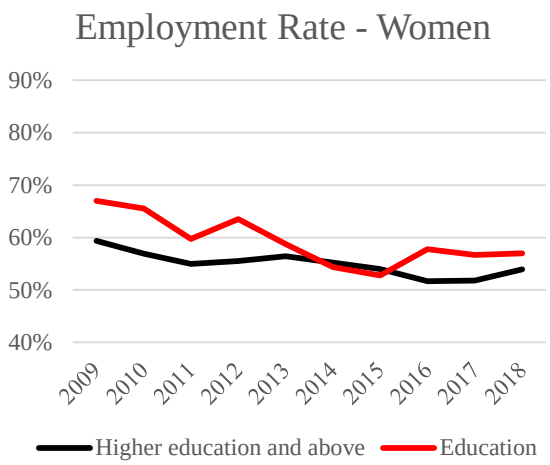



**Graph 9b**



**Graph 10a**


Employment Rate - Men
90%
80%
70%
60%
50%
40%
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Higher education and above
Education


Employment Rate - Women
90%
80%
70%
60%
50%
40%
2009
2010
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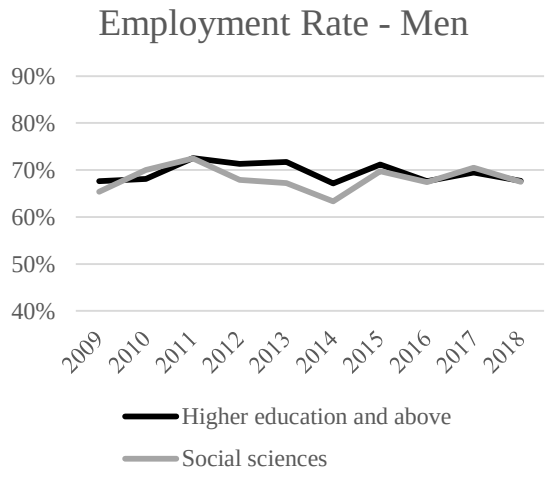
2016
2017
2018
Higher education and above
Education


Employment Rate - Men
90%
80%
70%
60%
50%
40%
2009
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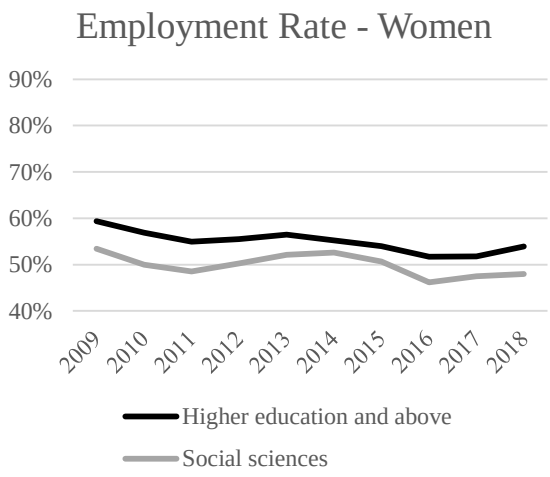
2017
2018
Higher education and above
Social sciences


Employment Rate - Women
90%
80%
70%
60%
50%
40%
2009
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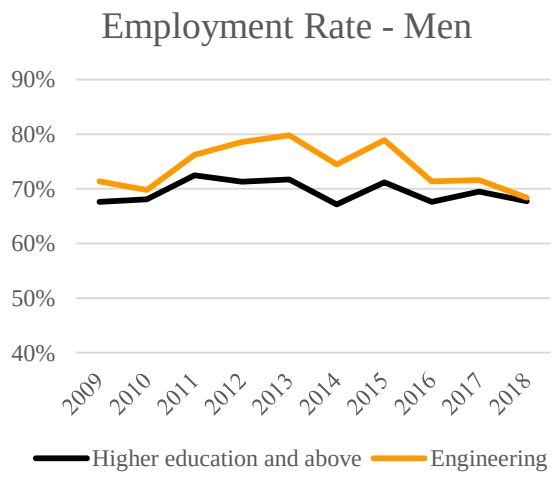
2016
2017
2018
Higher education and above
Social sciences


Employment Rate - Men
90%
80%
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2009
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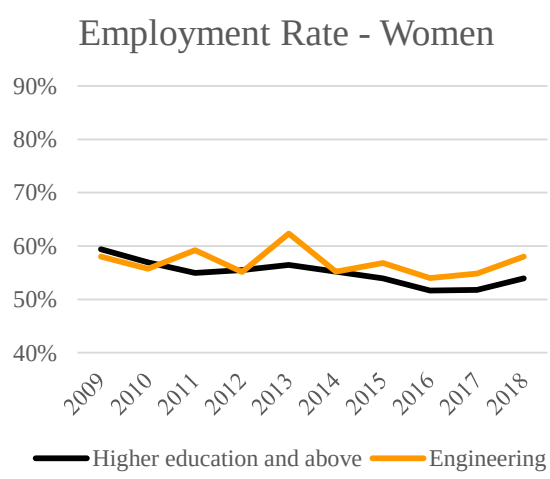
2017
2018
Higher education and above
Engineering


Employment Rate - Women
90%
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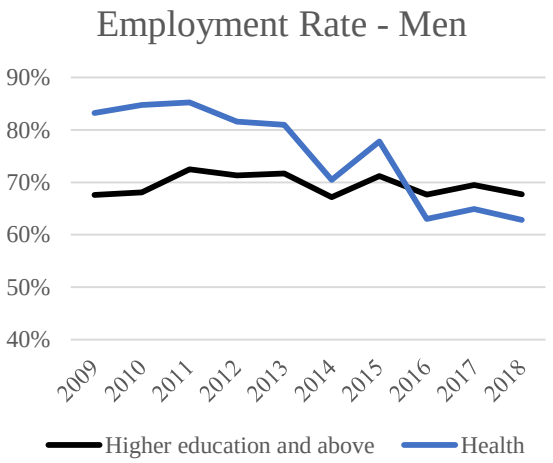
2018
Higher education and above
Engineering


Employment Rate - Men
90%
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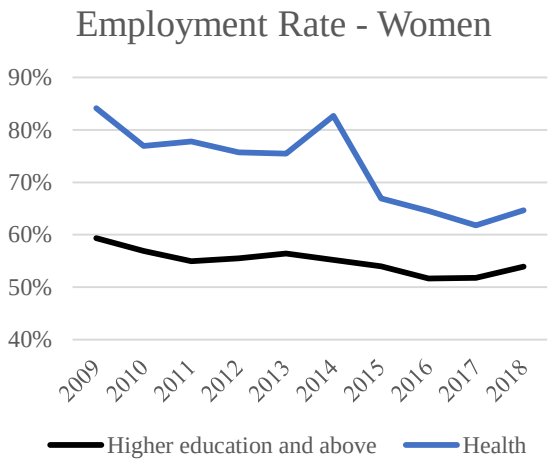
Higher education and above
Health


Employment Rate - Women
90%
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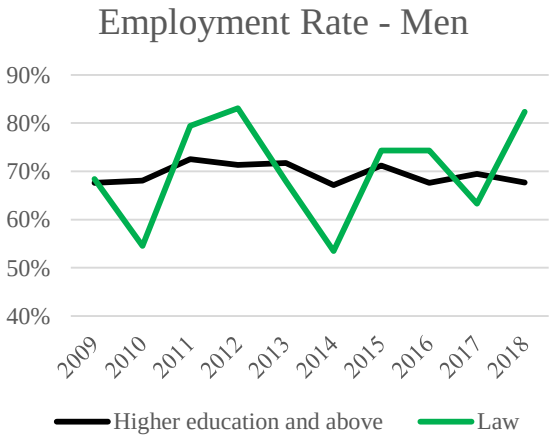
2018
Higher education and above
Health


Employment Rate - Men
90%
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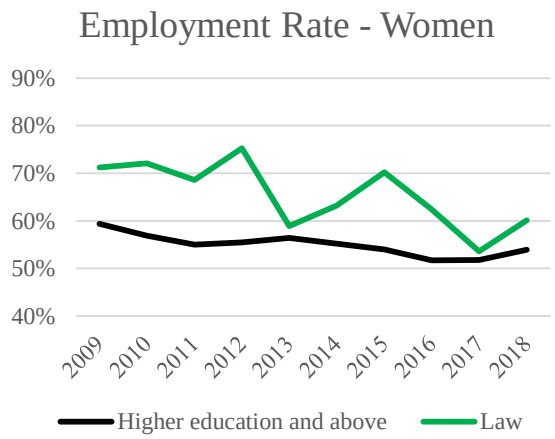
2018
Higher education and above
Law


Employment Rate - Women
90%
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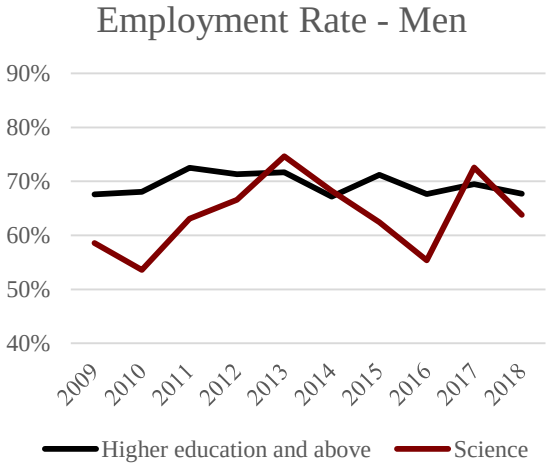
2018
Higher education and above
Law


Employment Rate - Men
90%
80%
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60%
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40%
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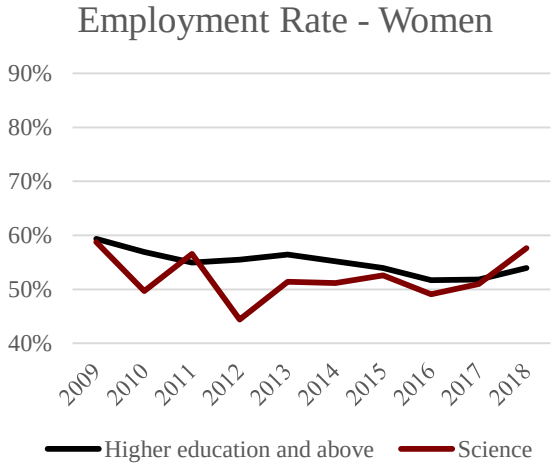
2017
2018
Higher education and above
Science


Employment Rate - Women
90%
80%
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50%
40%
2009
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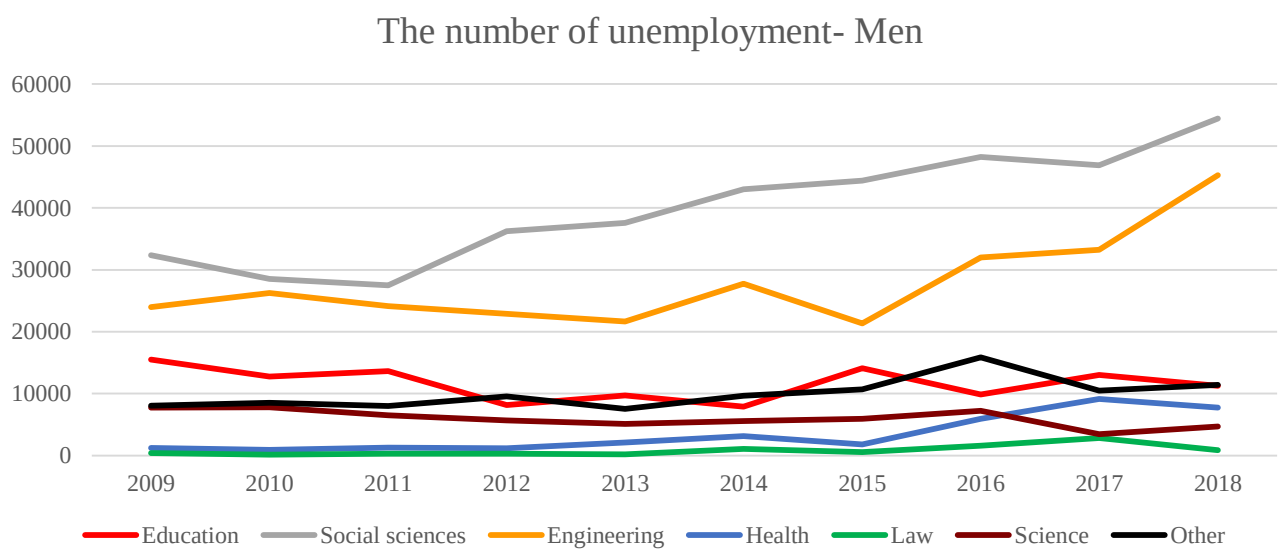
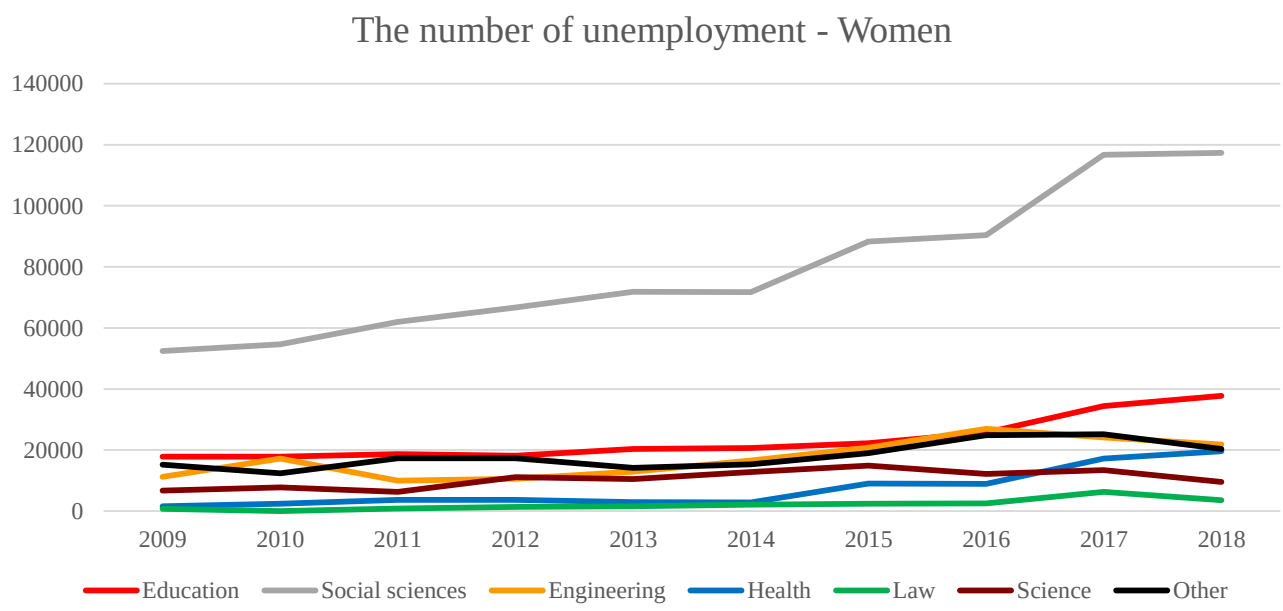
2017
2018
Higher education and above
Science

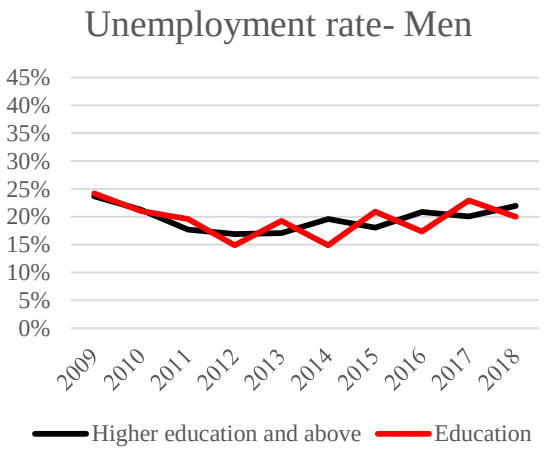
**Graph 11a**




**Graph 11b**



**Graph 12**


Unemployment rate- Men
45%
40%
35%
30%
25%
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15%
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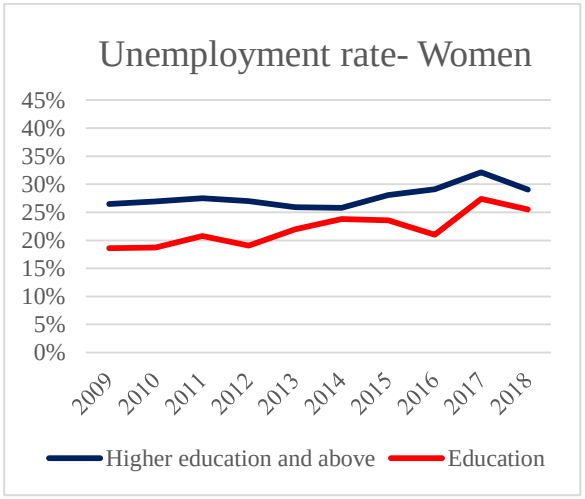
2018
Higher education and above
Education


Unemployment rate- Women
45%
40%
35%
30%
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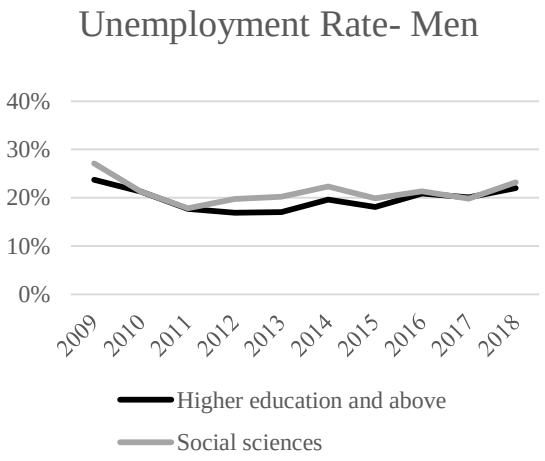
2018
Higher education and above
Education


Unemployment Rate- Men
40%
30%
20%
10%
0%
2009
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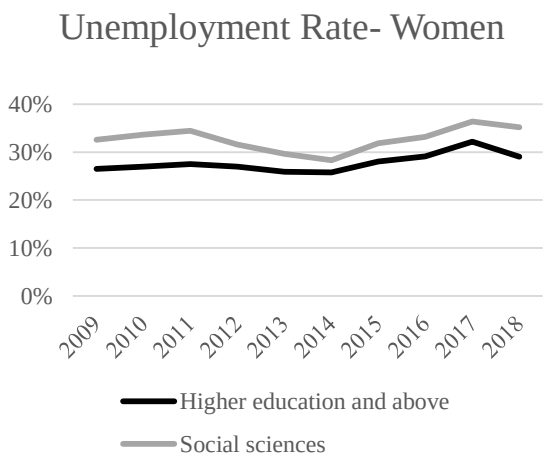
2018
Higher education and above
Social sciences


Unemployment Rate- Women
40%
30%
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10%
0%
2009
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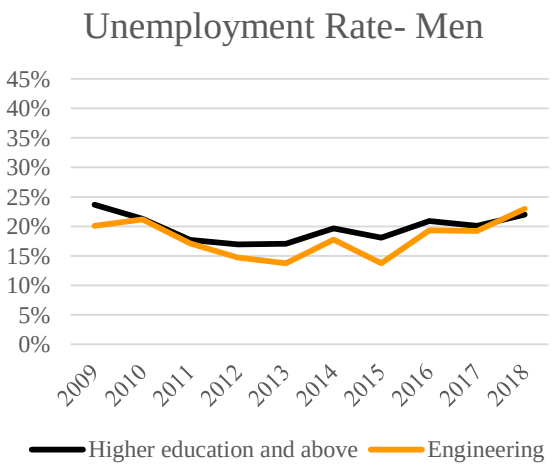
2018
Higher education and above
Social sciences


Unemployment Rate- Men
45%
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35%
30%
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2009
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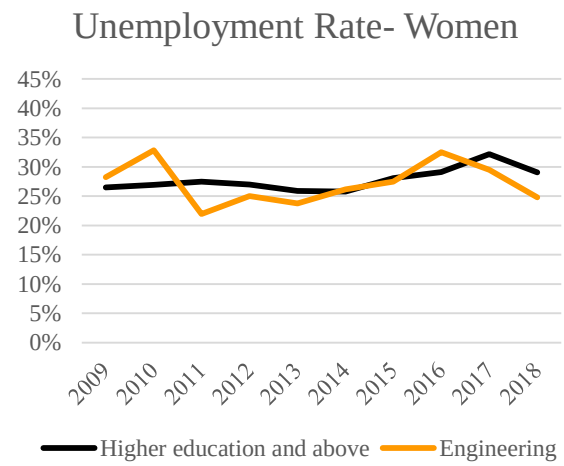
2018
Higher education and above
Engineering


Unemployment Rate- Women
45%
40%
35%
30%
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2009
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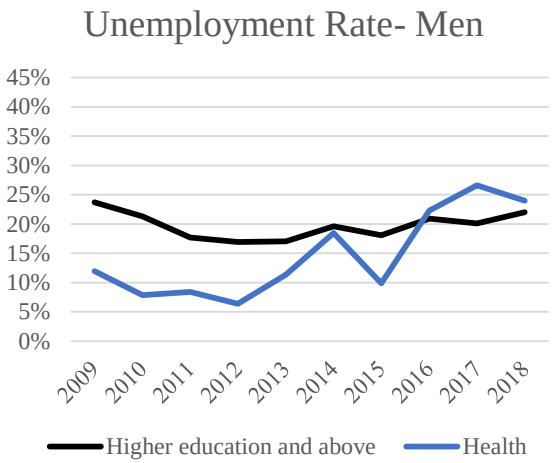
2018
Higher education and above
Engineering


Unemployment Rate- Men
45%
40%
35%
30%
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20%
15%
10%
5%
0%
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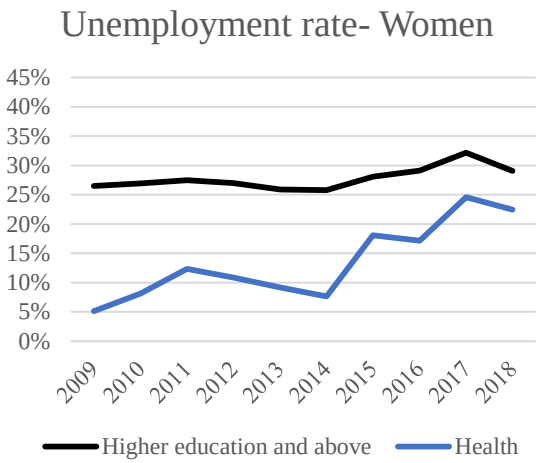
2017
2018
Higher education and above
Health


Unemployment rate- Women
45%
40%
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5%
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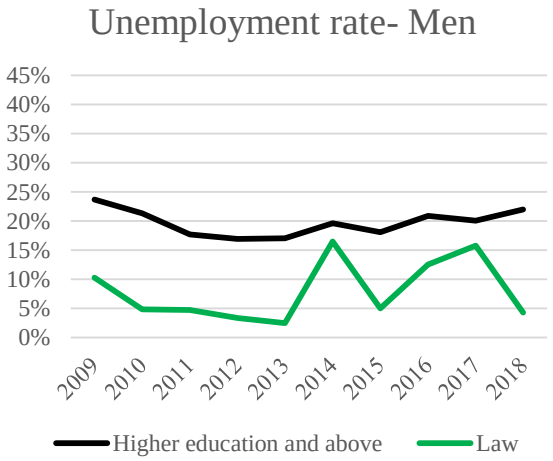
2018
Higher education and above
Health


Unemployment rate- Men
45%
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35%
30%
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2009
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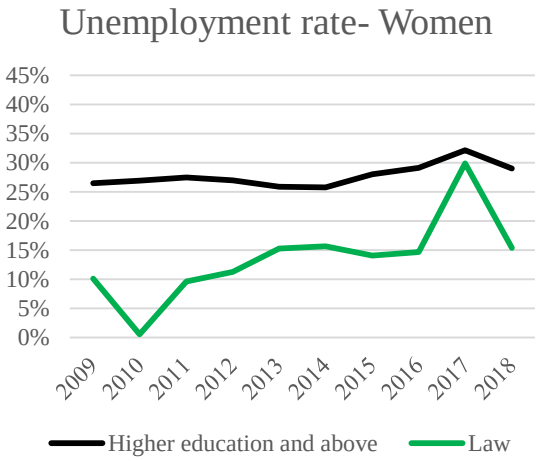
Higher education and above
Law


Unemployment rate- Women
45%
40%
35%
30%
25%
20%
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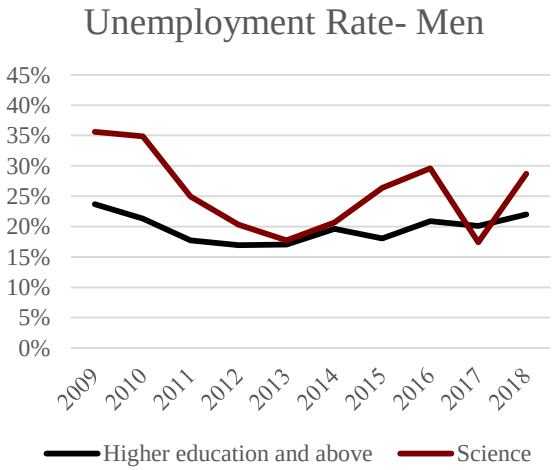
Higher education and above
Law


Unemployment Rate- Men
45%
40%
35%
30%
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2009
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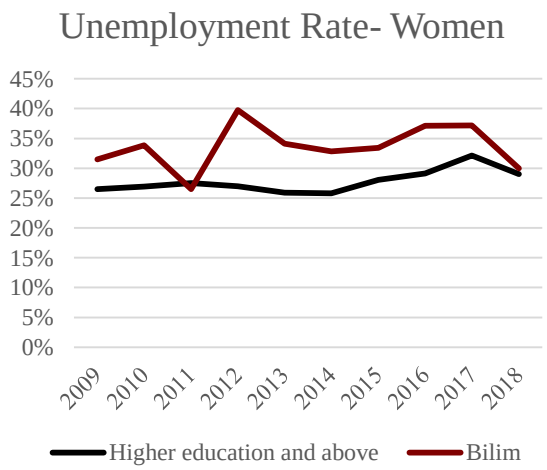
2018
Higher education and above
Science


Unemployment Rate- Women
45%
40%
35%
30%
25%
20%
15%
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0%
2009
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2018
Higher education and above
Bilim

**Graph 13 IPSOS Survey Data**

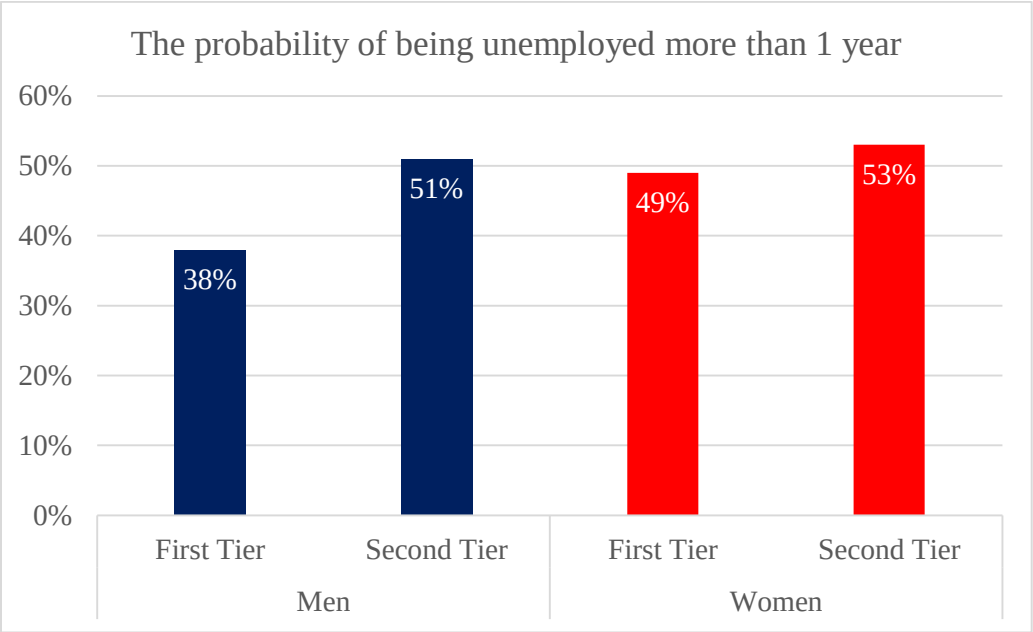


**Table 1. Being unemployed for over a year**

| | (1) | (2) |
|---|---|---|
| Variables | Unemployed for over a year | Unemployed for over a year |
| Second Tier | 0.116** | 0.180** |
| | (0.057) | (0.079) |
| Men | -0.042 | -0.040 |
| | (0.057) | (0.057) |
| Constant | 1.270*** | 1.287*** |
| | (0.455) | (0.455) |
| Number of observations | 322 | 322 |

Note: The dependent variable işsiz_süre, is equal to 1 if the individual is unemployed for over a year and 0 otherwise. In all analyses age fixed effect, the indicator of marital status (married or single), and department fixed effects are controlled. First column does not control the URAP ranking of the alma mater whereas in second column, this ranking is controlled.

**Table 2. Konda Survey Employment Data**

| Variables | 22-30 Age Range-Men | | | | |
|---|---|---|---|---|---|
| | First Tier | Second Tier | Number of Observations | Difference | p-value |
| In Employment | 0.813 | 0.791 | 59 | 0.022 | 0.855 |
| | (0.101) | (0.063) | | (0.119) | |
| In Labor Force | 0.938 | 0.977 | 59 | -0.039 | 0.558 |
| | (0.063) | (0.023) | | (0.067) | |
| Household Income | 4,087 | 3,488 | 57 | 598.571 | 0.368 |
| | (575.4) | (322.6) | | (659.686) | |
| Civil Servant | 0.385 | 0.324 | 47 | 0.061 | 0.708 |
| | (0.140) | (0.081) | | (0.162) | |
| Private Sector | 0.231 | 0.265 | 47 | -0.034 | 0.815 |
| | (0.122) | (0.077) | | (0.144) | |
| Worker | 0.231 | 0.088 | 47 | 0.143 | 0.283 |
| | (0.122) | (0.049) | | (0.131) | |
| Small shop owner | 0 | 0.147 | 47 | -0.147 | 0.021 |
| | (0) | (0.062) | | (0.062) | |
| Tradesperson/ Employer /Self-Employment | 0.154 | 0.176 | 47 | -0.023 | 0.855 |
| | (0.104) | (0.066) | | (0.123) | |

**Table 3. Konda Survey Employment Data**

| Variables | 22-30 Age Range- Women | | | | |
|---|---|---|---|---|---|
| | First Tier | Second Tier | Number of Observations | Difference | p-value |
| In Employment | 0.579 | 0.636 | 63 | -0.057 | 0.678 |
| | (0.116) | (0.0734) | | (0.138) | |
| In Labor Force | 0.737 | 0.818 | 63 | -0.081 | 0.498 |
| | (0.104) | (0.0588) | | (0.119) | |
| Household Income | 3,064 | 3,913 | 61 | -848.902 | 0.111 |
| | (337.5) | (401.9) | | (524.838) | |
| Civil Servant | 0.455 | 0.321 | 39 | 0.133 | 0.467 |
| | (0.157) | (0.0899) | | (0.181) | |
| Private Sector | 0.364 | 0.357 | 39 | 0.006 | 0.971 |
| | (0.152) | (0.0922) | | (0.178) | |
| Worker | 0.0909 | 0.0357 | 39 | 0.055 | 0.575 |
| | (0.091) | (0.0357) | | (0.098) | |
| Tradesperson/Employer/Self-employment | 0.0909 | 0.286 | 39 | -0.195 | 0.130 |
| | (0.091) | (0.0869) | | (0.126) | |

**Table 4. Konda Survey Family and Environmental Features**

| | 22-30 Age Range | | | | |
|---|---|---|---|---|---|
| Variables | First Tier | Second Tier | Number of Observations | Difference | p-value |
| Father years of study | 10.04 | 8.699 | 168 | 1.337*** | 0.046 |
| | (0.561) | (0.357) | | (0.665) | |
| Mother years of study | 7.673 | 6.566 | 168 | 1.106 | 0.104 |
| | (0.564) | (0.373) | | (0.676) | |
| **Type of childhood region** | | | | | |
| Village, town, or county | 0.214 | 0.412 | 170 | -0.198*** | 0.007 |
| | (0.055) | (0.046) | | (0.072) | |
| City or metropolis | 0.786 | 0.588 | 170 | 0.198*** | 0.007 |
| | (0.055) | (0.046) | | (0.072) | |
| Household Size | 3.333 | 3.602 | 157 | -0.269 | 0.255 |
| | (0.169) | (0.163) | | (0.235) | |
| Married or engaged | 0.259 | 0.263 | 172 | -0.005 | 0.949 |
| | (0.058) | (0.041) | | (0.071) | |
| Single | 0.741 | 0.667 | 172 | 0.075 | 0.308 |
| | (0.058) | (0.044) | | (0.073) | |
| **Native Language:** | | | | | |
| Turkish | 0.879 | 0.884 | 170 | -0.005 | 0.930 |
| | (0.043) | (0.030) | | (0.053) | |
| Kurdish | 0.0862 | 0.107 | 170 | -0.021 | 0.659 |
| | (0.037) | (0.029) | | (0.047) | |

| | | | | | |
|---|---|---|---|---|---|
| **House type:** | | | | | |
| Hut | 0.0536 | 0.00935 | 163 | 0.044 | 0.166 |
| | (0.030) | (0.009) | | (0.032) | |
| Traditional single-family house | 0.0714 | 0.215 | 163 | -0.144*** | 0.007 |
| | (0.035) | (0.040) | | (0.053) | |
| Apartment | 0.804 | 0.664 | 163 | 0.140*** | 0.049 |
| | (0.054) | (0.046) | | (0.071) | |
| Luxury building, villa | 0.0714 | 0.112 | 163 | -0.041 | 0.381 |
| | (0.035) | (0.031) | | (0.046) | |

**Table 5. Konda Survey Employment Data**

| Variables | 30-50 Age Range-Men | | | | |
|---|---|---|---|---|---|
| | First Tier | Second Tier | Number of Observations | Difference | p-value |
| In Employment | 0.963 | 0.944 | 63 | 0.019 | 0.731 |
| | (0.0370) | (0.039) | | (0.054) | |
| In Labor Force | 1 | 0.944 | 63 | 0.056 | 0.156 |
| | (0) | (0.039) | | (0.039) | |
| Household Income | 4686 | 3571 | 61 | 1114** | 0.032 |
| | (406.423) | (304.695) | | (507.96) | |
| Civil Servant | 0.423 | 0.265 | 60 | 0.158 | 0.211 |
| | (0.099) | (0.077) | | (0.125) | |
| Private Sector | 0.346 | 0.294 | 60 | 0.052 | 0.676 |
| | (0.095) | (0.079) | | (0.124) | |
| Worker | 0 | 0.088 | 60 | -0.088* | 0.079 |
| | (0) | (0.050) | | (0.049) | |
| Small shop owner | 0.0385 | 0.147 | 60 | -0.109 | 0.140 |
| | (0.039) | (0.062) | | (0.073) | |
| Tradesperson /Employer/ Self-employment | 0.192 | 0.206 | 60 | -0.014 | 0.898 |
| | (0.079) | (0.070) | | (0.106) | |

**Table 6. Konda Survey Employment Data**

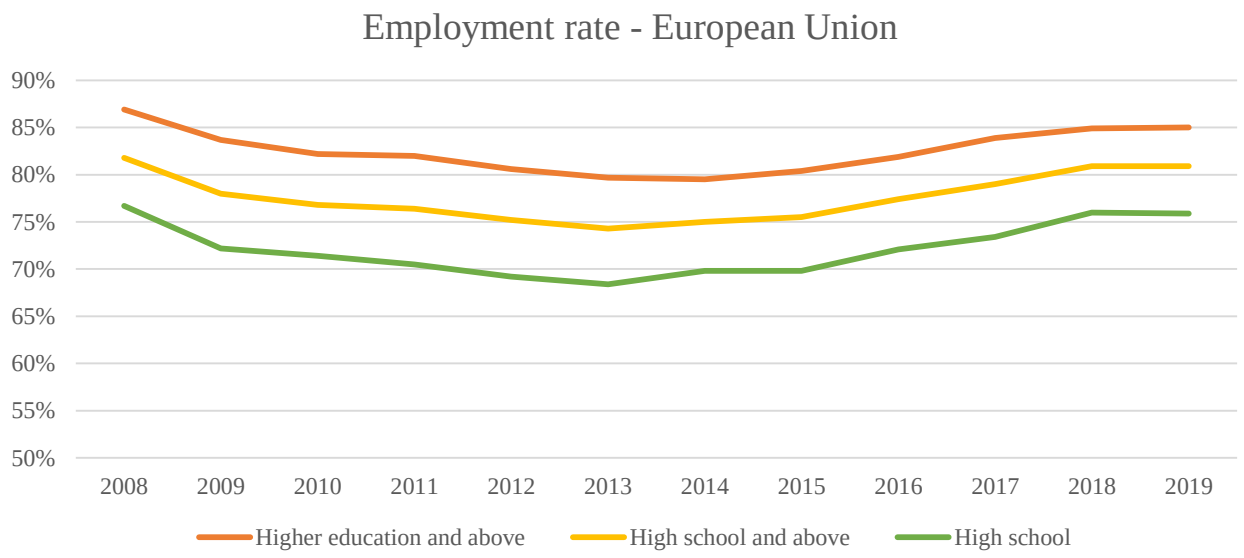
| Variables | 30-50 Age Range- Women | | | | |
|---|---|---|---|---|---|
| | First Tier | Second Tier | Number of Observations | Difference | p-value |
| In Employment | 0.750 | 0.556 | 60 | 0.194 | 0.120 |
| | (0.090) | (0.084) | | (0.123) | |
| In Labor Force | 0.750 | 0.639 | 60 | 0.111 | 0.364 |
| | (0.090) | (0.081) | | (0.121) | |
| Household Income | 4,652 | 4,621 | 57 | 31.586 | 0.959 |
| | (415.8) | (446.1) | | (609.818) | |
| Civil Servant | 0.500 | 0.200 | 38 | 0.300* | 0.056 |
| | (0.121) | (0.092) | | (0.152) | |
| Private Sector | 0.111 | 0.350 | 38 | -0.239* | 0.081 |
| | (0.076) | (0.109) | | (0.133) | |
| Worker | 0 | 0.050 | 38 | -0.050 | 0.324 |
| | (0) | (0.050) | | (0.050) | |
| Small shop owner | 0.056 | 0.050 | 38 | 0.006 | 0.941 |
| | (0.056) | (0.050) | | (0.075) | |
| Tradesperson /Employer/ Self-Employment | 0.333 | 0.350 | 38 | -0.017 | 0.917 |
| | (0.114) | (0.109) | | (0.158) | |

**Table 7. Konda Survey Family and Environmental Features**

| | 30-50 Age Range | | | | |
|---|---|---|---|---|---|
| Variables | First Tier | Second Tier | Number of Observation | Difference | p-value |
| Father years of education | 10.04*** | 8.156*** | 134 | 1.879*** | 0.008 |
| | (0.555) | (0.424) | | (0.699) | |
| Mother years of education | 7.596*** | 6.564*** | 135 | 1.032 | 0.148 |
| | (0.581) | (0.408) | | (0.710) | |
| **Type of childhood region** | | | | | |
| Village, town, or county | 0.293*** | 0.423*** | 136 | -0.130 | -0.117 |
| | (0.0603) | (0.0563) | | (0.082) | |
| City or metropolis | 0.707*** | 0.577*** | 136 | 0.130 | 0.117 |
| | (0.0603) | (0.0563) | | (0.082) | |
| Household Size | 3.263*** | 3.184*** | 133 | 0.079 | 0.698 |
| | (0.149) | (0.137) | | (0.203) | |
| Married or engaged | 0.741*** | 0.797*** | 137 | -0.056 | 0.448 |
| | (0.0580) | (0.0455) | | (0.074) | |
| Single | 0.224*** | 0.139*** | 137 | 0.085 | 0.212 |
| | (0.0552) | (0.0392) | | (0.068) | |
| **Native Language:** | | | | | |
| Turkish | 0.966*** | 0.937*** | 137 | 0.029 | 0.433 |
| | (0.0242) | (0.0276) | | (0.037) | |

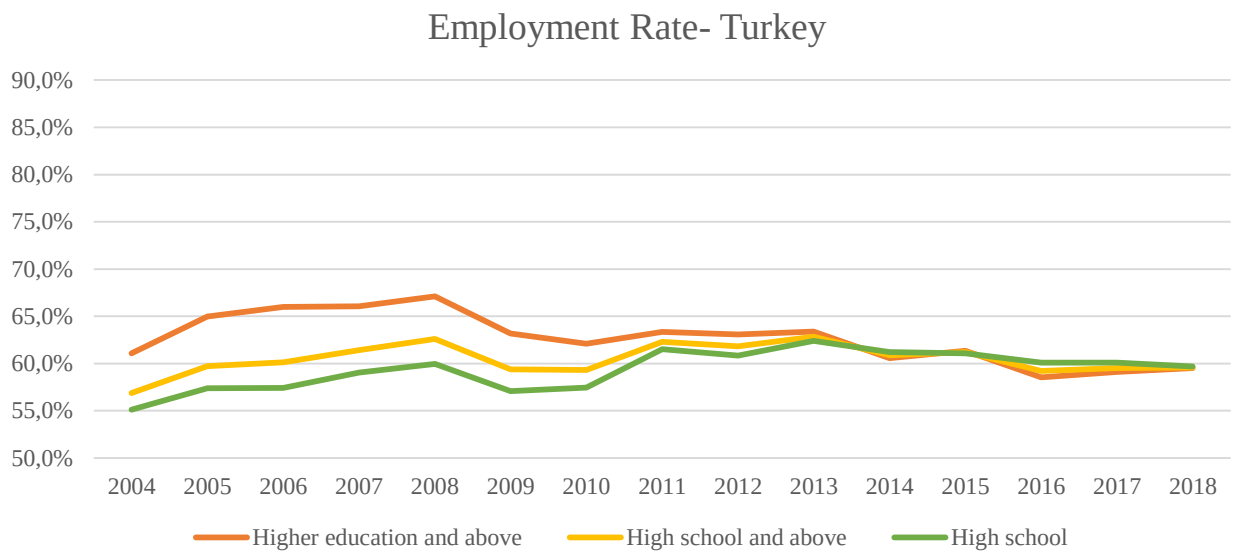
| | | | | | |
|---|---|---|---|---|---|
| Kurdish | 0.0172 | 0.0506** | 137 | -0.033 | 0.271 |
| | (0.0172) | (0.0248) | | (0.030) | |
| **House type:** | | | | | |
| Hut | 0.0385 | 0.0139 | 124 | 0.025 | 0.419 |
| | (0.0269) | (0.0139) | | (0.030) | |
| Traditional single-family house | 0.135*** | 0.194*** | 124 | -0.060 | 0.374 |
| | (0.0478) | (0.0470) | | (0.067) | |
| Apartment | 0.692*** | 0.681*** | 124 | 0.012 | 0.890 |
| | (0.0646) | (0.0553) | | (0.085) | |
| Luxury building, villa | 0.115** | 0.111*** | 124 | 0.004 | 0.942 |
| | (0.0447) | (0.0373) | | (0.058) | |

**Graph 14 Employment Rate- EU 28**



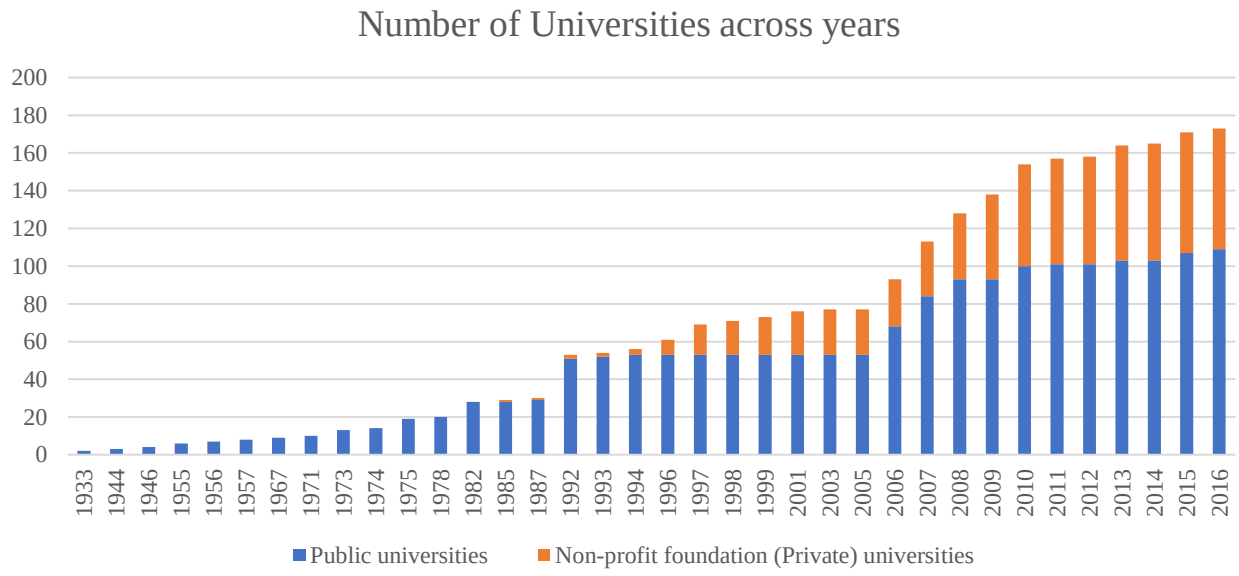

Resource: Eurostat, 2018.

**Graph 15 Employment Rate- Turkey**




Note: The graph is prepared by using TurkStat 2004-2018 Household Labor Force Surveys raw data. The employment rates of the population between 22-27 and not in education. The employment rate for a group is found by dividing the number of employees in the group by the population of the group.

**Graph 16**




Note: The graph is prepared by using the statistics of universities and their years of establishment prepared by YÖK.