

The Overeducation in Developing Countries: A Case Study of Turkey



INTRODUCTION

Overeducation

The Human Capital Theory (Becker, 1964) posits that education is an investment aimed at acquiring the necessary skills, know-how, and knowledge to contribute to an innovative economy (Lucas, 1988; Romer, 1990), establishing a connection between education and economic development (Sam, 2018), and motivating governments to invest in education. Over the past few decades, there has been a significant increase in the percentage of university graduates globally (OECD, 2010), leading to substantial growth and an elevation in the skill requirements for specific occupations (Groot & Brink, 1999). While a qualified workforce is regarded as a prerequisite for economic development, there is ongoing debate as to whether the job market has been able to keep pace with the advancement of the labor force. When the demand for highly skilled workers in the industry remains insufficient, the increasing supply may result in a mismatch between the industry and the labor force, leading to a labor market disequilibrium (Caroleo & Pastore, 2018). This situation can lead to overeducation, where a worker acquires more education than is necessary for performing the task (Mehta et al. 2011).

When we try to trace the overeducation in developing countries, two important problems arise in terms of the higher education sector (Sam, 2018). Firstly, in some developing countries, the low quality of education is an ongoing problem as educational institutions grow rapidly while lacking qualified instructors (Dessus, 1999). The second common trend observed in developing countries is the imbalance of graduates per sector. For example, in China, while the country fails to produce enough graduates for nursing and high-tech manufacturing, there is an excessive level of business and finance graduates (Ra et al., 2015). This specifically becomes a problem when the over-competition in some sectors prevents the graduates from finding jobs and forces them to differentiate more from the other candidates, even though the initial skill set is adequate.

Writers:

Merve Abacı
Derin Çelebi

While overeducated individuals may be able to perform their tasks more productively in the short run growth (Kampelmann & Rycx, 2012) in the long run, this situation might indicate an inefficient allocation of resources, waste of public investments, lack of on-the-job experience, and a high rate of mobility in the labor market, making training and recruitment more costly for employers (Sam, 2018). On the workers' side, this might be a factor that lowers job satisfaction. Secondly, while education increases the reservation wages of individuals (Caroleo & Pastore, 2018); labor market conditions (Herrera-Idárraga et al. 2013), lack of job experience, and unrequired skill sets might end up in relatively low wages (Mehta et al. 2011) and unemployment (Irizarry, 1980). Previous data suggests that overeducated individuals are more likely to change jobs (Tsang & Levin, 1985). Overall, the disequilibrium in education levels and the job market becomes an important field of measurement and analysis, both increasing the welfare of individuals, industry-level efficiency, and the quality of public investments.

Turkey and Overeducation

In the 21st century, Turkey has experienced an increase in the number of graduates, leading the foundation for the pool of a more educated labor force in Turkey's job market. The first reason behind this is government initiatives that aim to improve education quality and provide education to more people. Additionally, there is a widespread perspective that education is a pathway to a better future. With the presence of this overly skilled population, the job market has become progressively more competitive. Over the past decade, the increasing number of national universities gave more people access to education, which contributed to developmental progress. But it is also argued that the increasing number of higher education institutions led to a reduction in the quality of education as the new universities do not maintain the same standards, and the personnel or technical resources is not being distributed adequately. The established institutions seek

for excellence, whereas the new ones are not efficiently qualified to provide infrastructure. The problem of higher education institutions and the lack of job opportunities for the new graduates are emerging topics of discussion in the country, as the struggle of young teachers to be appointed to the public schools (CNN Türk) and the immigration of qualified workers to developed countries (Kızılkaya, 2023) find a place on the country's agenda.

Why Turkey?

Turkey has experienced an increase in university enrollment as well as government incentives of university education for the past two decades. The presence of the youth unemployment rate has a positive correlation with the level of education, which highlights the mismatch between the education level and unemployment. Consequently, the demand for university education in Turkey became popular, which led to a surplus of graduates who suffer from poor job market conditions. Thus, while discussing the signals of overeducation and its impacts on the job market, Turkey can be considered as a well-suited case study.

The Methodology and the Selection of the Related Data

To assess the extent of overeducation in Turkey, we first had to identify the types of data that could serve as indicators of a labor market disequilibrium. A primary challenge was the scarcity of labor market surveys that classify occupations based on their skill requirements. This issue is particularly pronounced in developing countries, where labor force surveys often have limited coverage of such topics. Consequently, we opted to utilize wage increases and characteristics of the unemployed labor force obtained from the Turkish Statistical Institute (TÜİK) as indirect proxies for overeducation.

Aashish Mehta and his colleagues, previously employed wage disparities across different education levels within each sector to identify instances of overeducation. Thus we focused on identifying a low return on education as a potential indicator of mismatched skill allocation. Additionally, we examined unemployment rates and the demographic characteristics of the unemployed population as supplementary determinants. Existing literature suggests a correlation between overeducation and unemployment, indicative of high labor market mobility.

Bilge Eriş Dereli had previously found the existence of overeducation, especially at the high school level. By employing diverse datasets and simple analytical perspectives, we aimed to see whether the characteristics of Tur-

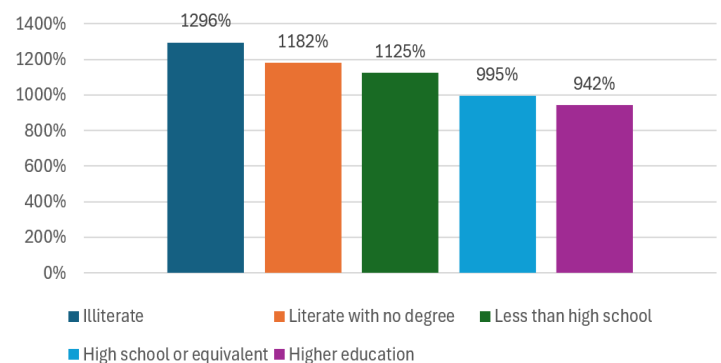
key's labor market and workforce are consistent with the predictions of the theory regarding overeducation.

FOUNDINGS

Wage Increase

Despite the significant wage increases implemented over the past decades, the devaluation of the Turkish Lira has prevented wages from keeping pace with inflation in Turkey. Consequently, the concept known as "the meltdown of the middle-income class" has become a prominent topic in Turkish politics, particularly affecting high school and university graduates. To assess the severity of this trend, we tracked yearly salary increases as percentages and overall increases, taking 2006 as the base year due to data availability. Our analysis revealed a 1296% increase in wages for illiterate workers, compared to a 942% increase for university graduates. Additionally, we observed a substantial decline in salary increases as educational attainment levels rose, with university graduates experiencing the lowest wage growth. Secondly, our analysis revealed a notable shift in wage dynamics for university graduates over time. In the early 2000s, university graduates experienced higher wage increases compared to other educational groups. However, this trend has reversed over time, with higher graduates now experiencing the lowest wage increases since 2021.

The Average Increase in Wages from 2006 to 2023 for each Education Level

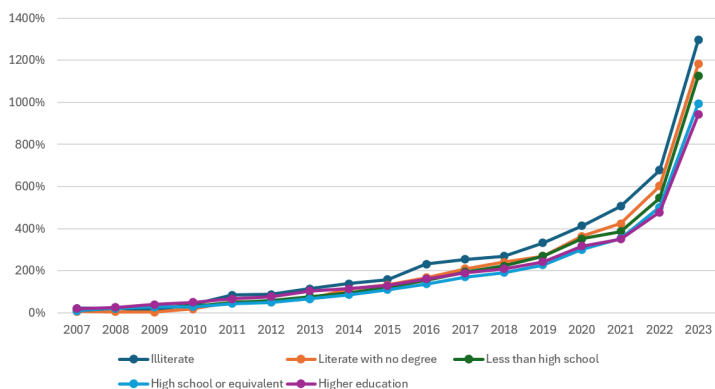


Although these findings align with our expectations, it is crucial to address a caveat before attributing causation. Over the past decade, the Turkish government has consistently raised the minimum wage to mitigate the impact of inflation, aiming to ensure it remains above the starvation wage determined by the Confederation of Turkish Trade Unions. In contrast, salary increases for other wage groups have largely been determined through bargaining between employers and employees. The economic crises in Turkey may have contributed to lower salary increases for university graduates, which were initially higher and more challenging to sustain. Furthermore, we identified

a significant disparity in wage increases between female and male graduates during the studied period, with males getting a higher salary increase. However, upon closer examination, we did not find substantial evidence linking this wage gap to overeducation. Therefore, we opted not to include these findings in our analysis.

Nevertheless, we believe that the proliferation of university graduates coupled with a scarcity of qualified job opportunities may disadvantage workers during these bargainings, resulting in lower salaries and contributing to the meltdown of the middle-income class. This scenario signals an overeducated workforce relative to the job market's demands.

The Cumulative Increase of Wages in Percentages (Taking 2006 as the Base Year)



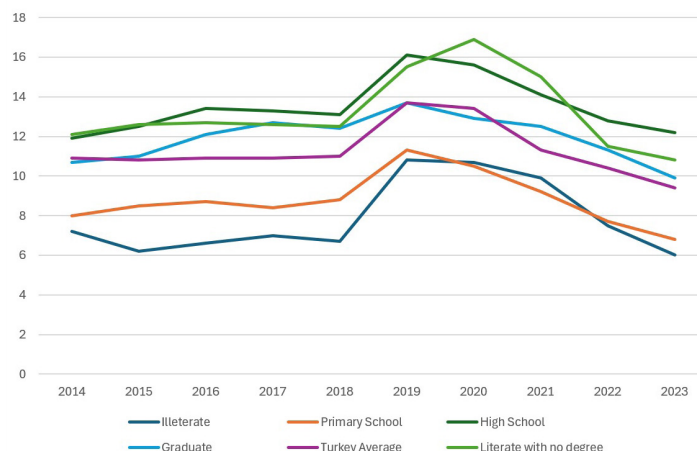
Unemployment Rate

To trace signs of overeducation, our initial analysis focused on examining the composition of the unemployed labor force for each year since 2014. We observed consistently lower unemployment rates among illiterate individuals and primary school graduates throughout this period, while high school graduates experienced unemployment rates exceeding the national average. Moreover, the unemployment level among university graduates surpassed the national average in all but two years, namely in 2014 and 2020. Interestingly, literate individuals without a formal degree faced higher unemployment rates compared to the national average during this timeframe, inconsistent with the general trend.

Following theoretical propositions, the higher unemployment rates among high school and university graduates may be attributed to the increasing reservation wages as educational attainment rises. Consequently, individuals from these groups may be more inclined to reject job offers if the offered wage falls below their expectations. Additionally, specialization in specific fields of study

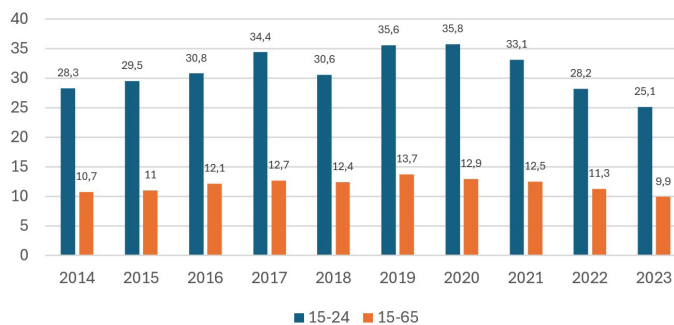
may prolong the job search process as individuals seek employment aligned with their educational background.

Unemployment (%) for each Education Level



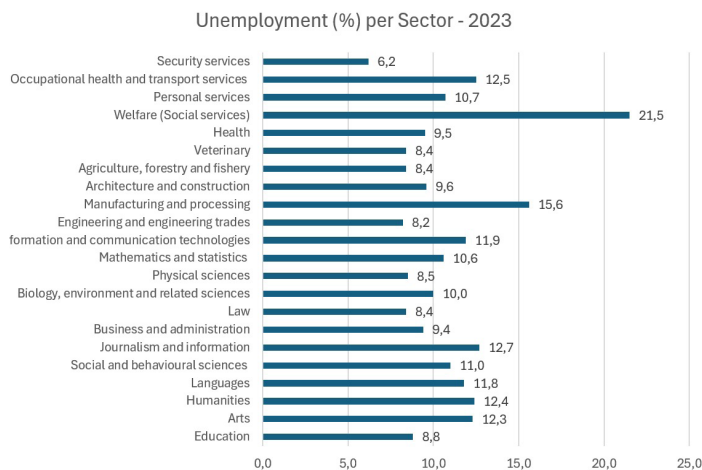
Subsequently, we examined the unemployment rate among university graduates within the young labor force aged 15-24, comparing it to the national average. Our findings indicated that unemployment was notably higher among young workers, with a rate exceeding twice the national average. This disparity suggests a more difficult job search process for young individuals, potentially influenced by factors such as the increasing number of higher education institutions, intensifying job market competition, and a lack of on-the-job experience.

The Graduate Unemployment Rate for Young Labour Force and Overall Labour Force



Finally, we conducted an analysis of the unemployment rate in 2023 across various sectors, facilitating an intra-sector comparison. We observed the most severe unemployment rates in the welfare sector (21.5%), followed by manufacturing and processing (15.6%), and journalism and information (12.7%). Conversely, the lowest unemployment rates were recorded in the security services (6.2%) followed by engineering and engineering trades (8.2%) sectors. These findings underscored significant disparities among sectors. Nonetheless, across most fields of study, unemployment levels exceeded the 2023 national average of 8.8%, with verbal and human sciences fields exhibiting particularly pronounced chal-

allenges in this regard.



DISCUSSION

Comments on the Reasons for Overeducation

Despite Turkey being a highly industrialized country, as the largest 18th economy in the world, the job opportunities remain low in contrast to the development of the workforce. This trend becomes especially visible for basic science, linguistics, and humanities graduates, where the market fails to offer research projects and positions that meet international standards of success. While unemployment in these sectors is above the national average, the increasing number of these departments in newly established universities and the high school graduates' high preference for these programs couples the problem in the current market conditions. The increasing competition due to the low number of jobs in certain fields and the high number of graduates not only diminishes the bargaining power of the workers but at the same time compels them to differentiate themselves from other candidates. If the differentiation efforts are happening through acquiring more licenses and master's degrees, then this may further contribute to the overeducation in Turkey.

Finally, the rapid expansion in the number of higher education institutions might have resulted in a decline in the quality of education, which eventually impacted the job market. While the number of universities in 1999 was 73, this number increased to 208 in 2023 (Aktaş, 2021: YÖK, 2024). However, many of these newly established universities are likely to lack qualified instructors, international programs, research projects, and necessary funding; placing graduates in a disadvantageous position during the job search period.

Brain-Drain

Previous studies reveal that Turkey suffers from a great

amount of brain drain which pushes Turkish professionals to move out of their country to live in better conditions professionally. The increasing mobility of highly educated people stems from the failure of recompense for their work and economic instability. The return rate is not expected to fall and the mobility leads to an erosion of the middle-wage group which is enormously dissatisfied with the economy. Moreover, women are more likely not to return compared to men. Another recent research has shown that, even if the work of those who end up working abroad does not require high-skills, women are more likely to have higher education qualifications compared to men counterparts (Dumont and Monso 2007).

For the middle-waged group that stays in Turkey, the situation does not seem to be appealing too. In 2020 almost 75% of the population reported not being able to afford their basic needs or barely affording them (Metropoll, 2020 : Yıldırım, 2020), and the increasing inflation still seems to be putting a lot of pressure on consumers. Even though the Turkish Central Bank started to shift to more orthodox economic policies again in recent months, urban poverty is likely to remain a major concern in Turkey.

Possible Solutions to Overcome Overeducation

In the following years, Turkey needs to take steps to reduce the impact of overeducation such as the erosion of the middle-wage class, brain-drain, low job satisfaction, and unequal wage distribution. A series of regulations needs to be implemented to eliminate educational institutions of low quality. By exterminating unuseful institutions, cash resources can be used for functional purposes such as improving technological and educational tools with more sophisticated faculty members, research opportunities, and diverse academic programs offered to students.

While doing so, high and middle school levels should not be neglected, as a shift in funding from higher education institutions to these levels seems to be necessary to improve the national educational level and labour force. This shift in capital usage becomes essential considering the decreasing trust in education in recent years, and Turkey's poorly performing results in the Programme for International Student Assessment compared to other OECD countries (Euronews, 2020 : Euronews, 2023). As might be expected, the economy holds a significant impact on welfare as well as overeducation which puts us into a vicious cycle, and the struggle of Turkey as a developing country seems to be tied to its education programs in the future.

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