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Massification of Higher Education in Türkiye and Its Challenges

Türkiye'de Yükseköğretimin Kitleselleşmesi ve Getirdiği Zorluklar

Mahmut ÖZER

ABSTRACT

In the last 20 years, the education system in Türkiye has witnessed massive growth and transformation from primary- and secondary education to higher education. Significant improvements have been made in enrollment rates at all levels of education, reaching a level comparable to OECD countries. In this context, this study focuses on the transformation and massification of higher education in Türkiye. The net enrollment ratio in higher education in Türkiye has increased from 10% to 46% during this period. Especially, the establishment of higher education institutions in all cities has contributed positively to women's access to higher education, and for the first time, the enrollment and graduation rates of women have surpassed those of men. The increase in the supply of higher education and easier access has raised the proportion of higher education graduates from under 20% to over 40% in the 25-34 age group during this period. At the same time, the average length of education for the population aged 15 and over is increasing every year. Additionally, this study identifies problem areas and proposes solutions to ensure the sustainability of the expansion in higher education during this period. The evaluation identifies insufficient face-to-face teaching capacity in the higher education system and attempts to compensate for this deficiency with distance education programs as the primary problem area. Especially since 2015, almost half of the students who have enrolled in higher education have been able to enroll in distance education programs. Therefore, increasing face-to-face teaching capacity in higher education and reducing the proportion of distance education in higher education stand out as challenging issues. The second problem area is highlighted as being related to the limitations in scientific knowledge production performance of higher education institutions and the number of doctoral graduates. Despite an increase in the number of doctoral graduates from all disciplines every year, sustaining the growth achieved during this period is highly inadequate. This problem not only negatively affects the capacity for scientific knowledge production but also creates significant challenges, especially in meeting the need for faculty members in newly established universities, thus adversely affecting the quality of higher education. The study also offers some recommendations for addressing these problems.

Keywords: Higher education, Massification of education, Sustainability, Human capital, Doctoral education

ÖZ

Türkiye'de eğitim sistemi temel eğitim ve ortaöğretimden yükseköğretime kadar son 20 yılda devasa bir büyümeye ve dönüşüme tanıklık etmiştir. Eğitimin tüm kademelerindeki okullaşma oranlarında önemli sıçramalar sağlanmış ve OECD ülkeleri ile karşılaştırılabilir bir düzeye ulaşılmıştır. Bu bağlamda bu çalışma Türkiye'de yükseköğretim alanındaki bu dönüşüme ve kitleselleşmeye odaklanmaktadır. Türkiye'de yükseköğretimde net okullaşma oranı bu dönemde %10'dan %46'ya yükselmiştir. Özellikle tüm şehirlerde yükseköğretim kurumlarının kurulması aracılığıyla erişebilirliğin artırılması kadınların yükseköğretime erişimine olumlu katkıda bulunmuş ve kadınların hem okullaşma hem de mezun olma oranları ilk kez erkeklere ait ilgili oranları geride bırakmıştır. Yükseköğretim arzının artması ve erişimin kolaylaşması, bu

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dönemde 25-34 yaş grubunda %20'nin altında olan yükseköğretim mezunu oranının %40'ın üzerine çıkmasını sağlamıştır. Aynı zamanda 15 yaş ve üzeri nüfusun ortalama eğitim süresi de her yıl artmaktadır. Bu çalışmada ayrıca bu dönemde sağlanan yükseköğretimdeki genişlemenin sürdürülebilir olması için sorun alanları belirlenmekte ve çözümler önerilmektedir. Yapılan değerlendirmede yükseköğretim sisteminde yüz yüze öğretim kapasite arzı yetersizliği ve bu yetersizliğin açıköğretim programları ile kapatılmaya çalışılması birincil sorun alanı olarak belirlenmiştir. Özellikle 2015 yılından itibaren yükseköğretime yerleşen öğrencilerin hemen hemen yarısı açıköğretim programlarına yerleşebilmektedir. Bu nedenle, yükseköğretimde yüz yüze eğitim kapasitesinin artırılması ve yükseköğretimde açıköğretim payının azaltılması meydan okuyucu bir sorun olarak ortada durmaktadır. İkinci sorun alanının ise yükseköğretim kurumlarının bilimsel bilgi üretim performansı ve doktora mezun sayılarındaki sınırlılıklarla ilişkili olduğu vurgulanmaktadır. Tüm disiplinlerden doktora mezun sayısı, her yıl artmasına rağmen, bu dönemde sağlanan büyümeyi sürdürülebilir kılmakta son derece yetersiz kalmaktadır. Bu sorun, bilimsel bilgi üretim kapasitesini olumsuz etkilediği gibi özellikle yeni kurulan üniversitelerin öğretim üyesi ihtiyacının karşılanmasında da önemli zorluklar oluşturmaktadır. Dolayısıyla yükseköğretimin niteliği ve kalitesini de olumsuz etkilemektedir. Çalışmada bu sorunların çözümlerine yönelik bazı öneriler de sunulmaktadır.

Anahtar Sözcükler: Yükseköğretim, Eğitimin kitleselleşmesi, Sürdürülebilirlik, Beşeri sermaye, Doktora eğitimi

INTRODUCTION

Countries attach great importance to their citizens' engagement with education in order to make their development sustainable and continually enhance their competitiveness. It is well-known that education, along with increased participation, leads to improved employability and higher wages (Connolly and Gottschalk, 2006; OECD, 2022). As expectations from education have increased in modern society, countries undertake large-scale projects and allocate substantial budgets to raise their citizens' access to education (Altbach, 1999; 2008; Darling-Hammond, 2010; Murray, 2020; Schleicher, 2018). Thus, they aim to become welfare societies and ensure sustainable development by utilizing their human capital most efficiently (Özer and Suna, 2022; 2023).

Developed countries, having universal education systems in primary and secondary education, have sought to achieve massification in higher education, especially after the Second World War. Consequently, there has been an expansion in the higher education systems of developed countries since the wartime period. While facilitating this expansion, they also aim to gradually increase the graduation ratios from higher education among the adult population in their countries (Küçükcan and Gür, 2009). For example, former U.S. President Obama set a goal in 2018 to have at least 60% of Americans aged 25-34 graduate from a higher education program by 2020 to address the higher education graduate shortage needed in the labor market. On the other hand, China has been implementing multidimensional and massive projects one after another to provide its citizens with the most qualified higher education services. These examples clearly demonstrate that countries continuously review their higher education policies, especially to enhance their competitiveness (Wildavsky, 2010).

Until the 2000s, the agenda of higher education in Türkiye, similar to the debates in primary and secondary education, focused on policies that continuously missed the main official agenda and witnessed conflicts representing an inward turn (Özer, 2021). Despite the fact that the young population is one of the most significant opportunities in Türkiye, access to higher education for all segments of society has not been considered a problem. Moreover, growth has been continuously hindered and led into an impasse by antidemocratic practices such as headscarf bans and quota applications (Gür, 2016). As a result, time has been lost, and opportunities have slipped away for the youth. In this context, it is essential to emphasize the significance of the last 20 years; this period has been a time when inhibiting practices inherited from the past were eliminated both in secondary and higher education, and access issues were largely resolved (Çetinsaya, 2014; Özer, 2022a, 2022b, 2022c).

Especially under the 'One University in Every Province' project in Türkiye, the number of universities in higher education has been continuously increased, facilitating access to higher education. The significant increase in the number of students after the establishment of higher education institutions in each province has clearly demonstrated the real demand for higher education. The number of students in higher education institutions has continuously increased, and this opportunity has been effectively utilized by women, enabling them to achieve comparable enrollment ratios with male students, in addition to primary and secondary education (Özer, 2022b). As of 2012, the access ratios of women to higher education have begun to surpass those of men, and this trend has continued to the present day.

At this point, there is a need for a comprehensive assessment of this rapid growth, particularly identifying the areas that ensure its sustainability and limit its quality. In response to this need, this study conducts such an evaluation, utilizing the comprehensive data from the 'Higher Education Outlook 2022: Monitoring and Evaluation Report' and 'Higher Education Outlook 2023: Monitoring and Evaluation Report' prepared by Yurdakul et al. (2022; 2023). Beyond assessments based on the data, areas that weaken the sustainability of the momentum achieved in higher education are identified, and improvement steps are proposed for these areas.

Massification of Higher Education in Türkiye

In recent years, both the capacities of existing universities have

been increased and a significant number of new universities have been established to enhance access to higher education in Türkiye. The first step in expanding higher education institutions was taken with the establishment of numerous public universities in 1992. While there were a total of 29 universities in 1991, with 28 public universities and 1 private foundation university, this number increased to 53 in 1992, with 51 public universities (Küçükcan and Gür, 2009). After the 2000s, especially with the 'One University in Every Province' project, the number started to rapidly increase, reaching 79 by 2006. Although these steps provided significant improvements in increasing access, the real increase in the number of higher education institutions occurred after 2006. Particularly, the rapid increase is noteworthy in private foundation higher education institutions during this period. In 2022, the total number of higher education institutions rose to 208, comprising 129 public and 79 private foundation ones (Yurdakul et al., 2022; 2023). As seen, an unprecedented increase in the number of higher education institutions has been achieved in a relatively short period of around 20 years.

The increase in the number of higher education institutions has indeed led to significant growth in higher education supply, as expected. In the last 20 years, the net enrollment ratio in higher education in Türkiye has risen from around 10% to 45% in 2021 and 46% in 2023 (Yurdakul et al., 2022; 2023). Considering the scale of the young population and the demographic structure in Türkiye, it is evident that the proportional increase corresponds to a considerably large student population. As a result, higher education in Türkiye has transitioned from being an elite education tier to the stage of massification, as can be observed with the ease of the substantial increase in the student population (Trow, 2010; Arlı, 2016). An essential point to highlight here is that the created physical infrastructure has increased the societal inclusivity of an education through access to education and changed the perception of that within society. With the support of all these developments, the number of students in higher education in Türkiye increased from 4,303,560 in 2011 to 8,296,959 in the academic year 2021/22 (Yurdakul et al., 2022).

While there has been a relatively small change in the enrollment ratios of men (increased from 38.4% to 40.3%), there is a significant increase in the enrollment ratios of women. Especially, the 'One University in Every Province' project has provided women, who may not have the opportunity to go to other cities or do not want to change cities, with the opportunity to access higher education in their own provinces. According to the results of a new study based on the 2021 YKS (Higher Education Entrance Exam) results, approximately 39% of those placed in face-to-face education programs enrolled in a higher education program in the province where they reside (Gür, 2022; Gür and Ayaz, 2022). In associate degree programs, this percentage increases to up to 45%.

As mentioned in the reports, in 2012, for every 100 male students, 97 female students enrolled. However, by 2021, this ratio had increased in favor of women to 114 for every 100 men (Yurdakul et al., 2022). In other words, the enrollment ratios of women in higher education are now significantly higher than those of men. The gradual improvement in women's access to higher education is clearly evident from the comparisons over the last 10 years. In 2012, the enrollment ratio for women was 38.6%, and this ratio increased to 49.2% in 2021 (Yurdakul et al., 2022).

In the last 10 years, the increasing representation of women in higher education is not only reflected in the number of students but also in the number of graduates. Indeed, the proportion of women among higher education graduates has been continuously increasing. As mentioned in the report, in 2012, for every 100 male graduates, there were 88 female graduates. However, by 2021, this ratio had reached 116 female graduates for every 100 male graduates (Yurdakul et al., 2022). In 2022, for every 100 men, 129 women graduated from higher education at the associate degree level, while at the bachelor's degree level, this ratio stood at 121 women for every 100 men (Yurdakul et al., 2023). In other words, in addition to access to higher education, the proportion of women among higher education graduates has surpassed that of men.

Certainly, the increased financial support and accommodation facilities provided to students have played a significant role in these improvements. As detailed in the reports, in the 2012/13 academic year, the Student Loans and Dormitories Institution (KYK) had a total capacity of 304,195 students, and this capacity was increased to 759,838 by the 2021/22 academic year and 876,942 by the 2022/23 academic year (Yurdakul et al., 2022; 2023). These facilities contribute significantly to ensuring access to education for individuals who may face financial difficulties or housing issues, especially when transitioning to higher education (OECD, 2008; Reynolds, 2020).

The increase in the supply of higher education has led to significant improvements in enrollment ratios for the age group of 20-24. For example, in 2020, Türkiye's net enrollment ratio for this age group exceeded the OECD average (41%) and increased to 50% (OECD, 2023).

On the other hand, the average duration of education for the population aged 15 and over in Türkiye has been continuously increasing. The average duration of education for the population aged 15 and over was 7.4 years in 2011, and it increased to 9.4 years in 2021 and 9.5 years in 2022 (Yurdakul et al., 2023). Certainly, the significant contribution to this comes from the 2012 educational reform, which extended compulsory education from 8 to 12 years. However, simultaneous expansion in higher education has taken this opportunity to higher levels.

A similar improvement has been observed in the percentage of the population aged 25-34 with higher education degrees. In 2011, this ratio was 19% in Türkiye (compared to the OECD average of 38%), and by 2021, it had increased to 40% (compared to the OECD average of 47%) (Yurdakul et al., 2022). In 2022, this ratio increased to a total of 41.2%, with 38.8% for men and 43.6% for women (Yurdakul et al., 2023). Considering the scale of the population in this age group, achieving a doubling of the access ratio in just 10 years signifies a significant leap. In this context, the highest increase between these years occurred in

Türkiye, and the country approached the OECD average.

On the other hand, the number of international students in the higher education system has also significantly increased. In 2012, there were 43,251 international students in the system, and this number had risen to 260,289 in 2021 and 301,694 in 2022 (Yurdakul et al., 2022; 2023). As a result, the global share of international students in Turkish higher education system continues to increase (Özer, 2012; 2016; 2017). This increase signifies an important development for the internationalization of higher education alongside its expansion.

Areas for Improvement

The expansion in higher education over the last 20 years has had significant effects on improving the quality of human resources in Türkiye, achieving development goals, and enhancing competitiveness. However, determining the steps needed to sustain this rapid growth in a quality-focused and sustainable manner is as crucial as the growth itself. Therefore, in this section, these areas will be addressed.

The share of distance education in higher education should be reduced

Despite the total number of students in higher education surpassing 8 million in 2021, a significant portion of this figure is composed of distance education students. As shown in the graphs in the reports, between 2012 and 2016, the number of students in face-to-face and distance education consistently increased at the same levels. However, since 2016, a significant shift has occurred. While the capacity for face-to-face education in public universities has continuously decreased since that year, on the contrary, the capacity for distance education has consistently increased. In 2021, there were 3,162,232 students in face-to-face education in public universities, while 4,454,128 students were enrolled in distance education (Yurdakul et al., 2022). In other words, 58% of young people studying in public universities continue their education not on campuses but through distance education. This situation poses a significant threat to higher education and the future of the country.

At its core, distance education programs should serve to support the development of young people and adults outside the school age population, both in secondary and higher education, as part of lifelong learning opportunities. However, having a significant portion of the higher education-age population enrolled in distance education programs will lead to significant shortcomings in the development of young people, who are the opportunity window of Türkiye.

Face-to-face education provides various mechanisms beyond education to support students' psychosocial development, benefit from peer education, participate in cultural, artistic, and sports activities, and engage in collaborative projects. The current situation indicates that only 42% of students in public universities have access to these opportunities, while the remaining 58% cannot benefit from them. This is concerning for the multifaceted development and self-confidence of young people. Increasing the capacity of distance education instead of face-to-face education capacity is not an option and should not be. If face-to-face education capacity is insufficient, the solution to expanding higher education supply is to open new public universities rather than increasing distance education capacity. In 2022, the reduction of distance education's share from 58% to 46% among students in public universities is a significant improvement in this context (Yurdakul et al., 2023).

The transition ratios to higher education should be increased

There was a notable shift in higher education transition capacities in 2016, as mentioned in the report. The ratios of high school graduates transitioning to higher education showed a continuous increase until 2016. In 2015, this ratio reached 53.4% (Yurdakul et al., 2022). In other words, one out of every two high school graduates taking the exam was admitted to either an associate degree or a bachelor's program. From 2016, this ratio began to decline, initially dropping to 49.2% and experiencing a sharp decrease to 34.9% in 2017. This decreasing trend continued in subsequent years, reaching 31.8% in 2022 (Yurdakul et al., 2022). So, strangely, while one out of every two high school graduates could transition to higher education until 2016, this ratio dropped to one out of every three students. The impact of the removal of minimum scores, especially in 2022, is evident here. In 2021, this ratio decreased to 26.8%, and with a slight recovery in 2022, it rose to 31.8%. If the minimum scores had not been removed, this ratio would likely have been much lower. In this context, the improvement seen in 2021 continued into 2022, with this ratio rising to 36% (Yurdakul et al., 2023). Although it is a positive improvement for this ratio to increase from 26.8% to 36% in a short period of two years, it is still considered inadequate.

On the other hand, the gap between the number of students applying for higher education and those actually admitted has consistently increased since 2016. For instance, in 2013, the number of students applying for higher education was 1,924,547, while the number of students admitted was 877,787 (Yurdakul et al., 2022). In other words, only 46% of the applicants were admitted to a higher education program. Despite the continuous increase in the number of applications, the admission ratio has consistently decreased, reaching its highest decline in 2023. In 2023, out of 3,527,443 individuals who applied for higher education, only 30%, or 1,063,807, were admitted to a higher education program (Yurdakul et al., 2023).

The capacity production problem in higher education has affected not only other types of high schools but also graduates of Science High Schools, who have demonstrated performance well above the OECD average in PISA studies (Suna, Tanberkan and Özer, 2020). Despite a fourfold increase in the number of graduates from science high schools between 2011 and 2019, the inability to produce capacity since 2016 has also affected Science High School graduates, resulting in approximately a 25% decrease in admission ratios to higher education programs (Suna et al., 2020). If even the most successful students are facing difficulties in transitioning to higher education, it indicates a serious problem.

In this regard, from time to time, the occupancy ratios in capacity are brought up. That is, the real performance is not just about creating a capacity that is largely filled but rather generating a supply capacity that is suitable for the demand. The inadequacy in this regard is evident.

As mentioned above, while an increasingly smaller number of students can enroll in higher education, how much of this low number is met through distance education programs? As previously stated, an increasing proportion of supply is being generated through distance education programs. For example, in 2012, out of the 660,464 students who enrolled in higher education, 213,486 enrolled in distance education programs. In other words, in 2012, 24% of those who enrolled in higher education enrolled in a distance education program. However, the remaining 76% had the opportunity for face-to-face education on campuses. By 2021, it can be observed that the share of distance education in higher education supply has increased significantly. Thus, out of the students who enrolled in higher education this year, 862,133 enrolled in face-to-face education programs, while 42%, or 631,958, enrolled in distance education programs (Yurdakul et al., 2022). The same trend is observed to continue in the 2022/23 academic year. Out of the students who enrolled in a higher education program this academic year, 970,862 enrolled in face-to-face programs, while 42% of them, which is 699,414 students, were able to enroll in distance education programs (Yurdakul et al., 2023).

In sum, while the percentage of those enrolling in higher education has been decreasing since 2016, an increasingly significant portion of those who do enroll are placed in distance education programs. This situation underscores the urgency of taking preventive measures.

The number of doctoral graduates should be increased

The number of doctoral graduates is one of the most important indicators of the performance of a higher education system in knowledge production (Akçiğit and Özcan-Tok, 2020). In this way, higher education institutions engage in original research, and subsequently, graduates contribute to meeting the faculty needs of higher education institutions while also supporting the country's human resources that strengthen its R&D capacity.

The level of doctoral education remains a significant challenge for Türkiye in terms of research capacity, both historically and in the present day (Güçlü and Yılmaz, 2019; TÜBA, 2006; 2008). While the number of doctoral graduates from all disciplines was 4,462 in 2012, this number increased to 8,857 in 2021 and 10,726 in 2022 (Yurdakul et al., 2023). Considering the rapid and substantial expansion in higher education over the past 20 years, it is evident that this figure is insufficient. When we compare Türkiye with its level of competitors, these countries have a considerably higher number of doctoral graduates, and this number shows a stable trend over the years. For example, in 2016, the number of doctoral graduates was 15,805 in Japan, 25,095 in India, 27,366 in the United Kingdom, 29,303 in Germany, 55,011 in China, and 69,525 in the United States, while in Türkiye, it was only 6,052 (Nerad et al., 2022).

The number of faculty member per doctoral graduate is relatively high in Türkiye. For instance, in 2012, there were a total of 55,179 faculty member in public and private universities, and during the same year, 4,462 doctoral graduates were produced. This means that there were 12.4 faculty member for every 1 doctoral graduate. In 2021, the total number of faculty member increased to 93,778, and the number of doctoral graduates rose to 8,857 (Yurdakul et al., 2022). Therefore, in 2021, there were 10.6 faculty member for every 1 doctoral graduate. No significant improvement is observed in 2022 either (Yurdakul et al., 2023). These ratios not only indicate a lack of enthusiasm among faculty members for pursuing doctoral education but also raise concerns regarding scientific performance.

The number of doctoral graduates is a critical parameter, especially in the context of the expanding higher education system, to meet the need for teaching staff. With these insufficient numbers, it seems unlikely to meet the demand for teaching staff, especially in universities established after 2006, in the near future. As a result, the student-to-faculty ratio is increasing, particularly in these universities, negatively affecting the quality of education (Akciğit and Özcan-Tok, 2020; Özer, 2011; Özer, Gür, and Küçükcan, 2011).

On the other hand, the report provides detailed data clustered into three periods based on the establishment years of universities: universities established and divided before 1992 (1st wave, 36 universities), universities established and divided between 1992-1994 (2nd wave, 31 universities), and universities established after 2006 (3rd wave, 62 universities). According to the data provided in this section, it is observed that 31.5% of current associate degree students, 45.8% of undergraduate students, 50% of master's students, and 70.9% of doctoral students are enrolled in the 1st wave, which consists of 36 universities established and divided before 1992 (Yurdakul et al., 2022). These universities bear the majority of the weight in providing higher education services. Instead, it is necessary to reduce the associate and undergraduate student capacity of these universities and shift this burden to 2nd and 3rd wave universities. In this case, if 1st wave universities predominantly focus on postgraduate education, it could significantly contribute to increasing the number of doctoral graduates.

In Türkiye, especially in the last decade, research and development (R&D) activities are crucial to support the sustainability of the increasing production capacity in various sectors. The employment of doctoral graduates in these sectors plays a critical role. Currently, the number of doctoral graduates is neither sufficient to meet the needs of higher education institutions nor capable of supporting research and development activities in the labor market. Therefore, it is extremely vital for higher education institutions to break free from this inertia and take all necessary steps to make doctoral education much more attractive.

The international publication performance should be increased

One of the primary functions of higher education institutions is *education*, and another crucial function is *production of knowl-*

edge. Through this function, they strengthen their research capacity and can generate solutions to national and international problems. Indeed, the production of scientific knowledge is a prominent factor in the qualitative assessment of higher education institutions (Vernon, 2018). When the research capacity of higher education institutions is robust, their ability to guide society also increases.

As shown in both reports, it is evident that the scientific publication performance of higher education institutions in Türkiye has been consistently increasing. Given the continuous growth in the number of academicians, this increase is already an expected outcome. The total number of teaching staff in higher education institutions was 127,441 in 2012, and this number increased to 184,702 in 2021 and 184,566 in 2022 (Yurdakul et al., 2022; 2023). According to the Scopus data provided in the report, the number of internationally indexed documents with Türkiye as the address was 36,941 in 2012, and this number rose to 65,783 in 2021 and 71,443 in 2022 (Yurdakul et al., 2023). Based on these figures, the international publication per teaching staff member was 0.29 in 2012, and it increased to 0.36 in 2021 and 0.38 in 2022. Although the number of international publications per teaching staff member has increased, this result roughly indicates that only one out of three teaching staff members produces international publications. Considering the development and competitiveness goals of the country, this number is seen as highly insufficient.

As is known, another important reference for the quality of produced knowledge is the number of citations to these studies. On the other hand, it is observed that the number of citations to these publications has steadily declined since 2015. The most significant decrease occurred in 2021. While the number of publications in 2012 was lower than in 2021, the publications received 544,642 citations in 2012, whereas the number of citations sharply dropped to 254,215 in 2021 (Yurdakul et al., 2022). This indicates that the international visibility of the publications is extremely low. However, there has been a second dramatic decrease from 2021 to 2022, with the citation dropping from 254,215 in 2021 to 73,465 in 2022 (Yurdakul et al., 2023).

Actually, the most important parameter influencing international publication performance is related to doctoral education. In previous sections, it was indicated that the number of doctoral graduates in Türkiye is extremely inadequate. Therefore, if doctoral programs are reconsidered, and a significant initiative is taken to increase both their quality and quantity, the number of international publications is likely to increase as well.

DISCUSSION and CONCLUSION

Türkiye has undergone significant transformation and expansion in all levels of education, from primary- to higher education, over the past 20 years. Massive investments were allocated to build new educational institutions, and antidemocratic practices such as the ban on headscarves and the quota system were abolished to democratize the education system. Additionally, various social policies were consistently implemented to strengthen equal opportunities in education (Özer and Suna, 2024). In this study, we evaluate the massification of higher education in Türkiye, discuss the challenging issues for the sustainable expansion of higher education, and then we propose some solutions for these issues. In this context, we based our evaluations on the data related to detailed indicators of the development of higher education in Türkiye, in the reports prepared by Yurdakul et al. (2022; 2023). The reason for using two separate reports in the same context was to observe the reflections of recent YÖK decisions, especially regarding transitions to higher education.

The investments made in the last 20 years have borne fruit. Enrollment ratios in preschool (5 years old), primary school, secondary school, and high school have reached and exceeded 99% for the first time (Özer, 2022b; 2023; Özer and Suna, 2024). Similarly, the enrollment ratio in higher education has increased from around 10% to the 46% range during this term (Yurdakul et al., 2023). The transformation in access to education is particularly crucial in recent years for steps towards educational equality in Türkiye (Özer and Perc, 2022; Özer, Gençoğlu, and Suna, 2020; Özer, Aşkar, and Suna, 2023; Suna ve Özer, 2023; Özer ve Suna, 2024). While the higher education system had a predominantly elitist appearance for many years, the investments made during this period have shifted it towards mass higher education.

The universalization experienced in all levels of the education system has made the entire system more inclusive and responsive to the demands of society. In Türkiye, every family can now easily ensure access to education at all levels for their children, regardless of their socio-economic level. From this perspective, Türkiye has, for the first time, had the opportunity to effectively bring its most enduring capital, human capital, together with education. The average duration of education for the population aged 15 and over continues to increase each year. While this duration was 7.4 years in 2011, it rose to 9.5 years in 2022 (Yurdakul et al., 2023).

At this point, enrollment ratios have reached comparable levels with OECD countries, and in some indicators, they have surpassed the OECD average. According to the latest report published by the OECD (2023), enrollment ratios for the age group of 5-14 have exceeded the OECD average between 2013 and 2020. The expansion in higher education and the opportunity for free education have not only increased the education levels of the population in the higher education age group but have also raised the education levels of adults. In 2020, the net enrollment ratio for the age group of 20-24 exceeded the OECD average, reaching 50%, and the enrollment ratio for the age group of 20-39 also surpassed the OECD average (OECD, 2023).

The increased accessibility to higher education has significantly contributed to the rise in the proportion of individuals with tertiary education in the age group of 25-34. In 2011, the ratio of individuals with tertiary education in Türkiye was 19%, while the OECD average was 38%. However, by 2021, this ratio had increased to 40% (compared to the OECD average of 47%) (Yurdakul et al., 2022). As a result, Türkiye has gained a crucial opportunity to efficiently utilize its human capital.

Similar to secondary education, women in higher education have made significant leaps in enrollment ratios, compensating for losses in previous years. In secondary education, the enrollment ratio for girls increased from 39% to 98% (Özer, 2023; Özer ve Suna, 2024). A similar improvement has occurred in higher education, with the net enrollment ratio for women surpassing that of men. In the tertiary education age group, in the 2008/09 academic year, the enrollment ratio for women was 25.9%, while men had a higher enrollment ratio (29.4%). However, by 2021, the enrollment ratio for women reached 49.2%, whereas it was 40.3% for men. In other words, over the course of 13 years, while the enrollment ratio for men increased by 11 points, the enrollment ratio for women increased by more than double that amount (23 points). In this context, women have been the winners of the universalization of secondary education and the massification of higher education. A pattern favoring women is also evident in graduation ratios from higher education. Consequently, it is expected that there will be significant increases in female employment in the labor market in the coming years in Türkiye.

As important as achieving significant gains in education in a short period, like 20 years, is ensuring the sustainability of these gains by continuously improving their quality. This study particularly focuses on these areas of improvement.

One area of improvement is related to the capacity of higher education supply. It is well-known that the number of applicants for higher education increases every year. However, despite this demand, the Council of Higher Education (YÖK) and universities have not been successful enough in increasing face-to-face teaching capacity supply espicially over the last 7 years. Instead, there has been a systematic effort to create capacity through distance education programs. This approach has reached a point where, as of 2021, 58% of students in public universities, or 4,454,128 students, have participated in distance education programs (Yurdakul et al., 2022). However, it is important to note that face-to-face teaching not only provides educational opportunities in the respective programs, but also supports the multidimensional development of young individuals on campuses. Although, in 2022, the reduction of distance education's share from 58% to 46% among students in public universities is significant and positive in this context (Yurdakul et al., 2023), the issue persists. This issue poses a serious risk for the future of the country. Additionally, it raises questions about the quality of the areas of improvement mentioned above.

On the other hand, the fact that the existing face-to-face teaching capacity is predominantly created through universities established before 1992 carries the risk of negatively affecting the performance of these universities, which have already higher performance in postgraduate studies.

The capacity constraints in face-to-face education have led to significant declines in the transition ratios of high school graduates to higher education. Previously, one out of two students could made transition to higher education, but nowadays only one out of three students can make that transition. Moreover, the inadequacy of supply in higher education is beginning to threaten the access of graduates from schools, such as Science High Schools, which perform well above the OECD average in the PISA surveys, to higher education. In this context, the contraction affects students at all levels of achievement. If the Higher Education Council's policy of primarily producing capacity through distance education continues in the next few years, an inevitable increase in the pressure of the Higher Education Entrance Exam (YKS) is expected. The pressure from the YKS exam will also affect the exams used for transition to high school, such as the LGS exams. This situation could exacerbate the long-standing issue of exam pressure in the education system to even more critical levels.

For Türkiye to capitalize on its youthful population as an opportunity, the expansion and massification of higher education over the past decade were aimed at increasing access to higher education. The number of universities increased by approximately threefold, with at least one university established in every province. With this expansion, the enrollment ratio in higher education began to rise steadily, and Türkiye experienced the massification of higher education, a phenomenon that developed countries had undergone after World War II. However, despite all these steps, a serious bottleneck in accessing formal higher education has been observed, especially since 2015. Those entering higher education are increasingly finding a place in distance education programs. In other words, the higher education system is unable to generate a supply that is compatible with demand; instead, it attempts to generate capacity through distance education. Currently, more than half of the 8 million students enrolled in higher education in Türkiye are registered in distance education programs in 2021. In other words, the higher education system in Türkiye cannot accommodate more than half of the students in face-to-face education.

Without solving the issue of access to higher education, it is not possible to eliminate the examination pressure in secondary education. Therefore, at this point, there is a need for a situation assessment. Either the number of universities is insufficient to meet the demands despite all the increases, or the capacities of existing universities cannot be used efficiently. Alternatively, both possibilities may be valid together. A rapid situation assessment should be made, and steps towards a solution should be taken as soon as possible.

In this regard, there are two steps that can be taken. Firstly, the existing face-to-face education programs need to be systematically restructured. This way, the capacities of face-to-face education programs can be increased efficiently. The second step that can be taken is to increase the number of state universities. Currently, there are 209 universities, but 79 of them are the foundation higher education institutions. The share of these 79 foundation institutions in the current student capacity is only 8%. Therefore, the most permanent solution to improve the current situation is to open new public universities to increase the opportunities for face-to-face education.

Another critical area for improvement is the research performance of the existing higher education institutions in terms of scientific knowledge production. The most crucial point here is related to the number of doctoral graduates. As mentioned earlier, the number of graduates from all disciplines in Turkish higher education system is far from meeting the country's needs. While Türkiye currently has almost 10,000 doctoral graduates per year, in countries Türkiye compete with, such as Germany, the United Kingdom, the United States, Russia, and China, the number of doctoral graduates ranges from 20,000 to 70,000. Considering that the number of doctoral graduates was at the level of a few thousand in the 2000s, there has been a significant increase. However, when compared to countries like Germany, which has consistently produced over 20,000 doctoral graduates for the past 30 years, the current situation makes it challenging to support research and development capacity.

On the other hand, doctoral graduates constitute the most crucial human resource for meeting the teaching staff needs of universities. Given the increase in the number of universities in the last 20 years, the increase in the number of doctoral graduates is of utmost importance. At the current stage, the number of doctoral graduates is far from making this expansion sustainable in higher education. As a result, newly established universities are struggling to function with a small number of faculty members, negatively impacting the quality of services provided. In this situation, although averages may improve, differences in the number of students per faculty member are quite high when considering individual universities and departments. In departments or universities where there are not enough teaching staff, the excessive workload of instructors negatively affects their performance in scientific knowledge production as well.

This inadequacy in the number of doctoral graduates also negatively affects the scientific publication capacity of higher education institutions. Although the number of publications increases every year, a significant portion of this increase is due to the increase in the number of faculty members. On the other hand, the number of citations to publications has decreased to a concerning extent. This situation indicates a crisis in terms of the international recognition of scientific production in higher education institutions in Türkiye. Therefore, postgraduate education, especially doctoral education, should be thoroughly examined and planned for the long term.

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