

A comparative analysis of healthcare expenditures in OECD and Türkiye¹

Abdurrahman Erdal^{1,*} & H. Bayram Isik^{2,a}

¹ Ph.D. student, Kirikkale University, Faculty of Economics and Administrative Sciences, Kirikkale, Türkiye

² Professor, Kirikkale University, Faculty of Economics and Administrative Sciences, Kirikkale, Türkiye

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Abstract

This study discusses how the health expenditures in OECD countries and Türkiye are financed, and the similarities and differences in health expenditures. With the COVID-19 pandemic, 2020 was a year in which the economy slowed down but health expenditures increased. Total health expenditures worldwide reached 8.7 trillion dollars in 2020. In Türkiye, the total health expenditure increased by 24.3% in 2020 compared to the previous year and reached 249 billion 932 million TL. The ratio of current health expenditure to GDP was 4.6% in Türkiye in 2020, while the average of OECD countries was 8.8%. States appear as the party that covers the vast majority of health expenditures. While the ratio of general government health expenditure to total health expenditure in Türkiye is 79.2% in 2020, average of OECD countries is 73%. When inter-country per capita health expenditures are compared, we can see that the inter-country differences are very large and some countries spend only 1% of GDP and some more than 10% of their GDPs for health services. This study covers the data set from year 2000 to 2020, when all health expenditures data are fully available, and analyzes comparatively the health expenditures of the OECD and the Turkish health expenditures during this time period. The results show that Türkiye is in the last place between 2000-2020 in total health expenditures among OECD countries but improving in almost all indicators related to healthcare.

1. Introduction

The spread of Covid-19, which emerged at the beginning of 2020 and gradually increased its impact, has once again shown us how important the developments in the field of healthcare are. Just like all other countries, Türkiye has been negatively affected by this virus, and the economic and social problems in the country have seriously increased. The Covid-19 pandemic, which has still not ended and caused the reorganization of social life, has had important psychological consequences as well as physical, social, economic and political effects all over the world.

A healthy society is of great importance for the development of a country as well as being a qualified human resource. The health of the individuals in the society are closely related to the provision of the needed health services. All expenditures made for the protection, development and maintenance of human health and the treatment of existing diseases are included in the scope of healthcare expenditures. Although it differs from country to country, health expenditures, which are known to be effective on economic growth and development, constitute one of the most important expenditure items in all countries. Especially in developed countries, the shares of health expenditures allocated from their budgets are relatively higher than in other countries. While health expenditures are one of the most discussed issues in recent years, it also constitutes one of the main areas of health economics (Boz and Sur, 2015: 24). The main goal of all countries and health systems is to create a

¹ This study is related to the PhD thesis of Abdurrahman ERDAL.

* E-mail: abdurrahmanerdal@gmail.com & ORCID: <https://orcid.org/0000-0003-2292-4426>

^a E-mail: hbayram@kku.edu.tr & ORCID: <https://orcid.org/0000-0002-5228-4004>

healthy individual and a healthy society. Therefore, the health expenditures of the countries are increasing day by day and gaining more importance. In addition, since comparisons can be made between countries, characteristics and effects of these expenditures are important, as well. This study aims to reveal the position and ranking of Türkiye within OECD countries in terms of health expenditures during the period of 2000-2020.

2. Literature Review

According to Akdur (2020), countries have to spend at least a certain amount per person, even for the basic health services that individuals need. If the health expenditure is less than this amount, it means that the people of the country cannot benefit from the most basic health services. Although health expenditures are generally shaped within the framework of the socio-cultural values of the countries and the health system implemented by the country, the reasons for the increase in health expenditures are generally similar regardless of the socio-cultural values of the countries, the applied health policies and their level of development.

Basically, it has been revealed in the literature that economic, social-cultural and technological factors are effective in the increase in health expenditures (Hansen and King, 1996: 127). Many factors such as increase in personal income, technological developments in medicine, change in demographic structure, increase in global health risks, increase in chronic diseases, change in insurance coverage, urbanization, increase in education level and health awareness, easier access to health services, changes in social value judgments, prolongation of life expectancy, changes in social order and personal lifestyle affect health expenditures (Khanolkarvd., 2016: 34-35). The most important factor affecting health expenditures is the increase in per capita income. Individuals tend to buy goods and services that will enable them to continue their lives more comfortably with the increase in their income. People increase their demand for other goods and services, especially when basic services are provided by the state or other institutions. In this case, it is seen as an expected development that individuals who want to improve their living conditions will increase the demand for health services (Mutlu & Işık, 2012:216).

The scarcity of resources allocated to health in developing countries is among the main problems in the delivery of health services. While the relevant countries are insufficient in providing the necessary health services to their population, they cannot prevent this inadequacy with a rapid population growth. Of course, this situation makes it difficult to access health services offered in underdeveloped and developing countries (Mutlu & Işık, 2012).

Compared to developed countries, infectious disease cases and resulting deaths are more common in developing countries. At this point, the health expenditures that countries will make in order to protect them from epidemic diseases will both protect the current population from infections and protect future generations. At the same time, it is stated that it will prevent international health expenditures that may occur due to the epidemic and contribute to the health economy (Mushkin, 1962; Akın, 2007).

One of the reasons for the increase in health expenditures is today's vital differences. The diseases caused by the period and the past experiences of individuals affect the demand for health expenditures (Yıldırım et al., 2018: 551). Health has many economic, social, cultural and environmental components. Imbalances in income distribution are closely related to health protection, basic needs, compulsory foods, medical aid and other issues (Kalyoncu, 2011: 25).

Most of the developed countries want to increase the efficiency of health services in order to develop human capital. Therefore, they aimed to protect human health by allocating a larger share of the Gross Domestic Product (GDP) to health expenditures. (Tokgöz, 1981: 498).

Therefore, strengthening primary health services is seen as an effective policy tool. Primary care is expected to play an important role in producing effective policy tools in the health sector by limiting unnecessary hospitalizations and reducing associated hospital costs (OECD, 2020). In OECD countries, there is a mismatch between skills and duties in primary care teams, and population and patient needs (Frenk et al, 2010).

In their study, Çetintürk and Gençtürk analyzed 14 different expenditure variables used by 36 OECD countries in health services between 2003 and 2017 using the Ward method, and as a result of the analysis, the countries were clustered according to their health expenditure types and the countries that Türkiye showed the most similarity in various health expenditure types are Estonia, Latvia, Mexico, Czech Republic, Luxembourg, Belgium and Australia. This result indicated that Türkiye lags behind developed countries in health expenditures and is in the same cluster with countries with relatively low health expenditures (2020).

There has been a lot of progress in the field of health in Türkiye in recent years. For example, social security institutions were combined in 2006, everyone living in Türkiye was taken under health insurance with the Social Security and General Health Insurance Law that came into force in 2008, the Strategic Plan of the Ministry of Health was accepted in 2009, and the family medicine institution was established in 2010 (Sülkü , 2011). Contrary to the narrow-framed and weak implementations of reforms carried out in previous years, the reforms

after 2003 were carried out within the framework of a comprehensive program and fundamental reforms were made with the aim of creating a new system (Yilmaz, 2018).

3. Data & Methodology

In this study, a comparison was made on the health data of OECD and Türkiye. The data from 2000 to 2020 were obtained from the World Bank, OECD and TSI (Turkish Statistical Institute).

Some factors affecting health expenditures of OECD countries and Türkiye were considered as, life expectancy at birth, number of doctors (per 1000 people), mortality at birth, number of hospital beds (per 1000 people), urbanization, ratio of total health expenditure to gross domestic product.

One of the most important factors affecting health expenditures is life expectancy at birth, that is, average life-span. In developed countries, the increase in the quality of life with increasing income, technological advances and the development of more effective drugs against diseases have provided significant increases in the life span of people. Living longer means that people demand more health care services and spend more on health care. While good living conditions prolong the average lifespan, the prolongation of the average life expectancy causes the population to age and health expenditures to increase (OECD, 2005: 90).

Table 1. Data on Selected Indicators in OECD Countries and Türkiye

Countries/Years/Indicators	GDP Per Capita Current US\$		Life Expectancy at Birth (Years)		Population Age 65 and Over (% of Total Population)		Length of Hospitalization (days)	
	2000	2020	2000	2020	2000	2020	2000	2020
Türkiye	4337	8536	70	77	6.2	8.98	5.6	4.5
OECD	23007	38116	77	80	13	17	7.2	9.4

Source: Word Bank, 2022.

According to Table-1, life expectancy at birth has increased significantly in the last 20 years, increasing from 70 to 78 years in Türkiye compared to 77 to 80 in OECD countries.

The health level of the society; factors such as climate, environment, access to clean water, literacy rate also affects it. Variables such as the number of beds in the hospital, doctors per thousand people, and length of stay in the hospital are also determinants in health expenditures (Yalçın & Çakmak, 2016: 709). Health services are also one of the important indicators of the economic and social development levels of countries (Tutar & Kılınç, 2007: 32).

As it can be seen from the Table-1, GDP per capita is another important determinant of health expenditure and from 2000 to 2020 Türkiye's GDP increased from 4337 to 8536, while the OECD average rose from 23007 to 38116 Dolars.

Table 2. Data on Selected Indicators in OECD Countries and Türkiye

Countries/Years/Indicators	Mortality at Birth		Number of Doctors (per 1000 people)		Number of Hospital Beds (per 1000 people)	
	2000	2020	2000	2020	2000	2018
Türkiye	30.9	8.1	1.3	2.05	2.1	2.85
OECD	11.0	6	3.0	3.8	5.5	5

Source: Word Bank, 2022.

There has been a significant decrease in the mortality at birth in Türkiye in the last two decades compared to OECD average (Table-2). We can attribute this to health reforms and developing technology in Türkiye. Moreover, the increase in the number of hospital beds and doctors per capita is higher than the OECD averages.

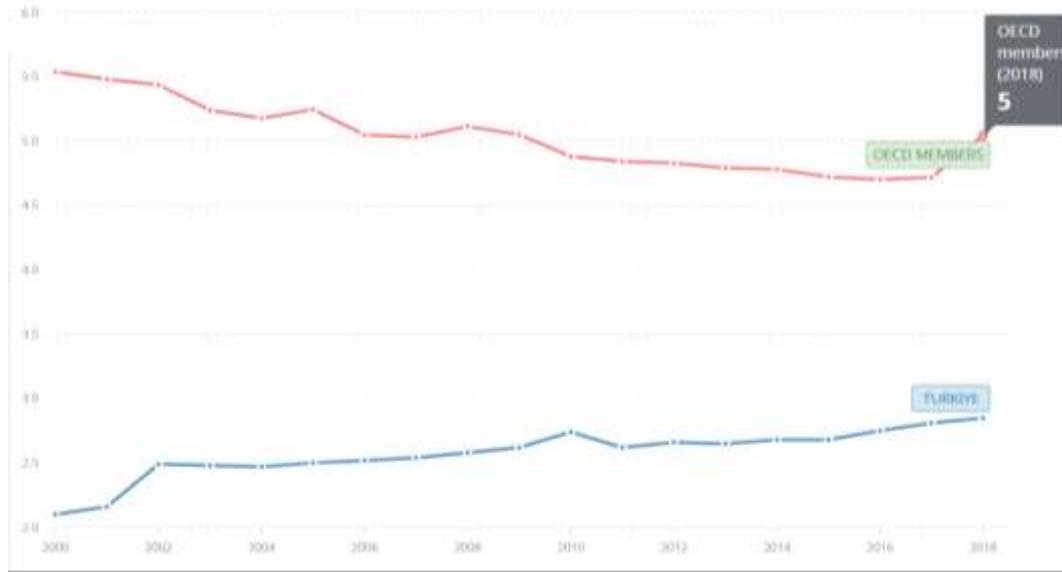


Figure 1. Hospital Beds (Per 1000 People)- Türkiye, OECD Members

Source: Word Bank, 2022.

In Figure-1, while the rate of the number of hospital beds per 1000 people decreased in the last twenty years in OECD countries, it had a steady upward trend in Türkiye except for a year 2011. This could be to do with the increase in the number of hospitals built in Türkiye in recent years.

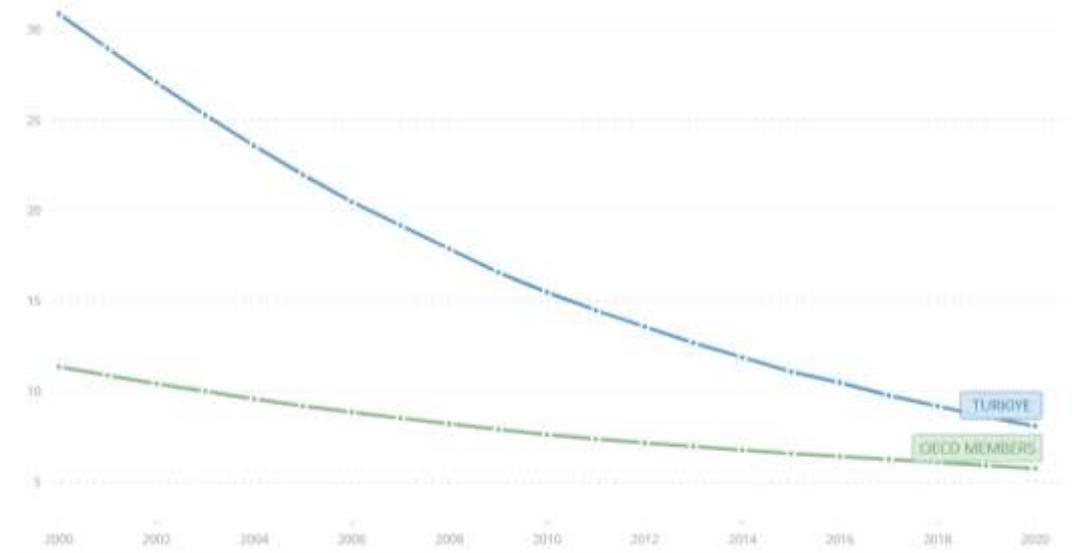


Figure 2. Mortality rate, infant (per 1000 live births)-Türkiye, OECD members

Source: Word Bank, 2022.

According to Figure 2, the mortality rate at birth in Türkiye decreased from 30.9 to 8.1, approaching the OECD average of 6. On the other hand, urbanization causes an increase in the demand of individuals for health services. The demand for health services is increasing due to epidemics and similar diseases that people may encounter as a result of living together. This means an increase in physical areas, health employment and health expenditure. The increase in the rate of urbanization day by day may cause inadequate health services and an increase in epidemics (Akin, 2007).

Table 3. Urbanization

Countries/Years/Indicators	Urbanization (%)	
	2000	2020
Türkiye	64,7	76,1
OECD	75,6	81,0

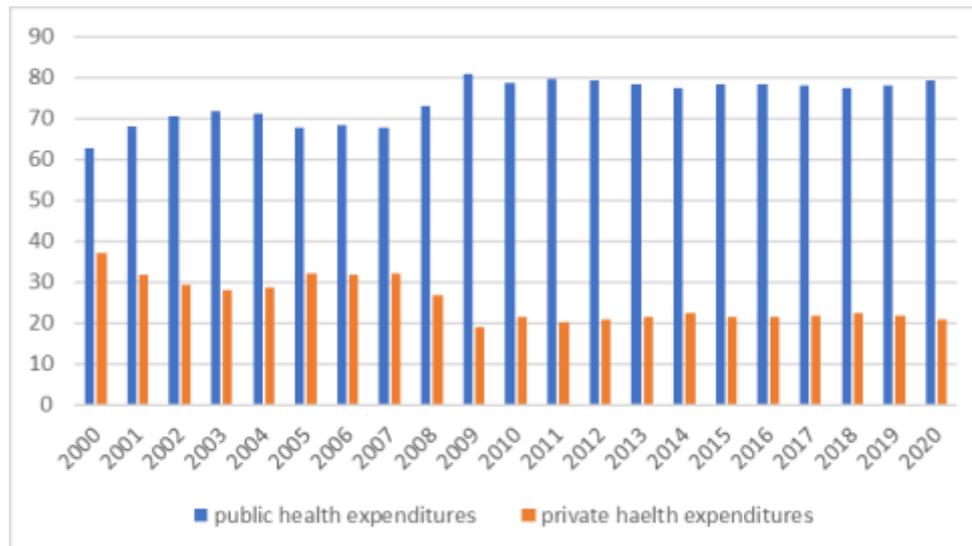
Source: Word Bank, 2022.

In Table-3, it is seen that the urbanization percentage of OECD countries is higher than Türkiye. However, the increase in the rate of urbanization in Türkiye in the last 20 years has increased at a higher rate than the average of OECD countries.

3.1. Health Expenditures in Türkiye

Health services are mostly provided by the public. When the income elasticity of public goods and services is assumed to be higher than one, a one-unit increase in individuals' income causes an increase in the demand for health services by more than one unit (Görgün, 1993). In other words, the increase in the income of individuals will lead to an increase in the demand for health services from the private sector (Mutlu & Işık, 2012).

In the field of health services, Türkiye has made great strides compared to its past periods. At this point, many activities have been carried out in the field of health, such as the transformation in the social security system and the acceleration of modern hospital formation in the last 15 years. In terms of the provision of health services, one of the brightest periods of the Republican period is being experienced.

**Figure 3.** Ratio of Public and Private Health Expenditures to Total Health Expenditures in Türkiye

Source: TSI, 2022.

Health expenditures have increased over the years in both private and public sectors. However, the share of public sector health expenditures in total health expenditures in every period is higher than the share of private sector health expenditures. While public sector health expenditures increased significantly, especially during crisis periods, private sector health expenditures either remained the same or turned into a declining form. Figure-3 shows how much of the total health expenditures are financed by the private sector and how much by the public sector.

Although an increase is observed in health expenditures in Türkiye over the years, investment expenditures have not increased at the same pace. However, health investment expenditures have also recently shown a significant increase (especially after 2017).

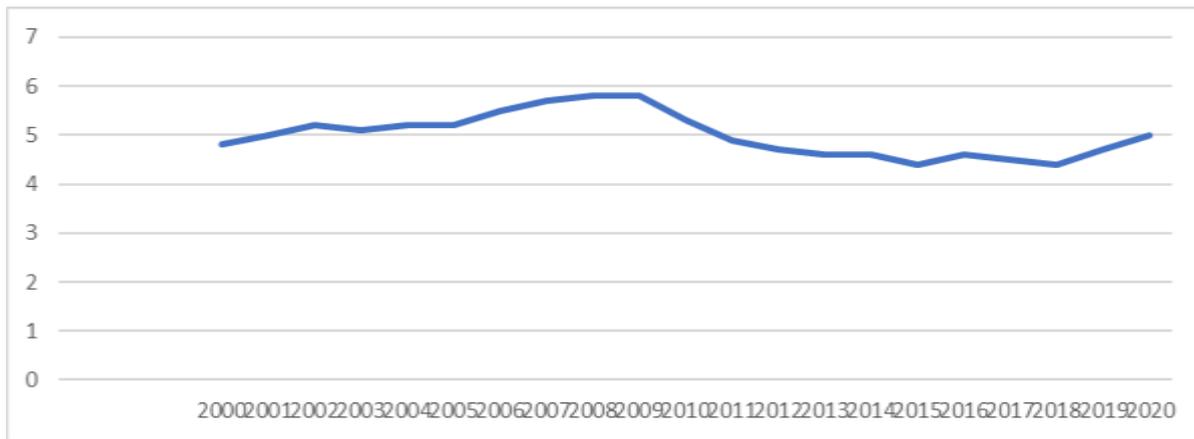


Figure 4. Ratio of Total Health Expenditure to Gross Domestic Product in Türkiye (%)

Source: TSI, 2022.

The years with the highest health expenditures in GDP were 2007, 2008 and 2009 (Figure-4). The share of the public sector's health expenditure in GDP was the highest in 2009 with 5.8, while the share of private sector health expenditures in GDP was the lowest. This could be to do with the 2008 global economic crisis. All these data indicate that the public sector is the leading financier in the field of health expenditures for Türkiye.

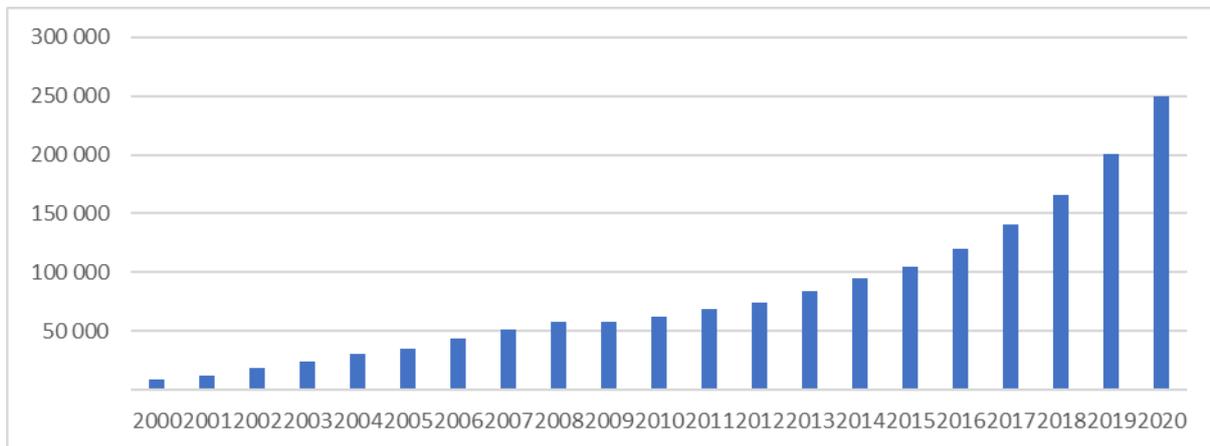


Figure 5. Total Health Expenditures in Türkiye

Source: TSI, 2022.

Total health expenditure increased by 24.3% in 2020 compared to the previous year and reached 249 billion 932 million TL. General government health expenditure increased by 26.3% and reached 198 billion 62 million TL. Private sector health expenditure was estimated as 51 billion 869 million TL with an increase of 17.3% (TSI, 2021).

The ratio of general government health expenditure to total health expenditure was 79.2% in 2020, while private sector health expenditure was 20.8%. Looking at the sub-components of the general government and private sector in 2020, the Social Security Institution (SGK), the central government, the households, the insurance companies, the non-profit organizations and local administrations had a share of 51.0 %, 27.6%, 16.0%, 2.6%, 2.1%, and 0.7%, respectively (TSI, 2021).

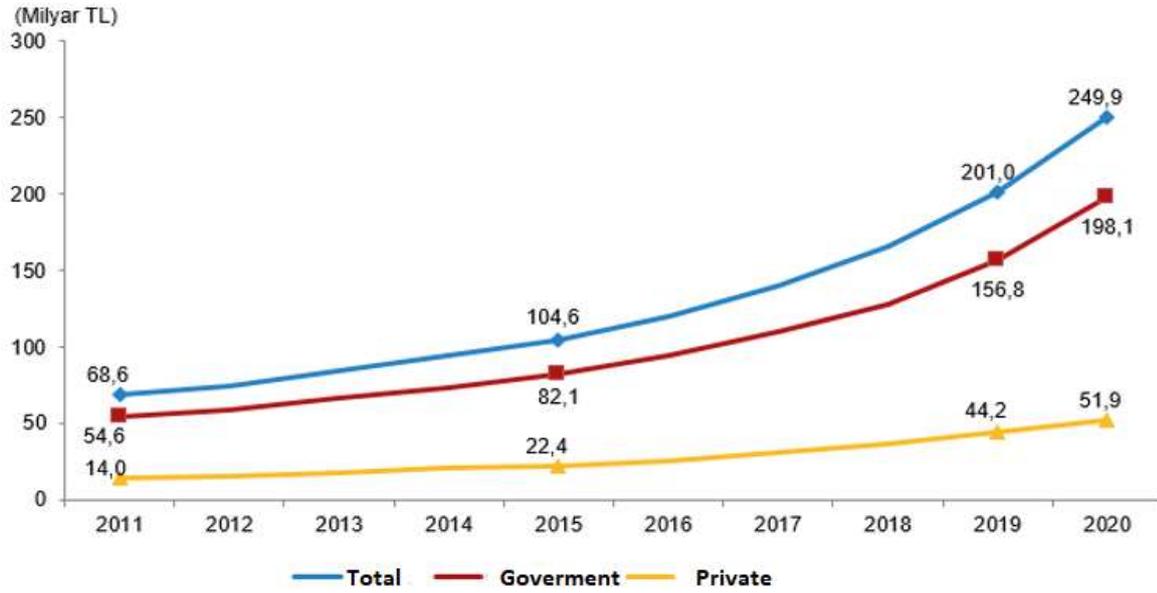


Figure 6. Comparison of Total-Public-Private Health Expenditures in Türkiye (2011-2020)

Source: TSI, 2022.

Health expenditures reached the peak point in 2020 with 250 billion TL in Türkiye. In the same period, total health expenditure has reached its highest level since 2000. In this increase, the rise in the demand for health services with the rapid increase in the population can be expressed as an important factor. In addition, the reason for the peak of spending in 2019 and 2020 is the Covid-19 epidemic which broke out in 2019. During this period, total health expenditures in Türkiye increased almost 1.5 times.

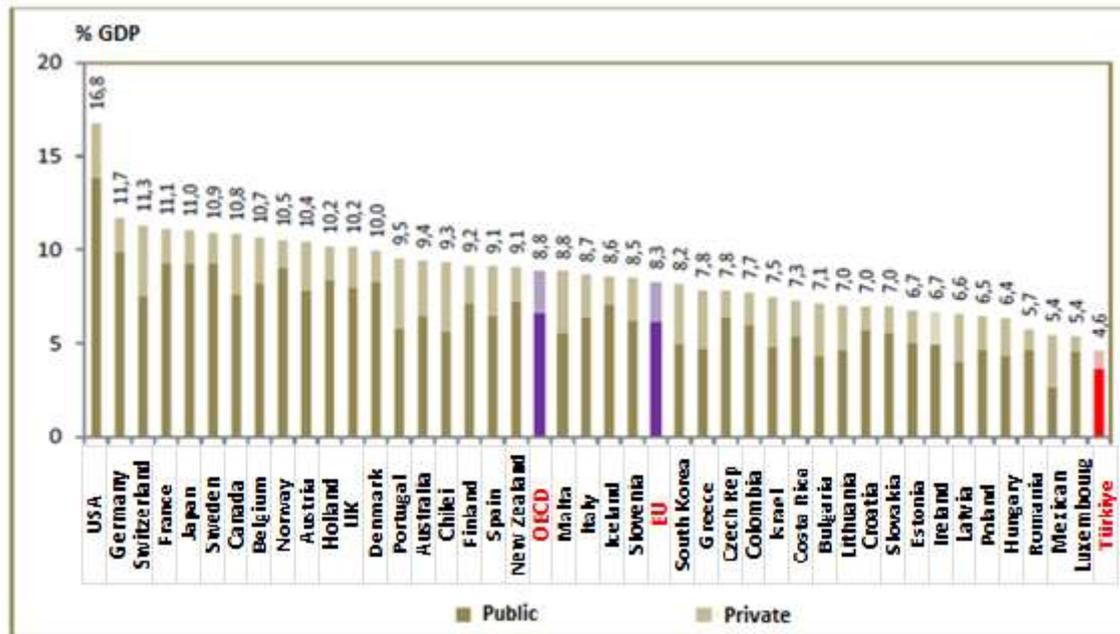


Figure 7. Comparison of Health Expenditures in Türkiye and OECD Countries

Source: TSI, OECD Health Data 2021

Note: Country data refer to 2019 or the nearest year. Data of Türkiye is for 2020.

Figure-7 shows private health expenditures and public health expenditures by country. At this point, the OECD average can be considered as a benchmark. The health expenditures of the countries were mostly financed by the public sector.

Among the countries in Figure-7, Türkiye is the country with the lowest share of health expenditures in GDP with a rate of 4.6%. The closest country to Türkiye is Luxembourg.

While the country with the highest public sector health expenditure in total health expenditures is Luxembourg, the country with the least public financing is Mexico. Of course, this situation can also be caused by the differences in the health expenditures of the individuals living in the country and the health systems.

Table 4. Total, Public and Private Health Expenditures per Capita

Countries/Years/Indicators	Total Health Spending per Capita US \$		Public Health Spending per Capita US \$		Private Health Spending per Capita US \$	
	2000	2020	2000	2020	2000	2020
Türkiye	432	1.304,7	266	1.029	124,9	214,4
OECD-Average	1.765	3.484	1.298	3.346	336	681,3

Source: OECD, Health Data 2022

Türkiye's total, public and private health expenditures remained below the average of OECD countries between 2000 and 2020. When we look at the total health expenditures, we can see that the expenditures in Türkiye have increased proportionally more than the OECD average. A similar perspective applies to public health expenditures. However, the same cannot be said for private health expenditures.

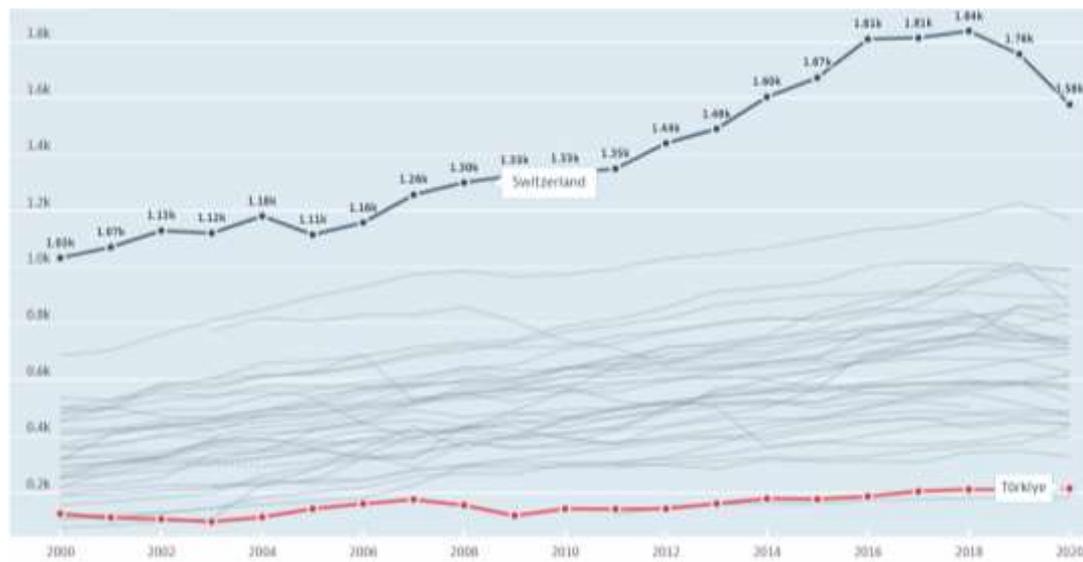


Figure 8. OECD-Türkiye Comparison of Out-of-Pocket Expenditures, 2000-2020

Source: OECD Health Data, 2022.

While Türkiye ranks among the last in out-of-pocket health expenditures among OECD countries between 2000 and 2020, Switzerland has been the country with the highest out-of-pocket spending by a clear margin.

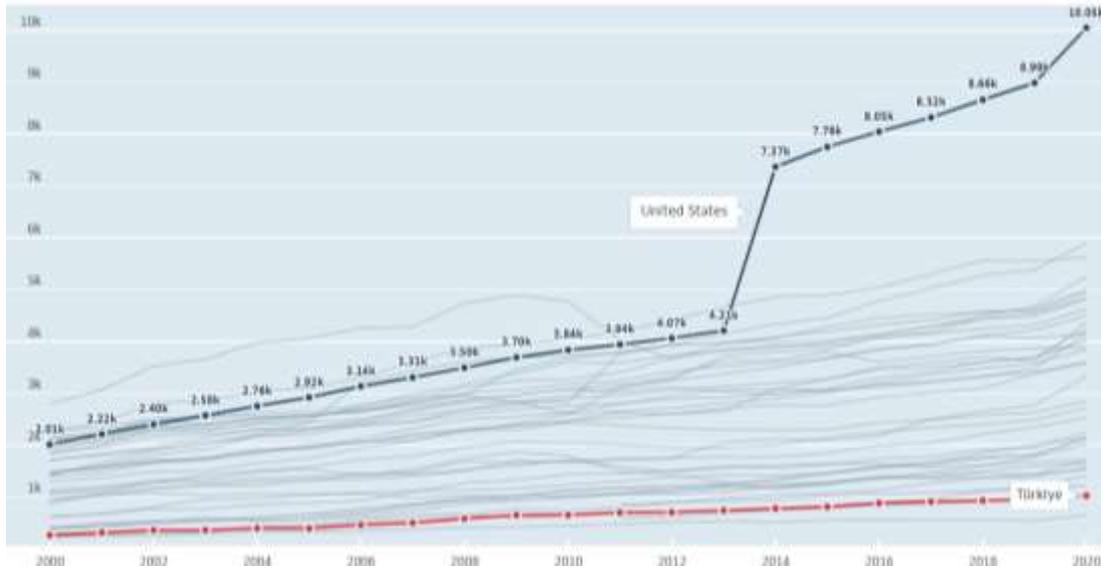


Figure 9. OECD-Türkiye Comparison of Public Health Expenditures, 2000-2020

Source: OECD Health Data, 2022.

In public health expenditures between 2000 and 2020, Türkiye was again in the last place in OECD countries. While the country with the highest spending was Luxembourg before 2011, the USA has been the country with the highest out-of-pocket spending compared to other countries after 2013.

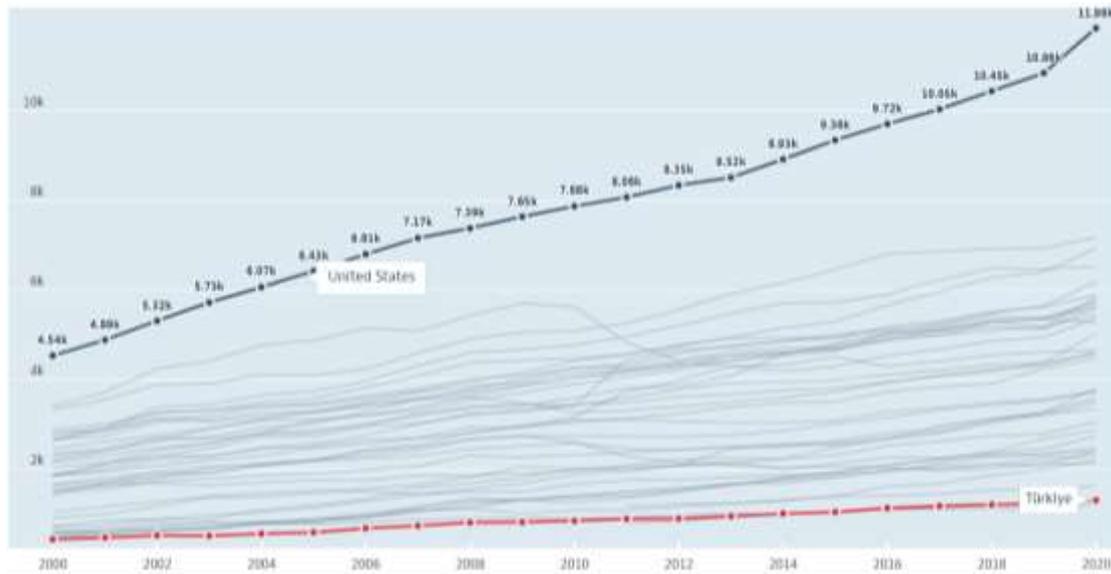


Figure 10. Total Health Expenditure Comparison of OECD-Türkiye

Source: OECD Health Data, 2022.

Türkiye was in the last place in total health expenditures between 2000-2020. The USA has been the one with the highest health expenditure by a clear difference compared to other countries. While Luxembourg was in the second place in the ranking of the countries with the highest health expenditures until 2010, Switzerland became the second after 2010.

4. Conclusion

The health expenditures varies with population and the intensity and spread of diseases. In recent years, with the Covid-19 pandemic, world countries have made various changes in order to use health expenditures more effectively. The differences in the healthcare systems also reveal differences in the presentation and financing of health expenditures. At the same time, economic development and education level appear as important variables in the field of health services. The development level of countries can also affect the budgets they allocate to health expenditures and health investments. This affects life expectancy, birth and death rates, as well.

In terms of financing health expenditures, all countries have both public and private financing at different rates. This is to do with health system or social security system of the relevant country. In Türkiye, almost %80 percent of health expenditures is financed by public sector. As for delivery of health services, there are health institutions belonging to the private sector as well as public health institutions.

With the increasing population in Türkiye, mainly due to refugees from Syria and Afghanistan, health expenditures increased over time. Therefore, the rate of participation in the Social Security System has increased rapidly with the reforms, and the public health expenditure burden has increased.

With the Health Reform Packages made after 2002 in Türkiye, there has been an increase in health expenditures but still not enough compared to OECD countries. While the total health expenditure per capita in Türkiye in 2000 was 432 dollars, it became 1.304 dollars in 2020. The average of OECD countries has reached 3,484 dollars from 1,765 dollars. The average of OECD countries in total health expenditures per capita has reached almost 3 times that of Türkiye. Mortality at birth and number of hospital beds approaching OECD average.

Economic crises and pandemics have a great impact on health expenditures. While the private sector health expenditures started to decrease with the crisis, the public sector health expenditures increased. Although there are improvements in many indicators, Türkiye performs very poor at almost all categories/indicators and needs stronger economy and policy changes to reach to OECD averages.

Countries should identify the best practices to promote better policies for better lives in order to improve their health systems and decrease burden on the public sector. It will be an important step to utilize public resources in a more productive and efficient way and promote the private sector to participate more in health expenditures.

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