

## The Effect Of The Economic Crises After 2000 On Private Hospitals In Turkey

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## ABSTRACT

A local or global economic crisis has serious economic consequences. The severity and duration of crises, which may occur due to more than one factor, may vary depending on these factors. The economic crisis has a negative impact on the health sector as well as all other sectors. The main purpose of the study is to determine the effect of the economic crises after 2000 on private hospitals in Turkey. For this purpose, a total of fourteen parameters such as the number of private hospitals, the number of beds, the total number of imaging, the number of applications to the physician, the number of inpatients, the total number of surgery and the number of physicians were examined. Within the scope of the study, document analysis was carried out as a method. Turkey Health Statistics Yearbook (2020) belonging to the Ministry of Health were taken as a basis in the said document review. When we look at the historical background of Turkey, it is seen that there was an economic crisis in 2001, 2008 and 2016. The 2001 crisis was excluded due to insufficient data. It has been observed that the number of private hospitals in Turkey has increased every year, regardless of the crisis. No effect of the 2008 crisis on the analyzed parameters was observed. When the parameters are evaluated, it was determined that the economic crisis experienced only in 2016 had a negative impact on private hospitals. This crisis had a negative impact on eight of the fourteen parameters examined.

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## INTRODUCTION

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The word crisis is etymologically derived from the Greek word 'krisis' which means decision (Aktan and Şen, 2001). The crisis in general; it is defined as an unexpected situation that mostly affects all small and large organizations negatively and creates damage and losses (Hoştut, 2019). It is possible to talk about types of crises in different fields, but since the focus of this study is economic crises, the others will not be mentioned. Crises that occur on an economic basis and also have economic consequences with their effects are considered as economic crises. As crises are easier, more frequent and more pervasive with the effect of globalization, in generally global crises are occur (Apak and Ataç, 2009). For this reason, it can be said that all world economies have faced crises from past to present (Memişoğlu and Durgun, 2011).

When we look at the history of Turkey, it is seen that there are small or large scale economic crises. However, the economic crises that have been experienced since the 2000s will be scrutinized in terms of their relevance to the periods in which the private health sector existed in Turkey, their belonging to recent periods and the measurement of their effects. Since the health data of 2000-2001 were not reached in the document review, this crisis year will be excluded from the evaluation. For this reason, the crises experienced in 2008 and 2016 will be briefly mentioned below. In the continuation of the study, the word crisis will be used to describe the economic crisis.

*The Crisis of 2008:* The crisis, which started in 2007 and made itself felt in 2008, is external origin rather than domestic reasons (Sancak and Demirbaş, 2011). Problems in the repayment of mortgage loans given to low-income households due to the rise in interest rates in the USA have affected the countries of the world. In this process, developing countries were less affected by the crisis compared to other countries (Yıldırım, 2010).

*The Crisis of 2016:* For Turkey, 2016 has been a difficult year in every respect due to the overlap of many crises. In this year internal conflicts, street incidents, terrorist incidents, suicide bombings and the "July 15 Coup Attempt" happened (Karagül, 2016). All these have both deeply injured the country sociologically and caused great damage to the country's economy. Such that its effects have been felt for many years. Events such as the contraction experienced in the country's economy after seven years, downsizing and the excessive increase in foreign currency values are associated with this crisis (Davras and Aktel, 2018).

### 1.1. Health Sector in Turkey and the Effects of Crises on the Sector

Since the establishment of the Ministry of Health in Turkey, it has been in a health structuring in parallel with the shaping of the economic, sociological and administrative structure of the country. Although there are some changes periodically, the social state mentality has prevailed in the provision of health services. Currently, the chief service provider is the Ministry of Health. Besides foundations, universities and private enterprises also play a role in the sector. Preventive (primary level), curative (secondary and tertiary level) and rehabilitative (tertiary level) services are provided in the country. Private hospitals take an active role in curative and rehabilitative services. There are a total of 1534 hospitals in Turkey, of which 900 (%58.7), 68 (%4.4) universities and 566 (%36.9) private hospitals belong to the Ministry of Health (T.R. Ministry of Health, 2020). These figures show us that the number of private hospitals in the provision of secondary and tertiary care is quite high.

The financial resources required for the provision of health services are mostly in the form of insurance services carried out by the Social Security Institution (SSI), private health insurances and out-of-pocket payments made by consumers. Recently, It is seen that the private sector has gained weight in recent investments, and even public hospitals are built with public-private partnerships. This situation causes private hospitals to take an active role rapidly in the health sector of the country, changes in health service delivery and economy. While private capital had a very limited place in the health sector before 1980, many countries have followed neoliberal policies since 1980. As a result, the health sector has received large amounts of private equity investment. For example; the share of the private sector in health expenditures, which was 5 million TL in total in 1999 in Turkey, was approximately 2 million TL. In 2020, the share of the private sector in spending, which reached 250 billion TL in total, increased to 52 billion TL (TSI, 2020). As can be understood from the situation in question; with the support of private sector investments in the country, the number of private hospitals has increased, serious employment opportunities have arisen for health human resources and the burden of service delivery on the public has been alleviated (Can and Eroğlu, 2016).

#### 1.1.1. Current Situation of Private Hospitals in Turkey

Private hospitals that can be established by real or legal persons; they can differ according to the types of activities, service units, number of beds, technological competencies and medical specialties. The number of private hospitals for which the Ministry of Health is authorized in the openings, licensing and inspections has shown a continuous increase over the years. In

2020, approximately %36.9 (566) of the total hospitals actively providing health services in the country are private hospitals. At the same time, it is seen that private hospitals have %20.8 (52.230) of the total number of beds in the sector (251.182) (T.R. Ministry of Health, 2019). Today, private hospitals are faced with some negative situations such as the low prices of HSN, the existence of city hospitals opened by the public (the increase in the quality of public health services with the establishment of city hospitals has affected the potential of patients who prefer private hospitals), the problems in the contracts made with the SSI and in the repayments. Besides; it is foreseen that they will continue to be an important partner in the health sector of the country as the leading power of health tourism with the health services they provide in international accreditation standards (Dömbekci et al., 2018).

### 1.1.2. Effects of Crises on the Health Sector

In addition to the uncertain demand for health services in general, some of the health needs are urgent, while an important part of them is partially postponed. In this context; when the economic crisis, the purchasing power of individuals will be adversely affected and non-urgent demands for health services may be delayed or reduced (Çıraklı, 2017). In addition, in this period, the private sector demand decreases as the demand for health services shifts to public health institutions where there is no out-of-pocket payment.

Institutions that provide health services have high personnel and material expenses in the service delivery process. For this reason, institutions need sustainable financing resources. In times of economic crisis, it is inevitable that various problems arise in the provision or use of financial resources. Accordingly, some disruptions or delays may occur in the health service delivery process. Therefore, in addition to the decrease in the demand for private health services, problems in supply may cause the sector to face serious losses (Gider, 2011).

#### 1.1.2.1. Effects of Crises on Service Delivery of Private Hospitals

The health sector is likely to be adversely affected by the economic crisis due to its service-intensive structure, the need to provide high-quality services, the predominance of economic resource use, high import rate, high dependence on foreign sources and technology (Çaman, 2009). For example; in a study conducted, it was seen that Acıbadem Health Services and Trade Inc. was adversely affected by the 2000-

2001 economic crises. The first private hospital in Turkey is the Private American Hospital, which was established by Admiral Bristol in 1920 (American Hospital, 2020). In the following years, private hospitals originating from foreign capital were opened. For this reason, although the economic crises experienced in those years did not reflect on the private health sector, they had negative effects on public hospitals (Gider, 2011). Until 2000, the private sector did not develop adequately, as the health sector did not receive enough investment in Turkey.

Private health expenditures, which amounted to 1.937 million TL in 1999 in the health sector in Turkey, had a regular increase until 2007. With the effect of the global crisis in 2008, these expenditures decreased in 2008 and 2009. Then, after the crisis effects disappeared, it increased steadily (TSI, 2020). While there were 271 private health institutions in 2002, it has been observed to increase every year except 2016 (T.R. Ministry of Health, 2019). The capital structure of private hospitals differs from public hospitals in terms of their profit motive. Especially after 2002, corporate private hospitals emerged and became a great power in service delivery in a short time (Kıyan, 2019). Considering the situation of private hospitals as the leading power in health tourism; the rise that started with the arrival of 163.252 health tourists in 2010 continued even in 2016, when the country was in a crisis environment and has continued until today (TSI, 2020). Private hospitals, which have a large market share, have a high contribution to the positive developments in the field of health tourism.

When we evaluate the effects of crises on private hospitals in general; we can say that it has been severely affected by the crises as it is suitable for unexpected situations during service delivery and the demand is uncertain. It is foreseen that the effects of the crises on the health sector and health institutions will be minimal if the necessary measures for the crisis are taken quickly and successfully implemented in the sector. On the other hand, it should not be forgotten that health systems generally emerge from crises by making health reforms (Hanefeld et al., 2018). In addition, the Health Transformation Program, which was initiated in 2003 in Turkey and successfully implemented by the Ministry of Health, has been a shield for the health sector in the face of crisis situations experienced in the country over the years (Çıraklı, 2017).

MATERIALS AND METHODS

The aim of this study is to evaluate whether private hospitals are affected by economic crises. For this purpose, document analysis, one of the qualitative research methods, was conducted. The document analysis method is known as a qualitative research method that is used to deal with the content of written documents in a comprehensive and systematic way (Kiral, 2020). In the study, the crises after the year 2000, when health data began to be kept regularly, were evaluated. In the review, the World Health Organization, OECD and Turkish Health Statistics Yearbook (2000-2020) were examined. However, it has been determined that data on private hospitals are only included in the Health Statistics Yearbook. For this reason, only the Turkey Health Statistics Yearbook 2020 is taken as a source. It has been determined that there has been an economic crisis in Turkey in 2000 and after 3 different times (2000-

2001, 2008 and 2016). However, the data for the year 2000-2001 were excluded from the evaluation as they were very incomplete. In the study, only the effects of the 2008 and 2016 crises were evaluated. In order to evaluate the effects of economic crises, 14 parameters related to private hospitals (Number of Private Hospitals, Number of Beds, Number of Qualified Beds, Number of Intensive Care Beds, Number of Medical Devices, Number of Imaging, Number of Applications to the Physician, Number of Inpatients, Total Number of surgery, Number of Hospitalized Days, Bed Occupancy Rate, Bed Turnover Rate, Number of Physicians and Patient Satisfaction Rate) were examined. In order to evaluate the effects of the crisis, these parameters were evaluated by considering the years before and after the crisis. The data is calculated as a percentage change, because to make it the change more visible.

RESULTS

The first crisis period that affected Turkey in the 2000-2020 period was in 2001. While examining the changes in the parameters examined in the study, the 2000-2001 crisis year was excluded because there was not have enough data. However, the data announced in this period are briefly evaluated. While there were 239 private hospitals in the country in 2001, it increased to 271 after the crisis year, increasing by %13. While 12.331 physicians were working in private hospitals in

the country during the 2001 crisis, this number became 11.766 after the crisis and decreased by %4.6. In 2002, in private hospitals; Although the number of qualified beds was 5.693, the total number of doctor visits was 5.697.170, the number of inpatients was 556.494, and the total number of operations was 218.837, no evaluation could be made about these, since there is no data for the crisis year and the year before the crisis.

Table 1. Comparison of 2008 and 2016 Crisis Years in Turkey in terms of Parameters.

PARAMETERS	2. PERIOD OF CRISIS			3. PERIOD OF CRISIS		
	2007	2008	2009	2015	2016	2017
Number of Private Hospitals	365	400	450	562	565	571
Number of Physicians	13.255	22.598	24.454	28.384	27.853	29.498
Number of Beds	17.397	20.938	25.178	43.645	47.143	49.200
Number of Qualified Beds	15.092	15.491	18.093	31.518	31.030	32.147
Number of Intensive Care Beds	4.299	4.416	5.183	13.569	14.018	15.379
Number of Medical Devices	-	574	-	5.313	5.359	5.572
Number of Imaging	-	1.716.693	2.795.559	14.886.472	14.020.755	14.945.533
Total Number of Surgery	986.224	1.383.671	1.665.984	1.604.126	1.499.829	1.525.685
Number of Inpatients	1.782.381	2.338.211	2.503.992	4.237.453	4.048.696	4.120.734
Number of Hospitalized Days	3.203.632	4.241.645	4.986.717	10.649.770	10.368.845	11.032.616
Number of Applications to the Physician	24.485.650	38.688.313	47.618.186	77.217.044	71.147.878	72.208.615
Bed Occupancy Rate	46	51	50.3	59.6	60.3	61.4
Bed Turnover Rate	93.4	101.9	92.1	86.6	85.9	83.8
Patient Satisfaction Rate	-	61.2	-	60.3	64.3	61.5

The second crisis period that affected Turkey in the 2000-2020 period was experienced in 2008. While 365 private hospitals were operating in 2007, it increased to 400 in the crisis year and to 450 in the year after the crisis. In other words, the number of private patients was not affected by the crisis and increased by %9.6 before the crisis and %12.5 after

the crisis. While 13.255 physicians were working in private hospitals in the year before the crisis, it increased by %70 to 22.598 in 2008, and reached 24.454 with an %8.2 increase in the year immediately after the crisis. In the year before the crisis, the total number of beds owned by private hospitals was 17.397, the number of qualified beds was 15.092 and the number of intensive care beds was 4.299. During

the crisis, these numbers increased by %20, %2.6 and %2.7 (total number of beds 20.938, number of qualified beds 15.491 and number of intensive care beds 4.416), respectively. In the year after the crisis, the total number of beds was 25.178, the number of qualified beds was 18.093 and the number of intensive care beds was 5.183, with increases of %20, %17 and %17, respectively. In addition, during the 2008 crisis, private hospitals had a total of 574 MR and CT devices throughout the country. With these devices, 1.716.693 views were reached. Although the data on the number of devices owned after the crisis could not be reached, the number of views increased by %63 compared to the year before the crisis and reached 2.795.559. While a total of 24.485.650 applications were made to physicians working in private hospitals in 2007, the number of applications increased by %58 to 38.688.313 during the crisis period, and reached 47.618.186 with an increase of %23 after the crisis. While there were 1.782.381 inpatients in private hospitals before the crisis, it was found to be

2.338.211 with an increase of %31 in the crisis year and 2.503.992 with an increase of %7.1 in the year following the crisis. Considering the number of days hospitalized, it was seen that it was 3.203.632 days in 2007, 4.241.645 days with an increase of %32.4 in 2008, and 4.986.717 days with an increase of %17.6 in 2009. When the total number of operations is examined; While it was 986.224 before the crisis, it was 1.383.671 with a %40 increase during the crisis period, and 1.665.984 with an increase of %20 after the crisis. The bed turnover rate, which was 93.4 before the crisis; It was realized as 101.9 with an increase of %8.5 in the crisis year and as 92.1 with a decrease of %9.8 after the crisis. While the bed occupancy rate of private hospitals was 46 before the crisis, it increased from 10.9 to 51 in the crisis year, and after the crisis, it was found to be 50.3 with a decrease of %1.4. Considering the satisfaction rate as the last parameter evaluated, it was determined that this rate was %61.2 in 2009, although no data was available before 2009.

**Table 2.** Percentage (%) Change of Examined Parameters in 2016 Crisis Compared to the Previous and Next Year

PARAMETERS	3. PERIOD OF CRISIS		
	2015	2016	2017
Number of Private Hospitals	+%1.08	+%0.5	+%1.06
Number of Physicians	+%0.5	<b>-%1.9</b>	+%6
Number of Beds	+%7.7	+%8	+%4.4
Number of Qualified Beds	+%7.6	<b>-%1.5</b>	+%3.6
Number of Intensive Care Beds	+%17.3	+%3.3	+%9.7
Number of Medical Devices	+%4.9	+%0.9	+%4
Number of Imaging	+%3.7	<b>-%5.8</b>	+%6.6
Total Number of Surgery	+%1.01	<b>-%6.5</b>	+%1.7
Number of Inpatients	+%8.6	<b>-%4.5</b>	+%1.8
Number of Hospitalized Days	+%11.8	<b>-%2.6</b>	+%6.4
Number of Applications to the Physician	+%6.7	<b>-%7.8</b>	+%1.5
Bed Occupancy Rate	+%3.5	+%0.4	+%1.1
Bed Turnover Rate	+%2.7	<b>-%0.7</b>	<b>-%2.1</b>
Patient Satisfaction Rate	+%2.5	+%4	<b>-%2.8</b>

The third and last crisis period that affected Turkey in the 2000-2020 period was experienced in 2016. In addition to the global economic problems, the negative effects of the coup attempt in Turkey were deeply felt in the year of the crisis, while 565 private hospitals were operating in the year, while it was 562 before the crisis and 571 after the crisis. Again, the number of private hospitals continued to increase with an increase of less than %1 after the third crisis Turkey experienced. As seen in Table 2, while 28.384 physicians were working in private hospitals in 2015, it decreased by %1.09 to 27.853 in 2016, and reached 29.498 with an increase of %1.06 in the year after the crisis. Despite the crisis, an increase has been observed in the number of hospitals established, but the number of employed persons has decreased. It is seen that private hospitals reduce the number of

employees first while implementing their downsizing strategies. In the year before the crisis, the total number of beds was 43.645, the number of qualified beds was 31.518, the number of intensive care beds was 13.569 and the total number of medical devices was 5.313. During the crisis period, the total number of beds increased by %8 to 47.143, the number of intensive care beds increased by %3.3 to 14.018, and the total number of medical devices increased by less than %1 to 5359. The number of qualified beds decreased by %1.5 during the crisis period to 31.030. Immediately after the crisis, the total number of beds was 49.200, qualified beds 32.147, intensive care beds 15.379 and medical devices 5.572, with increases of %4.4, %3.6, %9.7 and %4, respectively. While the number of applications made to physicians working in private hospitals was 77.217.044 in 2015, it decreased to 71.147.878 (-%7.8) during the crisis period, and

reached 72.208.615 with an increase of %1.5 in the year after the crisis. Considering the number of inpatients; The total number of inpatients, which was 4.237.453 before the crisis, decreased by %4.5 to 4.048.696 in the crisis year and increased by %1.8 to 4.120.734 in the year after the crisis. While the number of days spent was 10.649.770 before the crisis, it decreased to 10.368.845 (-%2.6) during the crisis, and increased to 11.032.616 (%6.4) after the crisis. While the number of surgeries performed in private hospitals was 1.604.126 in the year before the crisis, it became 1.499.829 with a decrease of %6.5 during the crisis period, and this number increased by %1.7 and became 1.525.685 after the crisis. While the total number of views in private hospitals was 14.886.472 in 2015, it reached 14.020.755 with a

decrease of %5.8 in 2016, which was the year of the crisis, and reached 14.945.533 with an increase of %6.6 after the crisis. While the bed turnover rate of private hospitals was 86.6 before the crisis, it became 85.9 with a decrease of %0.7 in the crisis year, and after the crisis, this rate was realized as 83.8 with a decrease of %2.1. While the bed occupancy rate was 59.6 before the crisis, it was 60.3 with an increase of %0.4 in the crisis year, and after the crisis it was found to be 61.4 with an increase of %1.1. Finally, while the satisfaction rate of patients who preferred private hospitals in the said period was 60.3 before the crisis, it was 64.3 with an increase of %4 in the crisis year, while it was 61.5 with a decrease of %2.8 after the crisis.

## DISCUSSION

In this part of the study, national and international studies were examined in order to evaluate the impact of economic crises on hospitals. The results of the studies identified in the examination were compared with our study results. First of all, if we talk about the studies in the international literature; in Greece, which is one of the countries where economic crises are experienced frequently, many studies have been carried out on how the health sector is affected during crisis periods. One of these studies was conducted by Rachiotis et al in 2014. In the study, it was concluded that the economic crisis in Greece caused a shortage of medical supplies in the health sector (Rachiotis et al., 2014). In the study of Zavros et al., it was concluded that health services were used less by the Greek people in times of crisis (Zavros et al., 2013). In another study conducted in 2011, Kentikelenis et al. found that long waiting times occur in health institutions during crisis periods (Kentikelenis et al., 2011). When we compare the findings of the studies conducted in Greece and the studies we conducted in Turkey, it is seen that the results obtained are similar. In the crisis of 2016 in Turkey, it was determined that there were decreases at different rates for parameters such as the number of physicians, the number of qualified beds, the total number of imaging, the number of surgery, the number of inpatients, the number of days hospitalized, the number of visits to the physician and the bed turnover rate.

Watts (2016) concluded in his study that there is an increasing patient demand during the developing economic crisis in Brazil (Watts, 2016). In our study, in the economic crisis in Turkey in 2008, the number of surgeries, the number of inpatients, the number of visits to the physician increased compared to the year before the crisis and continued to increase after the crisis. Therefore, a common effect was determined as a result of the two studies. De Vos et al. (2010) conducted a study in which they examined the effects of different economic crises that took place between 1996 and 2008 in Cuba on the national health system.

In the study, it was concluded that hospitals such as Cienfuegos, which operate in a good and strong national health system in Cuba, can be effective and efficient even under limited resource conditions (De Vos et al., 2010). In the study of Olafsdottir et al. examining the effect of the economic crisis in Iceland in 2013 on the health sector, it was concluded that the economic crisis in the country is a critical test of the resilience of the country's health system and they gave this test successfully (Olafsdottir et al., 2013). It has been determined that during the crisis that took place in Turkey in 2008, input parameters such as the number of beds, the number of devices, and output parameters such as the number of imaging, the number of surgery, and the number of patients were not affected by the crisis and continued their increasing trend. In addition, the number of private hospitals, the number of beds and the number of medical devices in the country continued to increase in both 2008 and 2016 without being affected by the crises. Therefore, it can be stated that the national health sector in Turkey has a developed and strong structure, especially in terms of private hospital management. In this context, it can be said that the results of the studies conducted in Cuba and Iceland show parallelism with the results of our study.

In their study, Kim et al. (2003) examined how the economic crisis in South Korea had an impact on the country's health system. As a result of the study, it was determined that the rate of use of outpatient and inpatient treatment services decreased (Kim et al., 2013). In our study, it was determined that the number of visits to the physician, the number of hospitalized patients and the number of days hospitalized during the crisis in 2016 decreased during the crisis compared to the pre-crisis period. In this respect, the results of the two studies seem to support each other.

When similar studies conducted at the national level are examined; First of all, in Çıraklı's (2017) doctoral thesis in which he analyzed the effects of economic crises originating in Turkey on health, it was

concluded that the effects of crises in general are variable and that they can have positive or negative effects on the stakeholders of the health field. This bidirectional effect was also seen in our study. In fact, it was determined that the country's health system was not affected much by the crisis in 2008, but the negative effects were determined in the crisis in 2016. Therefore, it has been understood that the effect level of the emerging crises is variable, that is, it varies positively or negatively depending on different factors. In addition, in our study, it was observed that the number of physicians, the number of qualified beds, the total number of operations, the number of inpatients, the number of days hospitalized, the number of visits to the physician decreased in some crisis periods (2016 crisis year) and increased in some crisis periods (2008 crisis year). These findings are in line with the results of Çıraklı's study. Çıraklı (2017) recommends that health expenditures should be increased especially during crisis periods in order to prevent the possible negative effects of economic crises on health in Turkey (Çıraklı, 2017)).

Gider (2011) conducted a study from the perspective of financial performance to determine how private

hospitals were affected by this process in times of economic crisis. Accordingly, it was concluded that a private hospital group in Turkey was adversely affected by an economic crisis in the country, but this negativity did not continue in the following years (Gider, 2011). In our study; eight of the parameters examined (the number of physicians, the number of qualified beds, the number of imaging, the total number of surgeries, the number of inpatients, the number of days hospitalized, the number of visits to the physician and the bed turnover rate) during the 2016 crisis period decreased compared to the year before the crisis, but after the crisis, it was observed that there was an improvement in these parameters after the crisis. When we examine the results of our own study together with the study of Gider; it is seen that the results of the two studies have similarities. In a study conducted by Bulduklu et al. in 2017, it was found that health tourism is an industry that is not affected by the crisis (Bulduklu and Karaçor, 2017). In this context, it shows that private hospitals operating in our country should focus more on health tourism in order to prevent or minimize the negative effects of possible crises.

## CONCLUSION AND RECOMMENDATIONS

In this study, which examines the effects of economic crises on private hospitals, the crises experienced in Turkey after 2000 were evaluated over fourteen selected parameters. When we look at the history of Turkey, there were three crises after 2000. However, since the health data of 2001 were insufficient, its effects could not be evaluated. Although the 2008 crisis had serious economic effects in our country and many other countries, no negative effects were found in the parameters of private hospitals that we examined. The factors that may cause this can be listed as follows;

- At the beginning of the 2000s, public hospitals remained behind in competition with private hospitals, preventing demand from shifting to the public,
- Positive effects of incentives to private hospitals,
- The growth trend of the health sector with the implementation of the health transformation program after 2003,
- The increase in the number of corporate private hospitals operating in the country,
- Private hospitals to focus on health tourism,
- Private hospitals appeal to a wider patient population through contracts with the Social Security Institution.

Unlike the previous crisis, the 2016 crisis had a negative impact on most of the analyzed parameters. Among the reasons for this, in addition to the economic crisis, are internal conflicts, street incidents, terrorist incidents, suicide bombings and the "July 15

Coup Attempt". All these have caused a long-lasting crisis, both sociologically and economically. For this reason, this crisis year also negatively affected private hospitals. In order to see the effects of the crises more clearly, other parameters should also be evaluated.

However, it was determined that the 2016 crisis had negative effects on the eight parameters examined. Negatively affected parameters; the number of physicians, the number of qualified beds, the number of imaging, the total number of surgery, the number of inpatients, the number of days hospitalized, the number of visits to the physician, the bed turnover rate. The unaffected parameters are; the number of private hospitals, the total number of beds, the number of intensive care beds, the number of medical devices, the bed occupancy rate and the patient satisfaction rate. When the parameters determined for the decrease are examined, the highest decrease in 2016 crisis year compared to the previous year was the number of applications to the physician with a rate of %7.8. Second was the total number of surgeries with a maximum rate of %6.5 and the third was the number of imaging with %5.8. Other parameters that decreased in the crisis year were the number of inpatients with %4.5, the number of days hospitalized with %2.6, the number of physicians with %1.9, the number of qualified beds with %1.5 and finally the bed turnover rate with %0.7. When these parameters are examined for 2017, it is seen that all of them increased at different rates. At the beginning of the parameters with the highest increase in 2017, the number of intensive care beds is %9.7. Secondly,

there is the number of imaging with an increase of %6.6, the number of days hospitalized with +%6.4 in the third place, the number of physicians with an increase of %6, the number of beds with %4.4 and the number of qualified beds with %3.6. The increase in other parameters was below %3. When the health data are examined, it has been determined that the number of private hospitals has increased every year, regardless of the crisis. Depending on the increase in the number of hospitals, it is seen that the total number of beds, the number of intensive care beds and the number of medical devices also increased independently of the crisis. In addition, it was determined that the bed occupancy rate and patient satisfaction rate increased in the crisis year. In 2017, the year following the crisis, there was an increase in twelve parameters, including the mentioned parameters. There are two variables that decreased in 2017 compared to the crisis year: bed turnover rate

and patient satisfaction rate. The decrease in the bed turnover rate is due to the increase in the number of inpatients and the number of visits to the physician. It would be more correct to further investigate the reasons for the decrease in the satisfaction rate separately. For this reason, this crisis year also negatively affected private hospitals. In order to see the effects of the crises more clearly, other parameters should also be evaluated.

The authors declare that they have no conflict of interest.

#### Ethical Approval (Must be answered):

Our study does not include any application on humans or animals. In our study, a document review was made. For this reason, no ethical committee decision was taken.

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