



**ULUSLARARASI BEŞERİ VE SOSYAL
BİLİMLER İNCELEME DERGİSİ (UBSBİD)
INTERNATIONAL HUMANITES AND SOCIAL
SCIENCE REVIEW (IHSSR)**

Volume: 9 Issue: 1 Year: 2025

**IMPACT OF COVID 19 PANDEMIC ON PRIVATE HEALTH INSURANCE IN
TURKEY**

Dr. Öğr. Üyesi Abdulaziz Gülay*
Prof. Dr. İclal Attila**

ARTICLE INFO

Article History:
Received: 14.03.2025
Revised : 14.04.2025
Accepted : 17.04.2025
Orcid Number:
0000-0003-3519-002X,
0000-0002-5584-8936

Keywords:
Covid 19, Private
Health Insurance,
Insurance Premiums,
Health Insurance
Coverage

ABSTRACT

Objectives: The private health insurance sector in Turkey has been significantly affected by the pandemic in many aspects. As the pandemic unfolded, the need and awareness of individuals and organizations for insurance coverage to protect themselves from the financial and medical consequences of the virus rose up. This situation led to an increase in demand for health insurance, among other products. This study aims to search and analyze the impact of Covid-19 on private health insurance in Turkey.

Method: In this study, a comprehensive literature review on private health insurance was conducted. For this purpose, relevant studies and works in the literature were analyzed. Then, data on private health insurance in Turkey between 2018 and 2023 were analyzed. These data were obtained from the database on the website of the Insurance Association of Turkey. Accordingly, total premium production, number of insured, coverage and policies, net incurred claims, claims/premium ratio and technical profit data in the private health insurance branch for the years in question were the subject of the study. The course of these data in selected years has been analyzed and evaluated comparatively using the tabular method. Especially total premium production and technical profit data provide important information about the general condition of the insurance sector.

Results: According to the findings of the study, it is concluded that the pandemic has increased the interest and need for health insurance. During the pandemic, the demand for private health insurance increased by approximately 30%. Total private health insurance premium production escalated continuously between 2018 and 2023. Moreover, it is determined that the loss/premium ratios decreased to the lowest level in 2020, the year when the impact of the pandemic was felt most strongly. Therefore, it is understood that the pandemic did not cause a serious downturn in the sector. On the contrary, it seems that after the pandemic, public awareness regarding the importance and necessity of insurance, especially health insurance, has increased. This data shows that health insurance awareness, which was low in society before the pandemic, has significantly enhanced with Covid 19.

Originality: At the time of its preparation, this study has been the first research to analyze the effects of the Covid 19 Pandemic on private health insurance in Turkey by analyzing health insurance data for the period between 2018 and 2023 through comparative table analysis. Therefore, it is expected that this study will contribute to the literature.

COVID 19 PANDEMİSİNİN TÜRKİYE'DE ÖZEL SAĞLIK SİGORTACILIĞINA ETKİSİ

MAKALE BİLGİSİ

Makale Tarihi:
Başvuru: 14.03.2025
Revizyon : 14.04.2025
Kabul : 17.04.2025
Orcid Numarası :
0000-0003-3519-002X,
0000-0002-5584-8936,

ÖZ

Amaç: Türkiye'de özel sağlık sigortası sektörü, birçok açıdan pandemiden önemli ölçüde etkilenmiştir. Pandeminin özel sağlık sigortası sektörüne başlıca etkilerinden biri tüketici davranışlarında yol açtığı değişimler olmuştur. Salgın ortaya çıktığında, bireylerin ve kurumların kendilerini virüsün mali ve tıbbi etkilerinden korumak amacıyla sigorta teminatına duydukları ihtiyaç ve farkındalık artmıştır. Bu durum, diğer ürünlerin yanı sıra sağlık sigortasına olan talebin de artmasına yol açmıştır. Bu çalışmada Covid-19'un Türkiye'de özel sağlık sigortası üzerindeki etkilerinin araştırılması ve analiz edilmesi amaçlanmıştır. *Yöntem:* Çalışmada özel sağlık sigortacılığına ilişkin kapsamlı literatür taraması yapılmıştır. Bu amaçla alanyazındaki ilgili araştırma ve eserler incelenmiştir. Sonrasında Türkiye'de 2018 ile 2023 yılları

* Marmara Üniversitesi, abdulaziz.gulay@marmara.edu.tr

** Marmara Üniversitesi, iclal.attila@marmara.edu.tr

Anahtar Kelimeler: *arasındaki özel sağlık sigortacılığına ilişkin veriler analiz edilmiştir. Söz konusu veriler Türkiye Sigorta Birliği'nin internet sitesindeki veri tabanından temin edilmiştir. Bu doğrultuda, özel sağlık sigortası branşında bahsi geçen yıllardaki toplam prim üretimleri, sigortalı, teminat ve polişe sayıları, net gerçekleşen hasar, hasar/prim oranı ve teknik kar verileri çalışmaya konu edilmiştir. Bu verilerin seçili yıllar içindeki seyri karşılaştırmalı olarak tablo yöntemiyle analiz edilmiş ve değerlendirilmiştir. Özellikle toplam prim üretimi ve Teknik kar verileri, sigortacılık sektörünün durumuna ilişkin önemli bilgiler sunmaktadır. Sonuçlar: Çalışmanın bulgularına göre, pandeminin Türkiye'de sağlık sigortasına olan ilgiyi ve talebi artırdığı sonucuna varılmıştır. Salgın süresince özel sağlık sigortasına olan talep yaklaşık %30 oranında artış göstermiştir. Özel sağlık sigortası toplam prim üretimleri 2018 ile 2023 yılları arasında sürekli artış göstermiştir. Ayrıca hasar/prim oranlarının pandeminin etkisinin en güçlü hissedildiği 2020 yılında en düşük düzeye indiği tespit edilmiştir. Bu sebeple pandeminin sektörde ciddi bir gerilemeye yol açmadığı anlaşılmaktadır. Aksine, pandemiden sonra sigortanın, özellikle de sağlık sigortasının, önemi ve gerekliliği konusunda toplumda farkındalığın yükseldiği anlaşılmaktadır. Bu veriler, pandemi öncesinde toplumda düşük olan sağlık sigortası bilincinin Covid 19 ile birlikte önemli ölçüde geliştiğini göstermektedir. Özgün Değer: Bu çalışma, hazırlandığı tarihte Türkiye'de 2018 ile 2023 yılları arasındaki döneme ilişkin sağlık sigortası verilerini analiz ederek Covid 19 Pandemisinin özel sağlık sigortacılığı üzerindeki etkilerini karşılaştırmalı tablo analizi yöntemiyle tahlil eden ilk araştırma olma özelliğini taşımaktadır. Bu sebeple, özgün bir niteliğe sahip olan çalışmanın literatüre katkı sağlayacağı umulmaktadır.*

1. Introduction

Epidemics have threatened public health to varying degrees throughout human history and have caused serious losses when they can not be controlled. Compared to other pandemics, serious problems have emerged in many sectors in developed and developing countries due to the high contagiousness of the Covid-19. Among these sectors, the health sector is perhaps the most affected by the virus (Afacan & Avcı, 2020:3). Covid 19 has caused a process that threatens the very essence of societies and has had devastating effects on socioeconomic life. The lives and livelihoods of millions of people around the world have been negatively affected. For example, 54% of the total 25,354 deaths in Italy in the first quarter of 2020 were Covid 19 diagnosed deaths (Nurchis et al., 2020:7). The global Covid 19 pandemic had a negative impact on all sectors. There have been economic losses for all countries, especially in the health sector. Curfews, restrictions on working hours and the complete closure of workplaces were the main factors that made the process difficult and overwhelming (Özkan, 2020:5).

The pandemic, which has affected the whole world since the beginning of 2020 and caused more than 7 million people to lose their lives (worldometers.info, 2024), has brought about a series of social and economic problems all over the world. It first created a serious burden on health systems, and the health systems almost collapsed in many countries. In order to control the spread of the pandemic, countries resorted to implementing various measures such as travel restrictions, mandatory quarantines, curfews and activity restrictions (Mugaloğlu & Polat, 2021). Although the measures taken have been useful in controlling the pandemic, they also brought about many problems such as decreased consumption, disruption of the supply chain and reduced production. The impact of the Covid-19 pandemic on the economy in Turkey has been significant, with various sectors experiencing disruptions and negative consequences as a result of the pandemic and the measures taken to contain it (Orhan & Tırman, 2020:2313-2314).

Turkey is one of the countries where Covid-19 was seen relatively late. However, since March 11, 2020, the date of the first case, the number of cases in the country started to escalate rapidly, and by the end of May 2024, the total number of cases exceeded 17 million, and more than 102 thousand people diagnosed with Covid 19 perished during this period (worldometers.info, 2024). To reduce the spread of Covid-19 in the country, long-term curfews were enforced in various periods, and the operations of restaurants, movie theaters, many other businesses and touristic activities were temporarily restricted or prohibited. Since the beginning of 2020, the pandemic has deeply affected the global economy, and the Turkish economy has also suffered significant losses in this period. The strict lockdown and widespread store closures in the first half of 2020 dramatically changed consumer purchasing patterns across the country. The pandemic has also had a significant impact on the tourism sector in Turkey, which is a key contributor to the country's economy (Tekin, 2015). However, when the impact of the pandemic on the insurance industry in Turkey is

analyzed, the findings reveal that Turkish insurance sector showed a strong growth performance and improved its technical results in 2020, unlike many other sectors. Initially, the economic uncertainties brought about by the pandemic led to a decreased demand for private health insurance among individuals and families. With job losses and financial strains, many people had to prioritize their spending, resulting in a decline in the number of individuals opting for private health insurance coverage. On the other hand, the heightened awareness of health risks due to the pandemic has sparked an interest in private health insurance as individuals seek to secure comprehensive coverage for potential future health emergencies. This shift in mindset has prompted some segments of the population to consider investing in private health insurance as a means of safeguarding their health and financial well-being (Koca, 2020:55-56).

The Covid 19 pandemic has significantly affected the healthcare and insurance system in Turkey, leading to changes in healthcare utilization patterns and insurance coverage. This article examines the impact of the pandemic on private health insurance in Turkey, focusing on the effects on insurance coverage and premium production. Therefore, this study aims to analyze and evaluate the effects of the Covid 19 pandemic on private health insurance in Turkey during and after the pandemic period. In this direction, secondary data covering the years between 2018-2023 were obtained from the web pages of authorized institutions and content analysis was conducted to determine changes in private health insurance. Taking into account the two-year periods before and after the pandemic; premium productions, number of insured and policyholders, claims paid and technical profit data were analyzed between the years 2018 and 2023. As a result of the analysis, it is found out that while there was a decrease in the number of policies in private health insurance, there has been no contraction in the sector due to the pandemic and premium productions steadily kept increasing over the years despite the negative influence of Covid 19 on industries. The study also signifies that the pandemic has led to increased reliance on private health insurance, particularly among individuals who feel more secure with complementary and supplementary health insurance during difficult times. All research and publication ethics were followed in the study.

2. Literature Review

There are various studies and researches in the literature that examine the effects of the Covid 19 pandemic on the insurance sector and private health insurance operations. It is noteworthy that these studies are relatively new and recent. Although there are many publications in the international literature examining the effects of Covid 19 on the insurance sector and private health insurance, the number of studies executed in Turkey and in the Turkish language is quite limited. It is possible to summarize the main ones of these studies as follows:

Babuna et al. (2020) reviewed the impact of the Covid-19 pandemic on the insurance sector in Ghana. For this purpose, comparative analyses with previous swine flu and MERS pandemics were conducted to measure the impact of the pandemic on the insurance market in Ghana. According to the results of this study, the Covid-19 pandemic created a sudden and unexpected shock in the insurance industry. Profit rates in insurance industry services dropped by 16.6% from March to June 2020, creating a serious financial impact on the insurance sector. Total premiums fell by 17.01% while claims increased by 38.4%. Many insurance companies managed to maintain their market share, whereas a few companies experienced market share declines. The authors argue that Ghana's insurance industry suffered a loss of 120 million Ghana Cedis between March and June 2020, but the industry would recover by January 2021.

Ghosh and Chatterji (2020) addressed the rates of patients with mental health problems in India and the problems that these patients experience in accessing treatment. In their study, it was stated that before Covid-19, treatments related to mental health were not included in the policies of insurance companies, but after the Covid-19 outbreak, mental health treatment services were included in the policy with the instructions of the government.

Banthin et al. (2020) aimed to explain the significant recessions and shifts in the economy brought about by the Covid-19 pandemic and how these shifts have affected insurance plans. Additionally, they attempted to describe how the recession has prompted changes in private health insurance policies. The findings of this study assert that there was a significant unemployment rate brought about by the recession, which caused people to lose both their jobs and their insurance. To obtain health insurance under the Affordable Care Act, people have been switching to different types of coverage. Thus, most of the

unemployed population are advised to insure themselves under other policies such as the CHIP or Medicaid.

Wang et al. (2020) conducted a panel data analysis to examine the effects of Covid-19 on the Chinese insurance market and concluded that Covid-19 reduced commercial insurance premium production, the growth rate of the insurance sector, and the insurance penetration rate. According to the findings of the study, Covid 19 has resulted in a decline in income from commercial insurance premiums, insurance density, insurance depth, and monthly premium growth rates. Both personal and property insurances are statistically and significantly impacted negatively. Increasing the amount of digital insurance and social security measures can lessen the negative effects of the pandemic on the insurance industry.

Blumenthal et al. (2020) intended to put forward some distinctive implications for the healthcare system and attempted to comprehend the nature of the new crisis that stemmed from the recession on insurance coverage under the pandemic circumstances. The paper discovered that the current situation is a result of both the strong reliance on employer-sponsored private health insurance and the lax enforcement of the law. The author suggests that informing recently unemployed individuals about the availability of insurance coverage could help resolve the current crisis.

Carey (2020) applied a study on the possible effects of the implementation of the National Disability Insurance Scheme (NDIS) in Austria during the Covid 19 period. In this study, it was mentioned that the services provided within the scope of the National Disability Health Insurance (meeting personal care needs, nutrition services, home cleaning services, etc.) will cause at least ten people to enter the homes of disabled people daily. Accordingly, the spread of the Covid-19 pandemic in the country will increase and these services will turn into a disadvantage for the disabled people.

Nawkhare and Kale (2020) examined the impact of Covid 19 on health insurance sector in India. By implementing quantitative research that includes a questionnaire in a structured format, the authors attempted to measure the level of awareness regarding private health insurance in India after 2020. According to the findings of the study, the awareness level of Indian people about the health insurance in such pandemic circumstances increased dramatically. The study also indicates that there has been greater concern about health, and enquiries regarding private health insurance increased by approximately 40% after the pandemic broke out.

Gollier (2021) investigated the impact of Covid 19 on the price of life and health insurance risks regarding the insurability of pandemic risks. The author argues that private health insurance plans might enhance the economy's risk distribution, but only if they are used speculatively. According to the findings of the research, self-insurance systems that combine debt and buffer stock savings are quite pertinent to low-probability large-loss risks.

Atukalp (2021) examined the effects of the Covid-19 pandemic on the health insurance sector in Turkey. Accordingly, the number of coverages on a sub-branch basis was analyzed during the period between January 2019-December 2020. As a result of the analysis, it can be alleged that after March 2020, when the first case of Covid-19 outbreak was detected in Turkey, the number of health insurances in April, August, October and December increased steadily.

In their quantitative research, Şahin and Uyar (2022) inquired people's perceptions of insurance and private health insurance in the context of Covid 19 in Turkey. By making use of a questionnaire created specifically for the study, data were collected and statistically analyzed. The main findings of the research reveal that participants generally regard Covid-19 pandemic as a serious health problem and private health insurance is not common enough among participants. The participants stated that if there was an increase in their budget, they would be more willing for buying a private health insurance policy. The study also found that younger populations have a stronger propensity to consider having private health insurance.

3. Background and Clinical Characteristics of Covid 19

Coronaviruses are single-stranded, enveloped RNA viruses with positive polarity. Since they have positive polarity, they don't contain the RNA-dependent enzyme RNA polymerase, but they encode this enzyme in their genome. They have rod-like projections on their surface. Based on the Latin word "corona", meaning "crown", these viruses are referred to as coronaviruses (Zhou et al., 2019:60). Coronaviruses, also scientifically abbreviated as (CoVs), are a big family of viruses that can cause infections ranging from mild

infections, such as the common cold to more serious infections like Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (Drosten et al., 2003:1968-1969).

The World Health Organization (WHO) Country Office for China announced on December 31, 2019, that instances of pneumonia with an unclear etiology had been documented in Wuhan, China (Xu et al., 2021:3582). On January 7, 2020, the virus was defined as a new kind of Coronavirus (2019-nCoV) that hadn't been seen in humans before. Clusters were reported in employees of the Wuhan South China Seafood City Market (a wholesale livestock and fish market that sells various types of animals) in southern Wuhan. In the patients; fever, shortness of breath and distinctive radiologic findings related to bilateral lung pneumonic infiltration were observed (WHO, 2020:1-2). The World Health Organization's COVID-19 report for China announced that deaths were mostly in older people or those with comorbid systemic diseases such as cancer, hypertension, cardiovascular disease, diabetes, chronic lung disease and other immunosuppressive conditions (Yamamoto et al., 2020:459-460).

The first notable case was a Chinese woman, aged 61 years, who was reported from Thailand on January 13, 2020. The number of countries reporting imported cases increased over the next few days, and in late February, nations with domestic transmission began to emerge. Eventually, 2019-nCoV disease was officially renamed as COVID-19, and the virus was dubbed SARS-CoV-2 in the medical literature because of its similarity to SARS CoV (Gao et al., 2020:12). The World Health Organization classified the Covid 19 outbreak as a "public health emergency of international scale" on 30 January, and declared it a global pandemic on March 11 due to the spread and severity of the virus and the occurrence of COVID-19 cases in 113 countries other than China, where the first outbreak started (Xu et al., 2021:3581). As of early March 2020, while the pace of the outbreak slowed in China, there was an increase in Covid 19 cases and related deaths in Iran, South Korea and Italy. In the following period, serious increases in cases were observed first in Europe and then in North America, and the virus spread almost all over the world (Hu et al., 2021:141).

In terms of the total number of cases and severity of the outbreak locations, the Covid-19 pandemic considerably surpassed SARS and MERS. As a result, the pandemic turned into an unprecedented threat to public health worldwide (Zhou et al., 2020:1057). On January 10, Turkey began conducting Covid 19 studies, and on January 22, the Scientific Advisory Board, the medical advisory board authorized and commissioned by the Turkish Ministry of Health, assembled for the first time. On March 11, 2020, the first Covid 19 case was observed, followed by cases in neighboring nations and Europe.

The diseases caused by coronavirus in humans can vary from simple colds to intense acute respiratory syndrome. It can cause varying degrees of clinical sequelae, such as respiratory, nephrotic, intestinal, hepatic, and neurological damage in animals and humans. (Tan et al., 2020:61). Patients commonly show symptoms of viral pneumonia, such as cough, fever, chest discomfort and shortness of breath in severe cases (Hu et al., 2021:141); but also fatigue, loss of appetite, weakness, nasal congestion, muscle pain, sore throat and headache. Conditions such as respiratory failure, the need for mechanical ventilation, shock and multiple organ failure require the patient to be monitored in intensive care units (Gao et al., 2020:12).

The most common symptoms associated with Covid 19 are fever, shortness of breath, anorexia, sore throat, cough and nasal congestion (Huang et al., 2020:497-498). However, presenting symptoms and signs of the virus vary. Most of the patients experience fever (80–99%), shortness of breath (32–40%), cough (60–83%), anorexia (40–85%), fatigue (45–72%), myalgias (10–40%) (Chen et al., 2020:508; Wang et al., 2020:1062-1063). Among other non-specific symptoms are headache, sore throat, nasal congestion, nausea, diarrhea and vomiting are major reported symptoms (Guan et al., 2020:1709-1710). Loss of taste (ageusia) or loss of smell (anosmia) preceding the onset of respiratory symptoms are also observed on the infected patients (Giacomelli et al., 2020:889). The infection displays some additional neurological manifestations, including seizures, dizziness, weakness, agitation or findings suggestive of stroke like sensory loss, speech or vision problems or problems with balance in walking or standing (Favas et al., 2020:3439; Abdullahi et al., 2020:687). Elderly people and immunosuppressed patients in particular may present with atypical symptoms, such as loss of appetite, diarrhea, fatigue, reduced alertness, confusion and reduced mobility (Aarons et al., 2020:2083-2084; McMichael et al., 2020:2007). Symptoms like fever, shortness of breath, gastrointestinal disturbances, or fatigue due to maternal physiological adaptations, adverse pregnancy conditions, or other illnesses such as malaria may overlap with Covid 19 symptoms. (Elshafeey et al.,

2020:49-50). In children, the symptoms of fever or cough may not occur as frequently and severely as they do in adults (Tay & Harwood, 2020:523).

4. Effects of Covid 19 Pandemic on Turkey's Economy and Health System

The Covid 19 pandemic quickly spread from its onset in the first quarter of 2020 and had grave repercussions across the world. The rapid spread of the virus caused countries to be considerably locked down, international and domestic travels get banned, public meetings and offices closed. In addition to the global closure of businesses, people lost their jobs and as of June 2024, more than 7 million people deceased worldwide (worldometers.info, 2024). The overall economic situation is characterized by a global recession. In many cases, the insurance industry has become a beacon of hope for people around the world (Babuna et al., 2020:1). The Covid 19 pandemic has put public health, social life, and the economy at risk in most countries (Bavel et al., 2020:462). To cope with the spread of the virus, governments had to take comprehensive measures. Turkey has also taken various measures to improve public health and the economy. The high volume of economic support provided, especially to small and medium-sized enterprises, has reached high levels (Ali et al., 2020:381-382). The health impacts of Covid 19 have not only increased the workload of the health system but have also revealed deficiencies, raised questions, and created new perspectives in economic indications and healthcare facilities. It will be useful to explain and analyze the effects of Covid 19 pandemic on economy and health system of Turkey, one by one separately.

4.1. Effects on the Economy

The Covid 19 pandemic has had a significant impact on the economy in Turkey. It led to an unprecedented global economic downturn, causing disruptions to supply chains, a decline in consumer demand, and job losses. The sectors most affected by these measures in Turkey were tourism, automotive suppliers, electronics, cosmetics, entertainment business and transportation (Gürbüz, Şöhret & Ekici, 2021:1). The first time the pandemic began to pervade across the country was early March 2020, when Turkish citizens were having frequent visits to Europe where it had emerged as an epidemic. Initial measures taken by the public authorities against the virus started with the suspension or cancellation of flights to the EU. As of March 17, 2020, the scope of the measures was widened, and all mass events were postponed including schools, sports events and congresses (Mugaloğlu & Polat, 2021). At a later stage, protective equipment was provided to the healthcare sector as additional measures to those to confine the expansion of the epidemic, such as social distancing, home quarantine, and age-based restrictions were included in the policy mix against the pandemic (Bostan et al., 2020:2-3)

One of the most immediate effects of the Covid-19 on the Turkish economy was the partial disruption of supply chains and the closure of businesses due to the lockdown measures imposed to control and slow the spread of the virus. Therefore, the most significant impact of the pandemic on the economy had been the slowdown in economic activities and commercial transactions. The pandemic led to widespread lockdowns and restrictions on movement and mobility, which caused many businesses to close temporarily or operate at reduced capacity (Bayar, Günçavdı & Levent, 2023:1-2). This resulted in a sharp decline in consumer spending and a decrease in demand for goods and services. The Turkish economy, which had already been facing challenges prior to the pandemic, was further strained by the crisis. The tourism sector, which is a key driver of economic growth in Turkey, was particularly hard hit, with revenues plummeting due to travel restrictions and the closure of hotels and restaurants. The decline in touristic activities had a negative effect on the country's GDP and employment levels (Yücel et al., 2022:3075). The closure of businesses and restrictions on movement also diminished domestic consumption and investment. As a result, GDP growth in Turkey contracted by 2.1% in the first quarter of 2020, marking the first economic downturn in over a decade. In the second quarter of the year the shrinking trend continued and due to the implementation of restrictive measures against the Covid-19 epidemic, the Turkish economy contracted by 9.9% year over year, the lowest level since the first quarter of 2009 (Türkiye İş Bankası, 2020:1).

The breakdown in economic factors also affected the labor market negatively, leading to a rise in unemployment rates in Turkey. Many businesses were forced to lay off employees or reduce working hours in response to the economic slowdown caused by the pandemic. As a result, the unemployment rates increased. According to data from the Turkish Statistical Institute, the unemployment rate in Turkey

reached 13.4% in August 2020, up from 11.1% in the same period the previous year. As for June 2020, the unemployment rate rose to 13.4%, up from 10.2% in the same period a year earlier (Turkish Statistical Institute, 2020). The increase in unemployment has placed a heavy burden on household incomes, leading to an increase in poverty and economic hardship for many families. As an expected consequence of the pandemic circumstances, poverty in Turkey is estimated to have risen by approximately 1.5 million people (IMF, 2021). This situation created a relatively detrimental influence on consumer spending, further exacerbating the economic slowdown. It appears that the closures and bankruptcy of small and medium-sized businesses and factories, which are likely to have incurred the most significant financial losses from the Covid-19 pandemic, contributed to an increase in the unemployment rate, particularly for workers in the blue-collar and service sectors. (Açıkgöz & Günay, 2021:3187). The pandemic also brought light to the vulnerability of workers in the informal economy, who were particularly hit by the crisis. Additionally, the closure of schools and childcare facilities placed a burden on working parents, particularly women, causing challenges in balancing work and caregiving responsibilities.

Researches examining the early effects of Covid-19 on the Turkish economy reveal that tourism and manufacturing sectors were the most affected by the pandemic. International travel restrictions and the slowdown in trade transactions led to a decline in Turkey's export revenues in these two important sectors, and the foreign trade deficit increased by 102.3% between January and April 2020 compared to the same period of the previous year (Kılıç, 2020:70; Soylu, 2020:177). Looking at the effects of Covid-19 on the Turkish financial sector, it is observed that the negative effects were more limited compared to the real sector. Thanks to low interest rates and government incentives, the banking sector expanded its loan volume and increased its net profit by 22.3% in 2020. Borsa Istanbul, on the other hand, gained a significant number of new investors during the pandemic, and the BIST 100 index increased by 29% in 2020 compared to the previous year. In this context, it can be said that the Turkish financial sector continued to meet the financing needs of the real sector during the pandemic, assuming an important function for the continuity of the economy and increasing its profitability despite the challenging market conditions (The Banks Association of Turkey, 2021:44).

In response to the economic challenges posed by the pandemic conditions, Turkish government implemented a series of measures to support businesses and individuals affected by the crisis. The government introduced a fiscal stimulus package called "Economic Stability Shield" to procure financial support to businesses and individuals affected by the pandemic. Economic Stability Shield, which was worth 100 billion Turkish Liras, was announced with great efforts in the first phase and quickly taken into force as of March 17 to manage the economic and social effects of Covid 19 (Özdemir, Atak & Hatiper, 2020:188-189). The package included measures such as tax breaks, loan guarantees, and cash transfers to help businesses stay afloat and prevent layoffs. Among these measures, employment support programs were carried out to mitigate the impact of job losses, as well as social assistance programs to provide financial support to vulnerable households and individuals (Güngen, 2021:3). In this context, tax payments of many taxpayers were postponed, credit receivables of state banks were put off and short time working allowance was introduced to support employment and employers (Republic of Turkey Ministry of Treasury and Finance, 2020). The government also executed monetary policy measures to promote the economy during the pandemic. To provide liquidity for financial markets and strengthen economic activity, The Central Bank of the Republic of Turkey (CBRT) cut interest rates by 250 basis points in July 2020, reducing the cost of borrowing for businesses and individuals, as part of a quantitative easing program (CBRT, 2020).

Despite the government's efforts to support the economy, the impact of Covid-19 on Turkey's economy had been profound and disruptive. Although all these measures were effective to some extent, they were not enough to eliminate the negative effects of Covid-19 on the country's economy completely. In the second quarter of 2020, the economy contracted by 9.9%, while growth in 2020 was actualized as 1.8%. Turkey's PMI index fell sharply in April 2020 due to both shrinking demand and businesses affected by activity and operational restrictions and prohibitions. The country's export figures for 2020 fell to 2018 levels (Istanbul Chamber of Industry, 2021). The USD/TL exchange rate, which was around 6.3 in March 2020, reached 8.3 in March 2021 after one year (CBRT, 2021). In the same period, the consumer price index increased by 16.2% compared to the same month of the previous year, while the unemployment rate rose

to 13.1% (Turkish Statistical Institute, 2021a; Turkish Statistical Institute, 2021b). The country's GDP contracted by 4,9% in 2020, marking the first full-year economic contraction in over two decades (Macrotrends, 2024). The decline in economic activity has also led to an increase in government debt, with the ratio of general government deficit to GDP widening to 4.7% of GDP in 2020 (Turkish Statistical Institute, 2021c).

4.2. Effects on the Health System

Covid 19 pandemic has had a significant impact on health systems worldwide, affecting the provision of healthcare services and creating unprecedented challenges for healthcare professionals, healthcare facilities and policymakers. It is considered the worst global public health threat since the great influenza epidemic that took place in 1918 (Lythgoe & Middleton, 2020). The rapid spread of Covid 19 and the overwhelming number of cases put immense pressure on healthcare facilities and resources, leading to challenges in providing adequate care and support to patients. Likewise, In Turkey, the formidable conditions of the pandemic brought about tremendous hardships and obstacles on the country's health system and economy, stretching its capacity. The economic repercussions of the pandemic also impacted the health system. The government's resources have been strained by the need to rapidly mobilize funds for Covid-19 response efforts, leading to potential constraints in healthcare financing and budget allocations.

One of the primary challenges faced by the health system in Turkey during the pandemic has been the strain and overload on healthcare facilities and resources, especially in emergency and intensive care units. Although Turkey had been in a far better situation in terms of mortality rates and the number of intensive care and intubated patients were fewer than most of the developed countries in the world during the years 2020 and 2021; the pandemic placed a severe burden on Turkey's healthcare infrastructure (Gül & Yücesan, 2021:1-2). The surge in Covid-19 cases led to a dramatic increase in hospitalizations and demand for intensive care unit beds, escalating pressure on the capacity of hospitals and healthcare providers. These hurdles caused overcrowded emergency departments, delayed medical procedures, and shortages of critical medical supplies and equipment; such as ventilators, test appliances and personal protective equipment. Consequently, healthcare professionals had to work tirelessly to manage the influx of patients and maintain the quality of care, leading to increased levels of stress and burnout. Therefore, another area of concern that stemmed from Covid 19 pandemic occurred on the mental health of healthcare workers. The stress and anxiety of working on the frontline of the pandemic, coupled with the fear of contracting the virus, took a toll on the mental well-being of healthcare workers. That's why, the harm of Covid 19 on health care professionals had been extremely devastating and overwhelming. The filiation processes became a routine part of their daily lives. A lot of physicians, medical academicians and health workers died from this infection. Over 40.000 health care workers tested positive and more than 200 health professionals and workers died of Covid 19 in only nine month period in 2020 (Çağdaş, 2021:260). In response to these challenges, the government took several measures to expand healthcare capacity, including the construction of new field hospitals and the deployment of additional medical personnel. The government also carried out mental health support services for healthcare workers to address these concerns and ensure that they have the necessary support to cope with the challenges of the pandemic (Keskinliç et al., 2021:4-5).

Initially, the pandemic has exposed the vulnerabilities of Turkey's public health system, particularly in terms of surveillance, testing, and contact tracing. The early response to the pandemic was marred by challenges in testing capacity and logistical difficulties in tracking and isolating cases, leading to delays in containing the spread of the virus. The spreading of the infection has also complicated the overall delivery of healthcare services in Turkey. Non-urgent medical procedures and elective surgeries have been postponed or canceled to prioritize Covid 19 patients, emergency services and intensive care facilities; leading to delays in care for other patients. These adversities brought along serious disruptions in the delivery and provision of essential health services like routine check-ups and chronic disease management, increasing the potential of long-term health consequences for the population with low health status. In 2020, the frequency of visits to healthcare providers dropped by 60% (Başer et al., 2020). In addition, the total number of applications to health service providers decreased by 35.1% in 2020 compared to the

previous year (Social security Institution, 2021). As a result, patients with chronic diseases such as diabetes, hypertension, cancer or those in need of long-term treatment and care services have been deprived of adequate healthcare utilities.

Afterwards, however, Turkey turned out to be one of the most successful countries at struggling and managing the arduous conditions of the pandemic. Many studies revealed that Turkey performed well enough to deal with the pandemic effectively (Kodaz, 2020:177). In terms of total number of tests, Turkey took its place amid the top six countries in the world. These statistical data demonstrated that Turkey ended up in a better level than the world average thanks to the early isolation decisions and timely preparations made. The government and Ministry of Health responded the pandemic with effective measures. At first lots of precautions were taken to avert the virus. After the first case was seen in the country, a series of actions and medical interventions were implemented in accordance with the pandemic plan to prevent the infection from spreading and to treat the cases appropriately (Demirbilek et al., 2020:493-494). To inform the public about the effects of Covid 19 and how to avoid it, Ministry of Health took numerous actions. In this context, an open access web site was founded for public usage and health professionals to share useful information about Covid 19 and to enlighten the public regarding the infection. The official state bodies also prepared thousands of brochures, billboards, social media videos and public spots to illuminate and warn both healthcare workers and people about the prevention, mitigation and containment of the infection (Öncü et al., 2021:66-67).

Despite the challenges mentioned above, the Covid-19 pandemic has also spurred innovation and adaptation within the Turkish health system. The epidemic accelerated the adoption of telemedicine and digital health solutions, allowing for remote consultations and monitoring of patients. Telemedicine and virtual healthcare services have been increasingly utilized to provide care to patients remotely and reduce the risk of exposure to the virus (Aydemir, 2021:1180). Additionally, the pandemic has highlighted the importance and necessity of investing in digital health infrastructure and technology to improve access to healthcare services and enhance patient outcomes. Healthcare professionals have also demonstrated resilience and flexibility in adapting to the demands of the pandemic, implementing new protocols and guidelines to ensure the safety of patients and staff.

5. The Effects of the Covid 19 Pandemic on Private Health Insurance in Turkey

When the possible effects of Covid-19 on the insurance sector were analyzed in the early days of the pandemic, the main focus was on the negative consequences of the pandemic on the insurance sector. In particular, business interruption, receivables, unemployment and private health insurances came to the forefront as branches where pandemic-related catastrophic losses may occur. One of the biggest threats posed by the pandemic to the Turkish insurance industry was the probability of a contraction in consumer demand due to declining economic activity. However, despite all the negativities caused by the pandemic, the Turkish insurance sector was one of the least affected sectors in 2020, growing by 19.2% compared to the previous year (Insurance Association of Türkiye, 2024). In 2019, the Turkish insurance industry completed the year with ₺ 69 billion in premium production, providing ₺ 129 trillion in coverage to the real sector. In the same year, the ratio of premium production in GDP reached up to 2.78% (SEDDK, 2020, p.7). As for the year 2020, total premium production in the insurance sector reached ₺ 82.5 billion, while the technical profit of insurance companies increased by ₺ 3.4 billion to ₺ 10.6 billion (Insurance Association of Türkiye, 2024). In this context, it is possible to assert that the Turkish insurance sector was not exposed to a significant negative impact in terms of incurred losses and technical profitability throughout the pandemic.

During the pandemic, the demand for private health insurance in Turkey increased by nearly 30%. In September 2019, the number of complementary health insurance holders was 1.1 million, while this number exceeded 1.6 million in the same month of 2020. This data indicates that public awareness of health insurance, which was low before the pandemic, has increased with the Covid 19 outbreak. Accordingly, it is possible to argue that the pandemic boosted the interest and demand for health insurance in Turkey (Ortaç, 2020). The need for private health insurance has become evident today due to reasons such as the inadequacy of social health insurance and public health service providers in terms of service, the

widespread demand for quality health services in the society, the high cost of treatment in private hospitals and the ability to receive health services at a fraction of these costs thanks to private health insurance.

Coverage is a crucial concept in health insurance. Risks and coverage are clearly stated in the insurance policy. Indemnities and benefits are not paid for risks that are outside the scope of coverage. However, this approach was not adopted during the Covid 19 pandemic. For insured persons with private health insurance policies, Covid 19 related treatment costs were covered, even though they were out of coverage. Insurance companies declared the public that they would pay the treatment expenses for Covid 19, despite the fact that the risk of pandemic disease was not supposed to be covered in the policies (Insurance Association of Türkiye, 2021:26). In this context, pandemic-causing diseases were included in the scope of emergency.

Health insurance has been the insurance branch that has come to the fore the most with the Covid-19 pandemic. During the pandemic, consumers' health concerns increased and the idea that the public health system alone might not be sufficient increased the importance of private hospitals and thus private health insurance. After the 2001 Ebola outbreak, pandemic-related risks were excluded from coverage in many insurance products. For this reason, when Covid-19 started to spread in Turkey, pandemic diseases were excluded from the coverage of almost all private health insurances offered in the country. Despite this situation, within a month of the first Covid 19 case in Turkey, most of the health insurance companies announced that they were going to cover Covid 19 treatment costs. The constructive approach shown by private health insurance companies on this issue has both increased the reputation of the sector and prevented possible objections and negative reactions from the insured.

5.1. Number Of Insured, Coverage and Policies

The private health insurance sector in Turkey accomplished the year 2020 with a nominal growth rate of 21% and a real growth rate of 5%. The 33% decline in the number of policies in 2020 was largely due to the decrease in travel health insurance policies. Due to travel restrictions imposed across the world, the number of travel health insurance policies decreased by 63% compared to the previous year (Insurance Association of Türkiye, 2024). This reveals that the increase in premium production in the health branch was largely driven by the rise in average premium amounts.

Below are the data and statistics regarding the number of private health insurance coverage, insured and policies between the years 2018 and 2023 in Turkey.

Table 1: Number of Insured, Coverage and Policies

	2018	2019	2020	2021	2022	2023
Number of Coverage	8.359.574	10.644.120	9.458.574	10.324.322	11.245.140	13.150.635
Number of Insured	6.763.142	7.493.712	6.382.009	8.904.927	10.357.931	11.851.572
Number of Policies	4.361.433	6.007.999	4.040.833	5.478.386	6.294.596	7.223.979

Source: Insurance Association of Türkiye, Statistics, General Insurance Data, <https://www.tsb.org.tr/en/statistic/general-insurance-data>

It can be seen from the data in Table 1 that the number of insured, policies and coverage decreased in 2020, the first year of the pandemic. However, these figures have continued to increase since 2021. For example, while the number of insured was 7.4 million in 2019, it decreased to 6.3 million in 2020 due to the pandemic. This decline reflects the negative economic impact of the pandemic on the insurance sector. In 2020, the most important reason for the decrease in the number of insured and policies was the decline in travel health insurance. Travel restrictions and curfews during the pandemic significantly reduced the demand for travel health insurance. While 4.2 million people had travel health insurance in 2019, this number dropped to 1.3 million in 2020. On the other hand, the opposite situation is available for complementary health insurance. In 2020, the number of people with complementary health insurance increased to 1.52 million from 1.06 million in 2019 (Insurance Information and Monitoring Center, 2021,

p.14-15). This increase can be explained by the fact that more people wanted to benefit from private hospitals due to the pandemic.

5.2. Premium Productions in Private Health Insurance Sub-Branches

Total premium productions in private health insurance continuously increased between 2018 and 2023. However, there are points where the change in total premium production is not in line with the changes in the number of coverage and insured. During the year 2020 and 2021, the increase in premium production was not parallel with the number of policies and insured.

Table 2 given below indicates the premium production volumes for each sub-branch during the chosen years in Turkey.

Table 2: Sickness-Health Insurance Sub-Branch Premium Productions (₺ Thousand)

	2018	2019	2020	2021	2022	2023
Sickness	68.660	92.136	85.595	104.851	141.736	296.208
Emergency Health	85.686	147.049	277.507	136.506	130.334	358.516
Health for foreigners	170.620	260.498	1.509.989	298.334	1.437.577	1.691.298
Complementary Health	535.359	995.932	1.509.989	2.616.075	7.808.624	20.607.715
Health	5.211.758	6.655.505	7.886.355	9.450.197	19.302.303	45.547.111
Travel Health	172.277	207.022	152.256	472.421	1.238.420	2.260.949
Sickness-Health Total Premium	6.244.361	8.358.143	10.095.658	13.078.386	30.058.996	70.761.799

Source: Insurance Association of Türkiye, Statistics, General Insurance Data, <https://www.tsb.org.tr/en/statistic/general-insurance-data>

As it is stated in Table 2, total premium productions in the health insurance sector increased continuously between 2018 and 2023. The pandemic in 2020 did not thwart this continuous rising trend. From ₺ 6.2 billion in 2018, total premium production volume increased more than 10-fold in nominal terms, reaching at ₺ 70.7 billion in 2023. In 2020, only premium productions in the sickness and travel health sub-branches declined, while premium productions in other branches generally continued to increase. In 2019, premium productions in complementary health insurance amounted to ₺ 995.9 million, rising to ₺ 1.5 billion in the following year when the pandemic made its impact felt. In the following years, premium productions continued to increase in this branch. The main reason for this increase over the years can be explained by patients' desire to receive higher quality healthcare services from private healthcare providers.

5.3. Total Premium Productions, Incurred Loss and Technical Profit Data

According to Social Security Institution (SGK) data, when the course of applications to health institutions is examined; it is observed that applications to all service providers decreased in 2020. There was a decrease in applications to health institutions due to reasons such as curfew restrictions, some clinics in hospitals stopped providing services, and health workers were negatively affected by the pandemic. The decrease in applications to health service providers has also led to a decrease in the amount of loss and indemnities. As a result, especially in 2020 and 2021, when the impact of the pandemic was felt strongly, the amount of indemnities paid in private health insurance and loss ratios were low, while technical profit data were relatively high. Table 3 stated below indicates and summarizes this situation.

Table 3: Total Premium Productions, Net Incurred Loss, Net Claims/Premium Ratio and Technical Profit Data

	2018	2019	2020	2021	2022	2023
--	------	------	------	------	------	------

Total Premium Production (₺ Thousand)	6.244.361	8.358.143	10.095.658	13.078.386	30.058.996	70.761.799
Net Incurred Loss (₺ Thousand)	3.968.742	5.101.224	5.354.020	7.729.015	15.118.079	32.619.238
Net Claims / Premium Ratio (%)	%78,5	%77,3	%64,1	%76,9	%87,0	%74,6
Technical Profit (₺ Thousand)	700.835	888.645	1.939.749	2.246.160	1.054.306	11.275.046
Technical Profit Growth Rate (%)	%97,4	%26,8	%116,2	%16,9	-%53,1	%969,4

Source: Insurance Association of Türkiye, Statistics, General Insurance Data, <https://www.tsb.org.tr/en/statistic/general-insurance-data>

As Table 3 demonstrates, total private health insurance premium production continued to increase linearly over the years. The total premium production, which was ₺ 6.2 billion in 2018, increased up to ₺ 70.7 billion in 2023. Moreover, it is also seen that the net incurred loss did not increase significantly in 2020 and 2021, when the pandemic was occurring on its peak. At first glance, a global pandemic was expected to have a greater negative impact on the insurance sector, especially in the health branch. However, when the changing consumer behavior during the pandemic period is examined, the decrease in the loss ratio of the non-life insurance sector is more clearly understood. The branch most likely to be negatively affected by Covid-19 in the Turkish insurance sector was the health insurance branch. However, although pandemic diseases are not covered by health insurance policies in Turkey, insurance companies have included Covid 19 in their coverage with the decision they took in the first days of the pandemic. Despite this, there was no significant increase in claims incurred in the health/sickness branch in 2020. Although there was an increase in treatment costs due to Covid-19, many people postponed their non-emergency treatments due to the risk of infection in hospitals, resulting in no prominent change in total treatment costs. Covid-19 escalated consumers' and insured's concerns about health risks and premium production in the health insurance branch increased. However, the impact of these concerns on incurred claims seems to have remained limited or lower than anticipated.

6. Conclusion

The Covid 19 pandemic has significantly affected the healthcare and insurance system in Turkey, leading to changes in healthcare utilization patterns and insurance coverage. Although there was a slight decline in the number of policies and insured persons during the Covid 19 pandemic, especially in 2020 and 2021; there was no contraction in the insurance sector. Total premium productions showed a continuous upward trend between 2018 and 2023. The increase in complementary health insurance can be explained by users' desire to use private health providers. The financial performance of the sector in 2019 and 2020 points out that the pandemic did not have a significant negative impact on financial results in Turkey. When the details of the strong performance of the Turkish insurance sector in 2020 are analyzed, it can easily be seen that the increase in premium productions was driven by high growth figures in life, health and fire branches. According to the findings of the study, the pandemic did not have any negative impact on private health insurance and the sector actualized a sturdy financial performance in 2020.

After the pandemic started in 2020, the demand for private health insurance in Turkey increased by nearly 30%. This data demonstrates that public awareness of health insurance, which was low before the pandemic, has increased with the Covid 19 outbreak. Accordingly, it is possible to assert that the pandemic boosted the interest and demand for health insurance in Turkey. Numerous empirical studies have found out that the level of participants' knowledge and awareness about health insurance was low before the Covid-19 pandemic broke out. With the pandemic, awareness about the importance and necessity of

private health insurance has increased in the society. Consequently, Covid-19 enhanced the demand for health insurance. Insured people generally expect the health insurance policies to include pandemic diseases within the scope of coverage.

The Covid-19 pandemic also left deep traces on the health system in Turkey, revealing both strengths and weaknesses in its capacity to respond to public health crises. The rapid pervasion of the virus and the increasing number of cases and deaths generated unprecedented difficulties to the health system. The overload on healthcare facilities and resources, the impact on the mental health of healthcare workers, and the disruption of healthcare services have all contributed to the complexity of managing the pandemic. For this reason, the pandemic has underscored the need for strategic planning and investment in strengthening the resilience of Turkey's health system. Critical areas for improvement include bolstering healthcare infrastructure and supply chain management, enhancing surveillance and testing capacity, and addressing systemic inequities in healthcare access. Furthermore, there is a need to prioritize the well-being of healthcare workers and invest in workforce development to mitigate the effects of burnout and attrition. It seems quite essential for the Turkish government and healthcare authorities to continue to exert effective measures to address these challenges and ensure the resilience of the health system in the face of prospective health crises in the future.

In order to eliminate the negative economic effects of pandemics, it is necessary to provide health education for the workforce and support remote working. Moreover, it is of great importance to organize social life and workplaces in accordance with pandemic conditions and to comply with safety measures. Health insurers and providers should offer more services virtually and in-home, like telehealth for mental health treatment and chronic diseases, to reduce virus exposure for vulnerable patients. Expanding covered services helps meet patient needs during the pandemic. The Government, insurers and providers need to work together to keep private health insurance accessible, affordable and responsive to evolving patient needs during the pandemic. By understanding the impact of Covid-19, addressing the challenges faced, and implementing strategic measures for the post-pandemic landscape, the private health insurance sector in Turkey can navigate the changing environment and continue to provide valuable coverage and services to policyholders.

References

- Aarons, M. M., Kelly, M., Hatfield, M.S.P.H., Sujan, C., Reddy, M.D., Anne Kimball & Jernigan, M. D. (2020). Presymptomatic SARS-CoV-2 infections and transmission in a skilled nursing facility. *The New England Journal of Medicine*, 382(22), 2081-2090.
- Abdullahi, A., Candan, S. A., Abba, M. A., Bello, A. H., Alshehri, M. A., Victor E. A., Umar, N. A. & Kundakci, B. (2020). Neurological and musculoskeletal features of Covid19: A systematic review and meta-analysis. *Front Neurol*. 11, 687-693.
- Açıkgöz, Ö. & Günay, A. (2021). Short-term impact of the Covid-19 pandemic on the global and Turkish economy. *Turkish Journal of Medical Sciences*, 51(7), 3182-3193.
- Afacan, E. & Avcı, N. (2020). A sociological overview of outstanding diseases through the Coronavirus example (Covid-19). *Eurasian Journal of Researches in Social and Economics*, 7(5), 1-14.
- Ali, H., Yılmaz, G., Fareed, Z., Shahzad, F. & Ahmad, M. (2020). Impact of novel coronavirus (COVID-19) on daily routines and air environment: evidence from Turkey. *Air Quality, Atmosphere & Health*, 14, 381-387.
- Aydemir, S., Ocak, S., Saygılı, S, Hopurcuoğlu, D., Haşlak, F., Kıykım, E., Zeybek, Ç. A., Celkan, T., Demirgan, E. B, Kasapçopur, Ö., Çokuğraş, H. & Canpolat. N. (2021). Telemedicine applications in a tertiary pediatric hospital in turkey during COVID-19 Pandemic. *Telemedicine and E-Health*, 27(10), 1180-1187.
- Babuna, P., Yang, X., Gyilbag, A., Awudi, D. A., Ngmenbelle, D., & Bian, D. (2020). The impact of Covid-19 on the insurance industry. *International Journal Of Environmental Research And Public Health*, 17(16), 1-14.
- Banthin, J., Simpson, M., Buettgens, M., Bloomberg, L. J. & Wang, R. (2020). Changes in Health Insurance Coverage due to Covid-19 Recession: Preliminary Estimates Using Microsimulation, Robert Wood Johnson Foundation.
- Başer, D. A., Çevik, M., Gümüştakım, Ş. & Başara, E. (2020). Assessment of individuals' attitude, knowledge and anxiety towards COVID-19 at the first period of the outbreak in Turkey: A web-based cross-sectional survey. *International Journal of Clinical practice*, 74
- Bavel, J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... Willer, R. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 4, 460-471.
- Bayar, A. A., Günçavdı, Ö. & Levent, H. (2023). Evaluating the impacts of the COVID-19 pandemic on unemployment, income distribution and poverty in Turkey. *Economic Systems*, 47, 1-21.
- Blumenthal, D., Fowler, E. J., Abrams, M. & Collins, S. R. (2020). Covid 19 - Implication for the health care system. *The New England Journal of Medicine*, 383(15), 1483-1488.
- Bostan, S., Erdem, R., Öztürk, Y. E., Kılıç, T., Yılmaz, A. (2020). The Effect of COVID-19 pandemic on the Turkish society. *Electronic Journal of General Medicine*; 17(6), 1-8.
- Buitrago-Garcia, D., Egli-Gany, D., Counotte, M.J., Hossmann, S., Imeri, H., Ipekci, A. M., Salanti, G & Low, N. (2020). Occurrence and transmission potential of asymptomatic and presymptomatic SARS-CoV-2 infections: A living systematic review and meta-analysis. *PLoS Medicine*, 17(9), 1-25.
- Carey, G. (2020). The National Disability Insurance Scheme and Covid 19: A collision course. *Med J Aust*, 213(3): 141-141.
- Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., ... Zhang, L. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet*, 395, 507-513.
- Çağdaş, D. (2021). Living the SARS-CoV-2 pandemic in Turkey. *Nature Immunology*, 22, 256-261.
- Demirbilek, Y., Pehlivan Türk, G., Özgüler, Z. Ö. & Meşe, E. A. (2020). Covid-19 outbreak control, example of Ministry Of Health Of Turkey. *Turkish Journal of Medical Sciences*, 50(9), 489-494.
- Drosten, C., Günther, S., Preiser, W., Werf, S. V. D., Brodt, H., Becker, S. ... Doer, H. W. (2003). Identification of a novel coronavirus in patients with severe acute respiratory syndrome. *New England Journal of Medicine*, 348, 1967-1976.

- Elshafeey, F., Magdi, R., Hindi, N., Elshebiny, M., Farrag, N., Mahdy, S., ... Nabhan, A. A. (2020). A systematic scoping review of COVID-19 during pregnancy and childbirth. *International Journal Of Gynaecology And Obstetrics*, 150(1), 47-52.
- Favas T. T., Dev, P., Chaurasia, R. N., Chakravarty, K., Mishra, R., Joshi, D., ...Pathak A. (2020). Neurological manifestations of COVID-19: a systematic review and meta-analysis of proportions. *Neurological Sciences*, 41, 3437-3470.
- Gao, Z., Xu, Y., Sun, C., Wang, X., Guo, Y., Qiu, S. & Ma, K. (2020). A systematic review of asymptomatic infections with COVID-19. *Journal of Microbiology, Immunology and Infection*, 54(1), 12-16.
- Ghosh, M. & Chatterji, B. P. (2020). Mental health insurance in India after Covid 19. *Correspondence*, 7(12), 1016-1017.
- Giacomelli, A., Pezzati, L., Conti, F., Bernacchia, D., Siano, M., Oreni, L., ... Galli, M. (2020). Self-reported olfactory and taste disorders in patients with Severe Acute Respiratory Coronavirus 2 Infection: A cross-sectional study. *Clinical Infectious Diseases*, 71(15), 889-890.
- Gollier, C. (2021). Insurance economics and Covid 19. *Journal of risk and Insurance*, 88(4), 825-829.
- Guan, W. J., Ni, Z.Y., Hu, Y., Liang, W.H., Ou, C.Q., He, J.X., ...Zhong, N.S. (2020). Clinical Characteristics of Coronavirus Disease 2019 in China. *The New England Journal of Medicine*, 382(18), 1708-1720.
- Gül, M. & Yücesan, M. (2021). Hospital preparedness assessment against COVID-19 Pandemic: A case study in Turkish tertiary healthcare services. *Mathematical Problems in Engineering*, 1-18.
- Güngen, A.R. (2021). *Turkey's economy amid the COVID-19 Pandemic: Measures and their impact*. İstanbul: Institut Français D'études Anatoliennes.
- Gürbüz, H., Şöhret, Y. & Ekici, S. (2021). Evaluating effects of the Covid-19 pandemic period on energy consumption and enviro-economic indicators of Turkish road transportation. (In) *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, (p.1-13). London: Taylor & Francis Group.
- Hu, B., Guo, H., Zhou, P. & Shi, Z. (2021). Characteristics of SARS-CoV-2 and COVID-19. *Nature Reviews Microbiol*, 19(3), 141-154.
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., ... Cao, B. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*, 395, 497-506.
- IMF. (2021). IMF Country Report on Turkey. No. 21/110. Washington.
- İstanbul Chamber of Industry (ISO). (June 1, 2021). ISO Turkey manufacturing PMI. Access Address: <https://www.iso.org.tr/projeler/iso-turkiye-imalat-pmi/>
- Insurance Association of Türkiye (TSB). (2021). Sector Report 2020, Access Address: https://www.tsb.org.tr/Publications/2020_YILI_SEKTOR_RAPORU.pdf, (02/07/2024)
- Insurance Association of Türkiye (TSB). (2024). Statistics, General Insurance Data, Access Adress: <https://www.tsb.org.tr/en/statistic/general-insurance-data>, (01/07/2024).
- Insurance and Private Pension Regulation and Supervision Authority (SEDDK). (2021). 2020 Annual Report About Insurance and Private Pension Activities. Access Address: <https://seddk.gov.tr/upload/doc/2020-sigortacilik-ve-BES-faaliyet-raporu.pdf>, (02.11.2024).
- Insurance Information and Monitoring Center. (2021). SAGMER Statistics December 2020. Access Address: https://www.sbm.org.tr//sbm_rapor/sagmer//2020/2020_12.pdf, (02.11.2024).
- Keskinkılıç, B., Shaikh, I., Tekin, A., Ursu, P., Mardinoğlu, A. & Meşe, E. A. (2021). A resilient health system in response to Coronavirus disease 2019: Experiences of Turkey. *Frontiers in Public Health*, 8, 1-12.
- Kılıç, Y. (2020). The Effect of COVID-19 (Coronavirus) in Borsa İstanbul. *Journal of Emerging Economies and Policy*, 5 (1), 66-77.
- Koca, F. (2020). Turkey's management of Covid 19 measures and strategies of health policies. *Insight Turkey*, 22(3), 55-66.
- Kodaz H. (2020). Successful treatment strategy of Turkey against COVID-19 outbreak. *Eurasian Journal of Medicine and Oncology*, 4(2), 177-178.
- Lythgoe, M. P., & Middleton, P. (2020). Ongoing clinical trials for the management of the COVID-19 pandemic. *Trends in Pharmacological Sciences*, 41(6), 363-382.
- Macrotrends. (June 18, 2024). Turkey GDP 1960-2024. Access address: <https://www.macrotrends.net/global-metrics/countries/TUR/turkey/gdp-gross-domestic->

- Turkish Statistical Institute (TÜİK). (2020). Labour Statistics August 2020. Access address: <https://data.tuik.gov.tr/Bulten/Index?p=Isgucu-Istatistikleri-Agustos-2020-33792#:~:text=T%C3%9C%C4%B0K%20Kurumsal&text=T%C3%BCrkiye%20genelinde%2015%20ve%20daha,%13%2C2%20seviyesinde%20ger%C3%A7ekle%C5%9Fti>.
- Turkish Statistical Institute (TÜİK). (2021a). Labour Statistics March 2021. Access address: <https://data.tuik.gov.tr/Bulten/Index?p=Isgucu-Istatistikleri-Mart-2021-37481>.
- Turkish Statistical Institute (TÜİK). (2021b). Consumer Price Index, March 2021. Access address: <https://data.tuik.gov.tr/Bulten/Index?p=Tuketici-Fiyat-Endeksi-Mart-2021-37381>.
- Turkish Statistical Institute (TÜİK). (2021c). Government Accounts, 2020. Access address: <https://data.tuik.gov.tr/Bulten/Index?p=37185&dil=2>.
- Türkiye İş Bankası. GDP Growth Q2-2020. Access address: <https://ekonomi.isbank.com.tr/en/Pages/home.aspx>
- Wang, D., Hu, B., Hu, C., Zhu, F., Liu, X., Zhang, J., ...Peng, Z. (2020). Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. *JAMA*, 323(11), 1061-1069.
- Wang, Y., Zhang, D., Wang, X., & Fu, Q. (2020). How does Covid-19 affect China's insurance market? *Emerging Markets Finance and Trade*, 56(10): 2350-2362.
- WHO. (2020). Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected. World Health Organization Interim Guidance, <https://www.who.int/publications/i/item/10665-332299>.
- Worldometers (2024, June 12th). Coronavirus. Access Address. https://www.worldometers.info/coronavirus/#google_vignette.
- Xu, Q., Samanapally, H., Nathala, P., Salunkhe, V., Furmanek, S., Cahill, M.N., ... Huang, J. (2021). Outcomes and risk factors for cardiovascular events in hospitalized COVID-19 patients. *Journal of Cardiothoracic and Vascular Anesthesia*, 35(12), 3581-3593.
- Yamamoto, V., Bolanos, J. F., Fiallos, J., Strand, S. E., Morris, K., Shahrokhinia, S., ... Kateb, B. (2020). COVID-19: Review of a 21st century pandemic from etiology to neuro-psychiatric implications. *Journal of Alzheimer's Disease*, 77(2), 459-504.
- Yücel, A. G., Köksal, C., Acar, S. & Gil-Alana, L. A. (2022). The impact of COVID-19 on Turkey's tourism sector: fresh evidence from the fractional integration approach. *Applied Economics*, 54(27), 3074-3087.
- Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., ... Cao, B. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet*, 395, 1054-1062.
- Zhou, Y., Yang, Y., Huang, J., Jiang, S., Du, L. (2019). Advances in MERS-CoV vaccines and therapeutics based on the receptor-binding domain. *Viruses*, 11(1), 60-63.