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Department of Economics**



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Master's Thesis

Turism Industry in Turkey

Meltem Nur Çin

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DIPLOMA THESIS ASSIGNMENT

Meltem Nur Çin

Economics and Management

Thesis title

Turism Industry in Turkey

Objectives of thesis

The purpose of this study is to examine the evolution, scope, and economic effects of tourism in Turkey; then to determine what Turkey should do to maximize its tourism potential from global tourism by identifying competitive advantages; and finally, to determine if there is a significant relationship between tourism and economic development.

Such questions will be explored in the thesis. What is the share and effects of tourism in Turkey's economy? How has tourism in Turkey been affected by the Covid-19 pandemic? What is the relationship between tourism and Turkey's economic growth?

Methodology

In compliance with the thesis's goal, initially review the literature for studying tourism in Turkey and its elements. Secondly, in the thesis will be used economic and statistical indicators which will help with the understanding of the problematic and interpretation of data.

The proposed extent of the thesis

60 – 80 pages

Keywords

Tourism, Turkey, Tourism, GDP, Economic Development

Recommended information sources

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The Diploma Thesis Supervisor

Ing. Tomáš Maier, Ph.D.

Supervising department

Department of Economics

Electronic approval: 16. 6. 2022

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 27. 10. 2022

doc. Ing. Tomáš Šubrt, Ph.D.

Dean

Prague on 26. 03. 2023

Declaration

I declare that I have worked on my master's thesis titled "*Turism Industry in Turkey*" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on March 31st, 2023

Meltem Nur Çin

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Turism Industry in Turkey

Abstract

The aim of this thesis is to examine to what extent the tourism sector in Turkey is affected by Covid-19. For this reason, the changes that occurred in Turkey's tourism before and after Covid-19 pandemic were examined. The data are handled in two ways, annual tourism and economic data between 2004 and 2021 and monthly tourism data between 2018 and 2021. The annual tourism data between 2004 and 2021 were analyzed statistically and the differences that emerged from March 2020 were revealed. Monthly tourism data between 2018 and 2021 were analyzed with the simple linear regression analysis method. In this analysis, the relationship between GDP, tourism revenue and number of tourists evaluated. Additionally, the differentiation of the tourism data after Covid-19 was analyzed with the t-test. In these analyses, it concluded that there is a significant relationship between Turkey's GDP and tourism data. It has also been observed that there has been a significant decline in Turkey's tourism data since March 2020, when the impact of Covid-19 pandemic has started to affect Turkey greatly.

Keywords: Covid-19, Pandemic Tourism, Turkey, Tourism, GDP

Turistický Ruch v Turecku

Abstrakt

Cílem této práce je zjistit, do jaké míry je cestovní ruch v Turecku ovlivněn Covid-19. Z tohoto důvodu byly zkoumány změny, ke kterým došlo v tureckém cestovním ruchu před a po pandemii Covid-19. V práci jsou použita data dvojího typu, a to roční data o turistickém ruchu a ekonomická data mezi lety 2004 a 2021 a měsíční data o turistickém ruchu mezi roky 2018 a 2021. Roční data o turistickém ruchu v letech 2004-2021 byla statisticky analyzována a od března 2020 byly objeveny rozdíly. Měsíční data o turistickém ruchu v letech 2018-2021 byla analyzována metodou jednoduché lineární regresní analýzy. V této analýze byl zkoumán vztah mezi HDP Turecka, příjmy z turistického ruchu a počtem turistů. Kromě toho byla pomocí t-testu analyzována diferenciací dat o turistickém ruchu po Covid-19. Na základě těchto analýz vyplývá, že existuje významný vztah mezi HDP Turecka a hodnotami o turistickém ruchu v Turecku. Bylo také zjištěno, že došlo k výraznému poklesu hodnot o turistickém ruchu v Turecku od března 2020, kdy se Turecka začal výrazně dotýkat dopad pandemie Covid-19.

Klíčová slova: Covid-19, Pandemická Turistika, Turecko, Turismus, HDP

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List of abbreviations

TURKSTAT : Turkish Statistical Institute

UNWTO : United Nations World Tourism Organization

GDP : Gross Domestic Product

GNI : Gross National Income

UNWTC : World Travel & Tourism Council

TURSAB : Association of Turkish Travel Agencies

WHO : World Health Organization

1 Introduction

An epidemic is defined by two different definitions as “pandemic” and “epidemic”. The epidemic is also considered as a “natural disaster”. An epidemic represents a regional event in which a disease is actively spreading, while a pandemic represents a global spread. The origins of the concept of pandemic, which comes from the ancient Greek, are expressed as pan “all” and demos “people”. It is used for epidemic diseases, which have a wide spreading capacity and whose effect is felt for a long time. There are many cases related to epidemic diseases in the pages of history (Morens et al., 2009).

It is not thought that the epidemics experienced before the coronavirus epidemic in the 21st century caused a long-lasting decline in the tourism industry and damages that shake the world in general. However, since the effects of the coronavirus on the world are different, it should be handled separately (Gössling et al., 2020).

With the first quarter of the 21st century, the Covid-19 virus shook humanity, and when the date showed 31 December 2019, the pandemic, which was determined to have started in a livestock market in Wuhan city of Hubei, a province of China, has seriously affected the whole world. Although this flu may seem “normal” to people in the early days of the disease, it has started to cause serious health problems in the course of time. This disease manifests itself with symptoms such as fever, dry cough, loss of taste and smell, headache and joint pain, and breathing difficulties. As a result of these symptoms, if the disease progresses, it leads to loss of life. The epidemic has grown so fast in terms of spread that it has caused countries to take many measures in this regard. The Covid-19 epidemic, which caused many measures to be taken such as travel restrictions, isolation practices, and the closure of workplaces, caused supply chain disruptions, production disruptions, unemployment increases, economic contractions and many other problems because of increased demands in some sectors. It is seen that the United States (USA), European countries and China are the countries most affected by this epidemic. In addition, within the scope of the coronavirus, it is seen that some sectors consider this epidemic as an opportunity. When examined based on countries, an opportunity has been created for medical tourism due to the strong structure within the health sector and some new opportunities have emerged (Yeyati & Filippini, 2021).

The tourism sector in Turkey has played a significant role in the country's economy, contributing 3.8% to the Gross Domestic Product (GDP), 17.5% to export revenues, and 53% to closing the foreign trade deficit in 2018. The industry has seen substantial growth, with the number of facilities rising from 778 in 1980 to 4,918 in 2019, and the number of beds increasing from 82,332 to 1,200,122 during the same period (TURSAB, 2022).

Tourism in Turkey affects 185 sectors indirectly and 54 sectors directly, making it the most competitive sector and the largest source of foreign exchange in the country. However, the Covid-19 pandemic has had an unprecedented impact on the tourism economy, with the Organization for Economic Cooperation and Development (OECD) estimating a sectoral decline of 45% in 2020. This projection underscores the severe consequences of the pandemic on the tourism sector (Alpago, 2020).

During the pandemic, domestic tourism in Turkey was significantly affected by restrictions and prohibitions, but it has gradually entered a recovery phase (OECD, 2020). The pandemic has also led to negative psychological preferences in travel decisions, with potential tourists being more hesitant to travel due to health and safety concerns (Acar, 2020).

The tourism industry is a significant and expanding component of both the domestic and international economies. Turkey is a fine example because the country has a large amount of tourism-related activities.

In the study, primarily, a literature review will be made for Covid-19 and the development of the tourism sector in Turkey and a conceptual framework will be drawn. Then, the rate at which Turkey's tourism is affected by Covid-19 will be analyzed comparatively with the statistics before Covid-19.

2 Objectives and Methodology

2.1 Objectives

In this study, it is aimed to analyze to what extent the tourism sector in Turkey is affected by Covid-19. In this context, the objectives of the study were determined as follows:

- To examine the impact of Turkey's tourism revenue and the number of tourists coming to Turkey on Turkey's GDP,
- To examine the differentiation in tourism data of Turkey after Covid-19,
- To evaluate how Covid-19 is affected and perception at the national level in the tourism sector with data between 2004-2021 using the case of Turkey.

2.2 Methodology

In this study, it is aimed to analyze the impact of Covid-19 on Turkey's tourism sector by using both quantitative and qualitative methods. For these reasons, firstly, with the data between the years 2004 and 2021, the rate at which Turkey's tourism sector was affected by Covid-19 statistically analyzed. The data used in the study were obtained from the data banks of the World Bank, the Ministry of Tourism of Turkey and the Turkish Statistical Institute. The indicators used in this method are as follows:

- Turkey's GDP and GDP Growth data,
- Tourism Revenues,
- The ratio of Turkey's export revenues and tourism revenues to each other,
- Contribution of tourism revenues to Turkey's foreign trade deficit,
- Number of tourists coming to Turkey,
- Number of tourism facilities in Turkey, occupancy rates and average number of days of stay of visitors.

Secondly, simple linear regression analysis was conducted to explore the relationship between the independent variable and the dependent variable. Before performing the analysis, assumptions of linearity and normality were checked to ensure the suitability of the data for linear regression analysis.

Simple linear regression analyzes were made in order to show the relationship between macroeconomic indicators and tourism, and analysis methods were used to test whether there is a difference in tourism revenues, number of tourists and average expenditure per capita before and after Covid-19. IBM SPSS Statistics software was used to conduct the analysis.

The simple linear regression model was specified as $Y = a + bX + \varepsilon$, where Y is the dependent variable, X is the independent variable, “a” is the intercept, “b” is the slope, and “ ε ” is the error term.

The primary aim of the analysis was to estimate the coefficients “a” and “b” to obtain the best-fitting line that describes the relationship between X and Y. The goodness-of-fit of the model was assessed using the coefficient of determination (R^2), which indicates the proportion of variance in Y that can be explained by X. The significance of the relationship was tested using the F-test and t-test for the slope coefficient (Neter et al., 1996)

In this part of the study, the simple regression model shown below was created in order to measure the relationship between Turkey's GDP data between 2004 and 2021 and tourism revenues:

$$y = \alpha + \beta x + \varepsilon \quad (1)$$

y = GDP of Turkey (Dependent Variable)

x = Tourism Revenues of Turkey (Independent Variable)

α = constant (the point where it intersects the y-axis)

β = slope of the regression line

ε = error term or residual

Another simple regression model was established to measure the impact of the number of visitors to Turkey on GDP. The equation of this model is formed as follows.

$$y = \alpha + \beta x + \varepsilon \quad (2)$$

y = GDP of Turkey (Dependent Variable)

x = Total foreign visitors to Turkey (Independent Variable)

α = constant (the point where it intersects the y-axis)

β = slope of the regression line

ε = error term or residual

Finally, in order to measure the impact of Covid-19 on tourism, the dependent sample t-test was applied to the variables in order to understand the differences before and after Covid-19. Data were analyzed using IBM SPSS Statistics version 20.

Two dependent sample t-tests were conducted to compare the means of tourism revenues and visitor numbers between January 2018 and December 2021. The assumptions of normality were assessed and met.

In this method, the value of “0” was given to the variable of Covid-19 before March 2020, the month when Covid-19 was first seen in Turkey, and “1” value was given after this month. As the dependent variable, Turkey's tourism revenues and tourist numbers between January 2018 and December 2021 were used. Thus, it was tried to determine whether a significant change was observed in these two variables since Covid-19.

Although Covid-19 started in 2019 and its effects started to decrease as of 2021, Covid-19's impacts are still being recognized nowadays for a variety of reasons as of 2023. The social economic effects of the Covid-19 pandemic, such as job loses, mental issues and education disruptions will likely be felt for years to come.

Overall, Covid-19's aftereffects show the necessity of continual concentration and international collaboration in the stand against the virus. For all these reasons, its effects of Covid-19 have not completely ended. The continuation of the Covid-19 pandemic is a limitation of this thesis.

3 Literature Review

3.1 Coronavirus and Covid-19 Outbreak

A new coronavirus disease from the coronavirus family emerges as “Covid-19”. It was first seen in December 2019 in Wuhan, China. Since then, it has started to be seen in other countries rapidly. The incident, which was shown as the first case in Turkey, was recorded on March 11, 2020. However, the cases increased day by day and many measures were taken by the state. It was stated that the starting point of this epidemic was the regional animal and seafood market in Wuhan. This virus, which has a high rate of transmission, first spread to the cities in Wuhan and Hubei regions, then to the whole people Republic of China, and then spread to other countries (Republic of Turkey Ministry of Health, 2021).

In addition, in the definition of Covid-19 made by the Ministry of Health of the Republic of Turkey; it expresses coronaviruses (CoV) as a large type of virus that causes many diseases such as the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and SARS-CoV, which are caused by the common cold. Because of the document named 2019-CoV published by WHO on January 10, 2020, it was announced that it is a necessity for all countries of the world to take measures within the framework of this virus. Within the scope of the coronavirus, studies have been carried out in many ways such as structure, spread area, way of protection in the process from its first appearance to the present day, and it is still being carried out (Acar, 2020).

Subsequent research has shown that Covid-19 can only be observed under a microscope, and it replicates rapidly when provided with the appropriate conditions for reproduction. Furthermore, its nature as a microorganism makes it challenging to combat (Morens et al., 2009).

The Ministry of Health of the Republic of Turkey has also made statements on this subject and it has been reported that citizens aged 60 and over represent the group most at risk if they have any chronic illness (Republic of Turkey Ministry of Health, 2021).

3.1.1 Covid-19 Epidemiology

Studies conducted in the Wuhan region of China, in the direction of reaching 44 cases of lung inflammation (pneumonia) in a short period, have determined that there is an epidemiological link with the seafood market. During the period, more than 80 thousand cases, including the surrounding provinces of the city of Wuhan, were reported (Dowd et al., 2020).

As the date showed January 30, 2020, because of the announcement made by the WHO Director-General, the highest known alarm level was “Public Health Emergency of International Concern (PHEIC)”, that is, a public health emergency as an international concern (WHO, 2021).

It is reported that the number of cases has exceeded 600 million in 2022. On March 11, 2020, upon the increase in the number of cases in China, it was reported by the WHO Director-General that the epidemic could be a pandemic. In addition, before this statement, it is announced that there were a total of over 118 thousand cases and 4291 deceased people (WHO, 2020).

It is known that the diseases specified under the title of pandemic cause a loss of life over millions. Although the first encounter with the Covid-19 case in the Republic of Turkey was on March 11, 2020, the first reported loss of life occurred on March 17, 2020 (Republic of Turkey Ministry of Health, 2021).

It is stated that the respiratory droplets of Covid-19 are transmitted by transmission or contact with other people (WHO, 2020). Although the duration of contagiousness cannot be determined exactly, it is thought that it starts in the last 1-2 days when the disease is incubated and lasts until the disease is overcome. Fever, dry cough and fatigue are the most familiar symptoms (WHO, 2020). It is reported that in addition to fever and shortness of breath, lung damage is also observed in the cases (Republic of Turkey Ministry of Health, 2021).

Table 1. Epidemic Death Chart

Year	Name of the Epidemic	Death Statistics
541-542	1. Plague Outbreak	30 to 50 million
1347-1351	2. Plague Epidemic	About 200 million
1817-1923	Cholera	About 1 million
1918-1919	Spanish Influenza	About 50 million
1944-Present	Crimean-Congo Hemorrhagic Fever	Net global data is not available
2002-2004	SARS	770 total
2009-2010	Swine Flu	About 200,000
2014-2016	Ebola	About 11,000
2019-Present	Covid-19	Over 6.28 million and is increasing gradually.

Source: Turk & McDermott, 2020; WHO current statistics, CDC, 2023

When the epidemic death chart shown above is examined, it is seen that Plague Outbreaks are more deadly than other epidemics. Among the epidemics that exceeded one million deaths after the Plague Epidemics, there is Covid-19, which has an effect today, besides cholera and Spanish influenza.

3.1.2 Covid-19 Transmission Ways

Studies on the new type of coronavirus are still continuing. In addition, the studies conducted for the first source of the disease point to the seafood wholesale market in the Wuhan region, and it is thought that the wild animal trade causes the transmission route. In addition, there is no determination about the transmission of the Coronavirus to humans through animals such as cats and dogs (Acar, 2020).

In addition, it is of great importance to determine the transmission route of the disease in all epidemic diseases. The principles of transmission of Covid-19 indicate that it is transmitted through “droplets”. The rate of transmission and transmission rates of viruses in society vary.

The main transmission coefficient of a disease is defined as “R0”. R0 is a measure of how contagious a disease is. WHO (2020) reports that the R0 value of Covid-19 is between 2 and 4.

In addition, coughing and sneezing may occur by people who have the virus, and people who encounter these droplets can be infected. Although test studies are carried out to prevent disease transmission, diseased people are shown as the main factor transmitting disease (Ebrahim et al., 2020).

When epidemiological features are determined over China, it is seen that the incubation period of the virus varies between two days and 14 days, and the average duration is five to six days. It is thought that this period may change again if different variants of the virus emerge (Fauci et al., 2020).

Although it is said that there is no virus type that is resistant to the environment in the evaluations within the scope of coronavirus, it is observed that the resistance or resistance characteristics of Covid-19 change within the framework of environmental conditions (Acar, 2020). Because of the tests, it has been determined that the effect time of coronaviruses on inanimate surfaces is limited to a few hours. It is also stated that the issue of general and personal cleanliness is of great importance (Fauci et al, 2020).

3.2 The Concept of Tourism and Its Importance

In this title, the concepts of tourism and tourist, the historical development of tourism are discussed, and types of tourism are examined.

3.2.1 Tourism and Tourist Concepts

The word “tourism” is derived from the word “tour”, which is the basis of the words “tornus” meaning “turning” in Latin and “touring” meaning “traveler” in English. Although its first use is not known, it is accepted that it is the "Sporting Magazine", which was first published in 1811 in England (Morley, 1990).

The first definition of the concept of tourism was made by Guyer-Feuler in 1905. Guyer-Feuler defines the concept of tourism as the need for rest that occurs as a result of the gradual increase in weather changes, and the desire to see and recognize the fascinating beauties blended with nature and art. Furthermore, driven by the aspiration to find happiness in nature and propelled by advancements in commerce, industry, and transportation, modern-day events are deemed an occasion to foster greater cohesion among nations and communities. These events, which have come to fruition through sophisticated transportation systems and vehicles, are founded on the belief that nature brings joy to people. (Buhalis & Foerste, 2015).

In the study conducted by Hunziker and Krapf in 1941, tourism is defined as the concept that covers the whole of the relations created by the temporary stay of foreigners in the lands of other nations, who do not have permanent and income-generating activities. In line with these definitions, the International Association of Tourism Experts made a terminological arrangement in 1980 (Hall & Page, 2014).

The League of Nations Committee of Statistical Experts first made the conceptual definition of the tourist in 1937. According to this definition, Tourist, an individual comes from one country to another by staying in the country for a minimum of one day within the framework of travel, health, religious, scientific, sports, visit and many reasons. In addition, in the Republic of Turkey, "Travel Agencies Regulation No. 2274" entered into force in 1966. Under this legal framework, tourists are defined as individuals who travel temporarily to a location other than their place of residence for various reasons, such as leisure, relaxation, scientific, sporting, cultural, administrative, religious, or health purposes, without the intention of earning money. They function as consumers during their travels, stay at a temporary residence, and ultimately return to their original place of residence (Towner, 1995).

Millions of people from almost every society in the world travel to different geographies from the geography they live in, for many reasons. These trips are generally "tourism" trips (Morley, 1990).

3.2.2 Importance of Tourism

Considering the importance of tourism, it is seen that it has many benefits in many areas, from its economic contributions to employment. Tourism is one of the most important sectors in the global economy due to the positive results of its income generation, foreign exchange return and contribution to employment (Hall & Page, 2014).

Tourism is a mass movement of many people who have millions of interactions and have their own unique history, language and culture. Due to this expression, large and small business areas such as tourism aircraft companies, sea vehicles, rental car agencies, travel agencies, units working for problem solving, accommodation places, places with food and beverage, meeting halls emerge (Towner, 1995).

Tourism provides important results in many areas. Some of these areas are economic and cultural, social and political effects, as well as their contributions to the country's economy, especially to economic and political relations. Due to these contributions, it is seen that developing countries as well as developed countries give importance to tourism policies (Gyr, 2010).

Due to the supply and demand in the field of tourism, it is seen as an important sector within the framework of contemporary economy. In the global studies in the field of statistics, the contribution rate of the tourism sector to the employment in the world is expressed as 7.4%, and it provides a contribution of 10% in terms of total employment (Tasci & Gartner, 2007).

Tourism is the main source of income of some countries, cities or regions. Because this sector is a "service" sector, the possibility of mechanization and automation can be provided in a limited way. This causes a great need for labor in the tourism sector. Tourism, which has a regional structure in terms of the service produced, constitutes a system in which all expenditures made by the tourist contribute directly to the country or city income. There are many sectors such as accommodation, transportation, food and beverage, entertainment sector within the sub-sectors of the tourism sector (Dwyer et al., 2004).

Along with globalization, the growth rates in cities have also increased, and there has been a growth in the needs of citizens in growing cities such as entertainment, rest and sports. This situation allows the tourism sector to progress gradually, and to the emergence of new types of tourism as it progresses. It is thought that tourism will be evaluated as a "planning and implementation tool" in the future to eliminate regional inequality, reduce poverty and improve employment opportunities (Hall & Page, 2014).

3.2.3 Historical Development of Tourism

The tourism industry is an important part of many people's lives. In the past, even up to the 1930s, when the people who made domestic or international voyages are examined, it is seen that these people are generally soldiers, merchants, explorers or sailors. Considering the past conditions, the reason why these people do not travel abroad is that the journeys are uncomfortable or dangerous. It has also been determined that some documents have been prepared in order for the travelers not to have security problems or difficulties in proving their identity during their travels, and that the travelers carry these documents with them. In addition, these documents are the first examples of "passports" (Chambers, 1997).

Economic, social, technological and political developments with the effect of globalization after the Second World War is an important factor in the rapid development of tourism. Tourism has continued its development since the Second World War and continues to do so. The development of tourism is of great importance both because it causes an increase in the number of tourists and because it contributes to economic development (Lumsdon, 1997).

It is thought that in the 19th century, some British citizens used the word "tourism" during their European journeys and this usage was first in this context. Until the end of the Second World War, ships were used as the main means of transportation. Today, ships that are used extensively within the framework of overseas voyages are important. At the end of 1940, it is observed that air transportation started to develop largely and the number of tourists increased with this development (Chambers, 1997).

3.2.4 Types of Tourism

When a generalized analysis of tourism is made, it is seen that it is divided into two as “domestic” and “external” tourism. Domestic tourism is defined as the use of tourism facilities by the citizens of the country through their travels within the borders of the country. In foreign tourism, there is an "out of country" travel and benefit. With this expression, it is thought that foreign tourism is of great importance in terms of "country economy" and "different cultural interaction" (Buhalis, 2000).

Types of tourism are formed by the people engaged in tourism activities within the framework of the participation purposes of these activities. When we look at the types of tourism, there are many types. The most preferred type of tourism in the world is "3s tourism", that is, "sea, sun and sand tourism". When examined in general terms, tourism types are divided into five as health, culture, faith, business and sports tourism (Buhalis, 2000).

3.2.4.1 Health Tourism

Health problems caused by factors such as congenital ailments and intense working conditions also negatively affect human life. It is seen that people travel from ancient times to the present day in order to maintain a healthy life. The most outstanding travel choice within the framework of these trips is “thermal waters”. These travels have two different factors (Nacioglu, 2016). These factors are it is aimed at eliminating the congenital or acquired health problems of the travelers in order to regain their old health and a regular treatment in order to protect the health of the travelers in their lives (Nacioglu, 2015).

Health tourism involves utilizing specialized facilities such as seaside, mountainous, cave, spa, hot springs, as well as hospitals, beauty and culture centers to either treat curable diseases or prevent future health problems. This type of tourism is pursued in the name of wellness and is aimed at promoting better health (Nacioglu, 2016). In addition, travels made for health purposes have helped shape health tourism and the emergence of health tourism types such as thermalism, climatism, uvalism and thalassotherapie (Laškarin Ažić, 2017).

- Thermalism is the use of rich mineral water resources such as hot springs in that geography for treatment purposes.
- Climatism is the use of the climate, natural environment or fresh air in that geography for treatment purposes.
- Uvalism is a cure from a mixture of some fruits and vegetables found in that geography.
- Thalassotherapie, on the other hand, is the use of seawater, climate or air in that geography for treatment purposes, similar to climatism.

3.2.4.2 Culture Tourism

Cultural tourism, as an alternative type of tourism sector, is known as a type of tourism that is of great importance within the scope of "protection of cultural values" and "transferring cultural values to future generations" as well as providing financial contribution. Generally, besides archaeological sites, there are areas of cultural value such as museums, architectural sites, art galleries, festivals, theater performances, musical activities and religious activities. Furthermore, during such trips, individuals can also engage in cultural tourism, which involves exploring various destinations, gaining insights into different cultures, and enhancing their knowledge and skills (Huh & Vogt, 2008).

Particularly in developed countries, cultural tourism typically encompasses visiting museums featuring diverse art collections, attending theatrical performances, and experiencing operas. In underdeveloped countries, religious rituals, works of art, traditional lifestyles, all local activities from local tools to belief patterns have importance as "global tourism" (Richards, 2019).

3.2.4.3 Faith Tourism

It is thought that humanity needs a "religious belonging" since its existence. This has been led to the rise of numerous faiths and ideologies from history to the present. Within the scope of these beliefs, people make collective visits to places that are described as "sacred". This has also been effective in the emergence of "religious tourism" (Rinschede, 1992).

Tourist trips made in order to meet the religious needs of people by leaving their places are evaluated under the concept of tourism, and this is called "religious tourism". The purposes of the faith tourism are (Sharpley & Sundaram, 2005):

- To relax spiritually as a result of pilgrimage visits,
- People's desire to meet and meet with people of their religions,
- Fulfilling the rules under the name of "religious duties",
- It can be classified as a desire to see and recognize the places that are described as "sacred".

3.2.4.4 Business Tourism

Because of national or international commercial agreements, people aim to strengthen business relations and provide economic benefits in connection with these relations. This has enabled business tourism to develop spontaneously and become a type of tourism. The majority of people traveling for this purpose contributes to tourism (Nicula & Elena, 2014).

Business trips are generally short. The shortness of business trips is mainly because they are made alone. As business tourism, activities such as fairs, exhibitions, congresses and training are mostly carried out. While performing these activities, the fact that the travelers also benefit from the tourism facilities as a result of being requested affects the tourism market (Sigala, 2020).

3.2.4.5 Sports Tourism

Sports tourism, which is one of the most popular types of tourism based on the number of participants, has both economic and cultural importance. When sports tourism is mentioned, traveling comes to mind in order to perform sports activities on different branches. Sports tourism is defined as the whole of activities that include travel to participate in sports-related activities and to realize the desire to compete in the name of leisure time of individuals participating in events such as national or international sports activities, tours and championships (Gozalova et al., 2014).

Besides the economic effects of sports tourism, there are also cultural effects. Along with sports activities, sports tourism also has an important effect in order to ensure the recognition of the country by other countries and to increase the awareness of the country's culture by the world (Gozalova et al., 2014).

3.3 The Relationship between Tourism and Economy

Under this title, the relationship between tourism and economy has been examined in terms of the factors affecting tourism.

3.3.1 Factors Affecting Tourism

The demand of consumers to buy tourism products in different price ranges and different brands within a certain period is defined as "tourism demands" (Serra et al., 2014). In order to create a healthy tourism demand, it is a necessity for the person requesting tourism to be economically sufficient and to have free time within the desired time. In the absence of either of these two conditions, the demand for tourism is not in question. When the hierarchy of personal needs is taken into account, the first orientation is to meet the needs such as shelter, nutrition, security, education and health. If these needs are met, the person has thoughts in order to turn to tourism activities. The two biggest needs to be met in tourism activities are money and time (Dwyer, 2018). It is thought that a classification can be made by considering the geographical feature factor of tourism demands. With this thought, tourism demand can be subjected to two different analyzes as domestic and foreign (Hall, 2012).

In countries where tourism is seen as important, it is expected to invest more and more in tourism as a sectoral investment and to make a future-oriented planning. A realistic estimation made or to be made regarding the tourism demand will contribute to the country's tourism and exports. In order to make a realistic forecast, there must be a supply-demand match. Therefore, the determination of a country's tourism demands depends on the effectiveness of the tourism plan it has made and the strategies it has put forward in line with this plan (Dwyer, 2018).

It is seen that the countries that comprehend the importance of tourism in general in the world experience an economic development originating from this sector. As a result of the importance Turkey attaches to this sector, it provides the necessary economic gains. Because of various ongoing studies in Turkey, it is desired to increase the share to be obtained from the tourism sector. In addition to its geopolitical location, Turkey's natural and cultural riches attract the attention of tourists. It is predicted that Turkey's wealth will be recognized more because of the right policies and planning, and in this case, tourism revenues will increase more (Okumus et al., 2012).

Many factors are effective in increasing the demand for products that are available touristic. When a classification is made, it emerges as “economic factors” and “non-economic factors”. In addition, economic factors have a direct effect on the formation of demand, and non-economic factors affect the determination of demand over time (Dwyer, 2018). In addition, when "foreign tourism" is considered, social, political, psychological and economic factors have an effect on the creation of "demand"(Wang et al., 2018). The factors affecting the formation of demand are examined below.

3.3.1.1 Social Aspects

When we look at the social factors affecting tourism, features such as marital status, gender, age, education level, cultural level and occupation type are shown. These features are effective in the level of participation in tourism activities (Zarei & Maleki, 2019).

Socio-demographic characteristics of individuals directly affect their travel preferences. The first of these characteristics is the level of education. It shapes the demand in line with the impact of the education level of individuals on tourism. In addition, the occupations of individuals also affect tourism demands. Education level also helps to understand how much knowledge people have about the world. In addition, the education level of people shows their ability to acquire knowledge, and it makes people want to gain experience. Apart from tourism activities, education level also affects participation in cultural, sports and artistic activities (UN Environment Programme, 2019).

Age, gender and family structure are among the factors affecting tourism. Starting from the place of residence, factors such as the number of individuals in the family and their working status can affect the demands on goods and services. In a statistic that will serve as an example for this situation, it has been determined that people who are married and have children are less likely to participate in tourism activities than those who are single. In addition, tourism activities can be shaped depending on gender and age. In many countries, including Turkey, women are engaged in many pursuits due to their social roles in the country. This causes women to have less free time than men. When the age factor is examined, young people have more free time than the elderly does. In addition, there are different activities in which the "age" factor is effective (Cankul & Demir, 2018). The age group that travels the most is individuals between the ages of 25-65. Based on developed countries, it is seen that young people travel more. Language differences are a factor affecting both employment and service quality in the tourism sector. In order for the tourism sector to be a successful one, "communication with the tourist" is a very important factor. In line with language problems, it is seen that some tourists will not have difficulty in understanding and want to travel to countries where a common language is spoken. As a result of this request, tourism activities are also affected (Hall, 2012).

3.3.1.2 Psychological Elements

Many psychological factors can prevent people from participating in tourism. First, it is important for the tourists to feel safe in the places they will travel and the behaviors that the people in the country they travel to have an effect on them in terms of their psychological effects. The psychology of people has a direct or indirect connection with economic behavior. Because of the continuous and unlimited development of touristic activities, tourists reach psychological satisfaction more slowly (Zarei & Maleki, 2019).

In a study conducted in 2016, it was determined how psychologically the mood and emotional states of people affect their travels abroad, and in this context, it was observed that socio-psychological factors are among the factors affecting the desire to travel.

It is stated that shocks in individuals' moods have an effect on foreign tourism demand, and this effect occurs within time and event factors. When the example of the September 11 attacks is examined, the tourism demand of people who want to travel to the region has been affected psychologically (Dragouni et al., 2016).

3.3.1.3 Economic Factors

Economic factors are one of the most important factors in the field of tourism. In this context, the main evaluations of tourism demands are the expenditures made by the tourists and the duration of their stay in the country. It is an important situation that the purchasing power of the people who demand service in the tourism sector is high. Sufficient purchasing power allows tourism activities to be carried out in a healthy way. In other words, the economic power of the countries they belong to is an important factor in the foreign tourism demands of people (Santos & Cincera, 2018).

As an economic factor affecting tourism, it is known as income elasticity of tourism demand. It is important that the person or persons performing tourism activities have a certain amount of income for the consumption of touristic-based products. The products and services offered to the person in tourism activities are not compulsory needs. This shows that product prices are a separate determinant from demand. However, if there is a price decrease on the tourism sector, it is predicted that the demand will be at a higher level than the price (Santos & Cincera, 2018).

It is seen that the welfare level of the person is also related to tourism, and in this context, the interest in tourism is more in societies with high welfare levels. This ensures that income distribution is an effective factor in tourism (Acar, 2020).

National income per capita is one of the economic factors affecting tourism. Equality in income per capita symbolizes a fair distribution within the country, naturally contributing to an increase in the income levels of low-income people, and this contributes to an increase in their interest in tourism. When societies with unequal income distribution are examined, it is seen that personal demands for tourism also decrease (Lumsdon, 1997).

The distance from the tourism regions also influences tourism activities. When we look at the countries that send tourists, moving away from the borders of the country causes a decrease in tourism demand. This shows that the distance factor has a deterrent effect on tourism demand. The concept of accessibility is closely related to the flow of tourism to a region. Travel cost is one of the most important economic factors in the formation of tourism demand (Santos & Cincera, 2018).

The accommodation potential and supply capacity of the touristic region are also an important factor. Due to the increasing demand in the regions, the importance of accommodation emerges. The physical structure and service quality of the establishments serving on accommodation are the main determinants of the accommodation preferences of tourists (Davras, 2017). In addition, the suitability of the fees for the service provided creates an increase in the demand for foreign tourism. This ensures the supply-demand (Santos & Cincera, 2018).

3.3.1.4 Political Elements

Because of tourism, the ties between states are strengthened and this environment becomes tolerant. This shows the importance of tourism in terms of world peace. In addition, the existence of some laws preventing travel by the state of which the people who will create tourism demand due to interstate problems are citizens is a problem that prevents tourism activities and creates a "shrinking in demand". Countries can impose such sanctions because of certain conditions and political environments (Dwyer et al., 2004).

In addition, tourism activities are adversely affected due to the political events in the country where tourists have the idea of travel demand. In societies with political instability, the success in the tourism sector is decreasing day by day. In line with the crisis between Turkey and Russia in 2015, the number of Russian citizens requesting travel to Turkey has been shown as an example (Irani et al., 2022).

3.4 The Impact of Historical Epidemics on Tourism

In the pages of history, it is possible that there are situations that will cause the death of millions of people in global-based epidemics. In addition, the transition of people from a nomadic lifestyle to a settled life has affected the formation of unhealthy conditions, causing people to experience many problems related to the immune system. An unhealthy environment, ignoring hygiene rules, destruction of ecological balance, famines and natural disasters are shown as factors (Xu et al., 2023).

As the first known epidemic in history, the plague of Athens, which was seen during the Peloponnesian War in 430 BC, is shown as the "ancient epidemic". It is thought that 75 to 100 million people lost their lives in this epidemic that took place within the territory of Greece. More than millions of people have lost their lives due to the epidemic until today (Ritchie & Jiang, 2019).

During the epidemic periods, apart from the "disease" dimension, social and economic life is also seriously affected. Compared to today, it is seen that epidemic diseases bring more destruction because the state or its affiliated organizations did not take measures during epidemics in the past. Considering that health, transportation and technology were not developed in the past, it is thought that the epidemic processes are longer, the epidemic management is more difficult, and the epidemic is more difficult to overcome (Xu et al., 2023).

In a study conducted in 2011, it is reported that epidemic diseases directly affect the economy. The reasons for affecting the economy are shown as the increase in the spending of the state and insurance organizations related to the epidemic, which provides resources for the epidemic. Labor inefficiency occurs when people are exposed to certain restrictions and measures during the treatment process. Some practices to prevent the spread of the virus include restricting tourism activities, restricting domestic and international travel, limiting public events, and evaluating sports or other activities within the scope of restriction (Verikios et al., 2011).

One of the most affected sectors within the framework of the restrictions applied in cases of epidemics is the "tourism sector". Considering the activities evaluated within the scope of tourism, the fact that there is a global interaction makes it necessary to primarily restrict or control tourism activities. The 21st century epidemic, which is described as the "first test" in the tourism industry, is shown as the SARS virus epidemic. It is known that 744 people lost their lives out of 8096 patients identified in 2002-2003. This epidemic, which caused an international panic environment, was detected in 27 countries, especially in China, Hong Kong, Taiwan and Singapore (WHO, 2021).

In addition, WHO has requested that travel to these countries be stopped in order to prevent the spread of the epidemic through international travel. After this demand, Asian tourism experienced a great collapse; It has caused about three million unemployed and 20 billion dollars of economic loss in countries where the epidemic is intense, especially in China, Hong Kong, Taiwan and Singapore (Kuo et al., 2008).

In addition, regarding the SARS epidemic, bird flu epidemic started to occur in Asian geography at the time when the idea of weakening was formed. The official transmission of the epidemic, which started in 1997, was first detected in China in 2003. As a result of the studies, it was determined that this disease was transmitted from animals to humans. With this determination, it is foreseen that the human harm will be less. In the statement made by WHO in 2005, it was stated that it could mutate. As a result of the warnings, there was a large-scale decrease in Asia-Pacific tourism, and the effects of this epidemic after the SARS epidemic caused great damage in terms of the tourism sector (Lee & Chen, 2011).

The swine flu epidemic, which was first seen in America and Mexico, emerged in 2009. According to the data presented by the American Center for Disease Control and Prevention, it is thought that between 151-575 thousand people lost their lives globally. In addition, although the high death rate of this epidemic is striking, the tourism industry has been affected less than other epidemics. In addition, it is seen that there is a decrease of 2.8 billion dollars in tourism revenues and a decrease of up to 1 million people in the number of tourists. The effects of the epidemic decreased after 2010 (Viboud & Simonsen, 2012).

After the swine flu, an epidemic disease originating from Africa, MERS, emerged. It is known as a coronavirus-based (Mers-Cov) virus. Saudi Arabia is shown as the first encountered case location. This region, which is also known as the "pilgrimage", has caused great concerns throughout the virus period. In 2013, a study was conducted during the pilgrimage, and no patient infected with MERS virus could be detected (Al-Tawfiq et al., 2014). Considering the effect of tourism, when the number of pilgrimages during the period is examined, it is seen that there has not been a great decrease. After this epidemic, the Ebola epidemic emerged in Guinea, which is on the African continent, and then began to be widely seen in West Africa in 2014. When WHO statistics are examined, it is seen that the number of people who died from this disease is 32 thousand 319 people (WHO, 2021). Although the negative impacts of the last two epidemics (MERS and Ebola) on tourism were low globally, the tourism industry in the region was greatly adversely affected by this epidemic. The density of cancellations at the airport and hotels in the region is striking, and there are also hotels that are closed for this reason. Due to the epidemic, domestic and foreign tourism in the region came to a standstill, and unemployment rates increased statistically, as businesses were greatly affected (Kongoley-MIH, 2015).

In other words, when the effects of the 21st century epidemics on the tourism industry are evaluated within the scope of the last five epidemics, it is not thought to cause a long-lasting decline and damage throughout the world. When the World Bank data is examined, it is seen that the effect of the SARS epidemic is only 0.4% compared to the past epidemics (World Bank, 2020).

3.5 The Relationship between Tourism and Covid-19

Due to the decrease in demand for the purchase of existing goods and services with the Covid-19 epidemic, economic losses have occurred in the countries of the world due to this epidemic. Travel restrictions and flight bans applied after the epidemic pose great threats to the tourism sector and the employees of this sector. Hotels, restaurants, entertainment venues, sports events and cultural events that make up the service sectors are the areas most affected by these restrictions (Sigala, 2020).

In addition, there are countries, cities and regions where tourism constitutes a large part of the national income in the world. Pandemic restrictions have led to a decrease or even extinction of demand in this region, causing great economic damage in these regions.

According to the May 2020 data published by the United Nations World Tourism Organization (UNWTO), the impact of Covid-19 on the tourism sector was expressed as three times this crisis, based on the “Global Economic Crisis” experienced in 2009. In addition, it is seen that international travel in May 2020 decreased by 98% compared to a year ago. When we look at the period from January to May of 2020, there is a 56% decrease compared to the previous year (TURSAB, 2021).

According to the data of the World Tourism Travel Council (WTTC), the loss of the travel and tourism sector in 2020 is over 4.5 trillion dollars. In addition, while it is seen that the GDP contribution of the travel and tourism sectors in 2019 is 10.4%, this rate drops to 5.5% in 2020, within the restrictions caused by the Covid-19 outbreak. In addition, it is reported that the tourism sector employment in the world in 2019 was 334 million, and in 2020, it decreased to 272 million employment and experienced a contraction of 18.5%, and 62 million people remained unemployed (WTTC, 2020).

In the World Tourism Barometer published by UNWTO in 2021, it is seen that there was a huge 73% decrease in international tourism in 2020 due to the effect of Covid-19, and it was followed by a decrease of 83% in the first month of 2021 due to the increase in restrictions. In addition, when the data for January 2021 are examined, Asia and the Pacific regions, which are the most restricted, experienced 96%, Europe and Africa 85%, the Middle East 84%, and the Americas 77% "international transit" loss (UNWTO, 2020).

3.6 Impact of Covid-19 on Tourism

Due to the sensitive nature of tourism, it is thought that a pandemic such as Covid-19 will greatly affect the tourism sector. The fact that people are faced with the pandemic can prevent any kind of travel they will make in the country or abroad in order to protect theirs.

Since there has never been a disaster with such a high impact on tourism in the world, it has become necessary to find new solutions to solve this problem. For this reason, government administrations and companies in the tourism sector are trying to develop different methods that will minimize financial losses on behalf of the tourism sector (Dwyer et al., 2004).

The restrictions that came with Covid-19 have reduced the income and expenditures of families and caused the tourism sector to be adversely affected. It is seen that businesses operating in the service sector and activities such as sports, entertainment and cultural activities are the areas most affected by these restrictions (Sigala, 2020).

Because of the cancellation of the travel plans of the tourists all over the world and the restrictions on the transportation sector, the world income in 2020 fell to 2.9 trillion dollars and decreased by 3.3%. When we look at the other years, it is seen that this rate is around 10.4% on average, and the revenue is around 9.16 trillion dollars on average. In this context, it is determined that the tourism sector has experienced the most contraction of the last 20 years. In addition to this contraction, considering that the contribution of the tourism sector, which contributes to the gross national product in the world, is over 10%, it is thought that the employment area will narrow as well as the economic problems that will occur as a result of the contraction, and therefore unemployment will increase (Gössling et al., 2020).

3.7 Impact of Covid-19 on Tourist Behaviors

There are many periods in history when humanity struggled with epidemics. During these periods, each epidemic disease caused people to lose their lives largely, and caused some health problems, psychological problems, and many problems affecting economic and daily life in people.

Today, the emerging epidemic has entered into a “new generation” formation like Covid-19, and in this context, it has prepared the ground for a series of problems that will last for years. In addition, with this epidemic, there have been certain changes in the way of life of people (Wachyuni & Kusumaningrum, 2020).

With the spread of the disease, states have taken many precautions, and in this context, tourism has been subjected to intense restrictions for a while. During the period when the effect of the disease diminished, the restrictions began to be lifted, and an increase in tourist demand was envisaged. However, during the pandemic, new behavioral patterns and new habits emerged in people, which led to new dimensions in tourism where customer behaviors were also affected. In other words, today, unlike other times, a tourism product selection in which psychological decisions are made rather than economic and social decisions have begun to be made (Sigala, 2020).

Studies have found that psychological factors are an important factor by tourists when people choose tourism during epidemics, and it has been stated that there is a demand for places where a situation such as fear, anxiety, trauma, and panic that may cause psychological and permanent damage is seen as "unexpected" by them. In addition, it is observed that people want a normal holiday five to seven months after the pandemic, which is stated in other studies, is over. However, it is emphasized that these holidays are not like past time holidays, but rather short holidays. In addition, considering the findings in these studies, places where cleaning measures are taken better, and nature areas are places where there will be more preference in tourism demand (Wachyuni & Kusumaningrum, 2020).

Due to psychological reasons, some people have turned to domestic tourism. Because domestic tourism is considered to be safer. This is one of the psychological effects of the pandemic on people. In addition, as the reason for this situation, the closure of the borders without prior notice during the Covid-19 epidemic caused millions of tourists to be stranded abroad for days or even weeks. This has become a psychological reason that should be considered when making a choice about tourism, both for them and for other people (Gossling et al, 2020).

The increase in unemployment rates due to the pandemic has also caused many problems in the tourism sector (Gros and Ounnas, 2021). One of these reasons is that people who are unemployed cancel their vacation plans, and people who continue to work want to postpone their vacation plans because they are afraid of economic fluctuations.

In addition, it is thought that individuals who have health problems due to the pandemic will also be affected psychologically by the disease, and in this context, they will experience fear when choosing a geography, they do not know while making their foreign tourism preferences. There are many surveys on Covid-19 and tourism preference in the world and the results are in this direction.

3.8 Economic Impact of Covid-19 in the World

The Covid-19 virus, which has spread rapidly since December 2019, has not only caused negative effects in the field of health, but also caused economic problems. The inability to carry out their activities and the unemployment of the employees in these sectors due to the closure or stoppage of their workplaces cause them to live in production areas as well as consumption (Musmar, 2020).

China has been severely affected economically by Covid-19 after the first case. The manufacturing and service sectors in China are the sectors most affected by the pandemic. Automobile sales in China decreased by 80% in this period, while exports decreased significantly (Musmar, 2020).

Germany has been severely affected by Covid-19, due to the economic incidence of Covid-19 cases. Thus, on March 23, 2020, the Economic Stabilization Fund was established in Germany in order to rapidly reduce the demand in the market sector (Scheifele, 2020).

It is determined that the world economy has contracted by 3.5% in 2020, and the contraction experienced by the Euro Area and India is approximately twice this rate. (Yeyati and Filippini, 2021). It is reported that the US economy contracted at a rate close to the world average in 2020. Despite the 2.7% growth of the world economy in 2019, it can be stated that with the decline in 2020, the effect of the epidemic on the production loss of the world economy is approximately 6.2%. In addition, the Covid-19 pandemic is the event that caused the deepest recession in the world economy after the Second World War (Yeyati & Filippini, 2021).

The Covid-19 outbreak has caused a deep crisis in the European Union. By the second quarter of 2020, most of the countries' GDP contracted by 10% and for the entire year by 5%, unemployment rates rose from 6.5% to 7.6% in early 2020. In the USA, this rate was reported as 4% at the beginning of 2020, and as 14.7% by April. In November, unemployment in the USA decreased to 7%. Based on this, it can be said that there is a panic atmosphere in 2020 (Gros & Ounnas, 2021).

The growth of the Turkish-Chinese economies in 2020 draws attention globally. These growth rates are 2.3% in China and 1.8% in Turkey. During the period, after Spain, the country where the effect of the pandemic was felt the most was England. The British economy suffered a great decline due to the crisis in the service sector, and the epidemic had a blow to the UK. Due to the pandemic, a large and sharp shrinkage occurred since the tourism sector, which has a great contribution to the economy of South Africa in 2020, was affected by the pandemic, and its effects will be felt for a long time (Gros & Ounnas, 2021).

As of the second quarter of 2020, the pandemic affected EU countries considerably, with Spain (-21.6%), France (-18.6%) and Italy (-18.2%) highly affected by the pandemic. Ireland was the only EU country that did not see an economic contraction in the second quarter of 2020. In addition, Ireland has attracted attention by showing a rapid recovery from this quarter (OECD, 2021).

In this context, most of the world's states, including Turkey, have started to struggle with an economic problem along with the fight against the epidemic (Acar, 2020). Within the scope of Covid-19, economic decision-making units in the world were directly affected, and after the epidemic, an expansionary attitude was started to be followed in economic monetary and fiscal policies (Gros & Ounnas, 2021).

Considering all the countries of the world, it is seen that the tourism sector, entertainment and culture sectors, transportation, energy, automotive and manufacturing industry sectors are also economically affected by the pandemic. In fact, it is shown as the main sectors most affected by the pandemic (Xu et al., 2023).

4 Practical Part

In this part, the impact of Covid-19 on tourism in Turkey will be analyzed in two stages. In the first stage, the statistical data will be analyzed and the change before and after Covid-19 will be revealed. Secondly, the relationship between tourism and economic growth will be examined with simple regression analyzes and the impact of Covid-19 on tourism will be analyzed.

4.1 Effects of Covid-19 on Tourism in Turkey

In this section, primarily, the change in Turkey's tourism data before and during the Covid-19 period will be examined through data such as tourism income and the number of tourists coming to the country.

4.1.1 Turkey Tourism Income and Statistics Before and After Covid-19

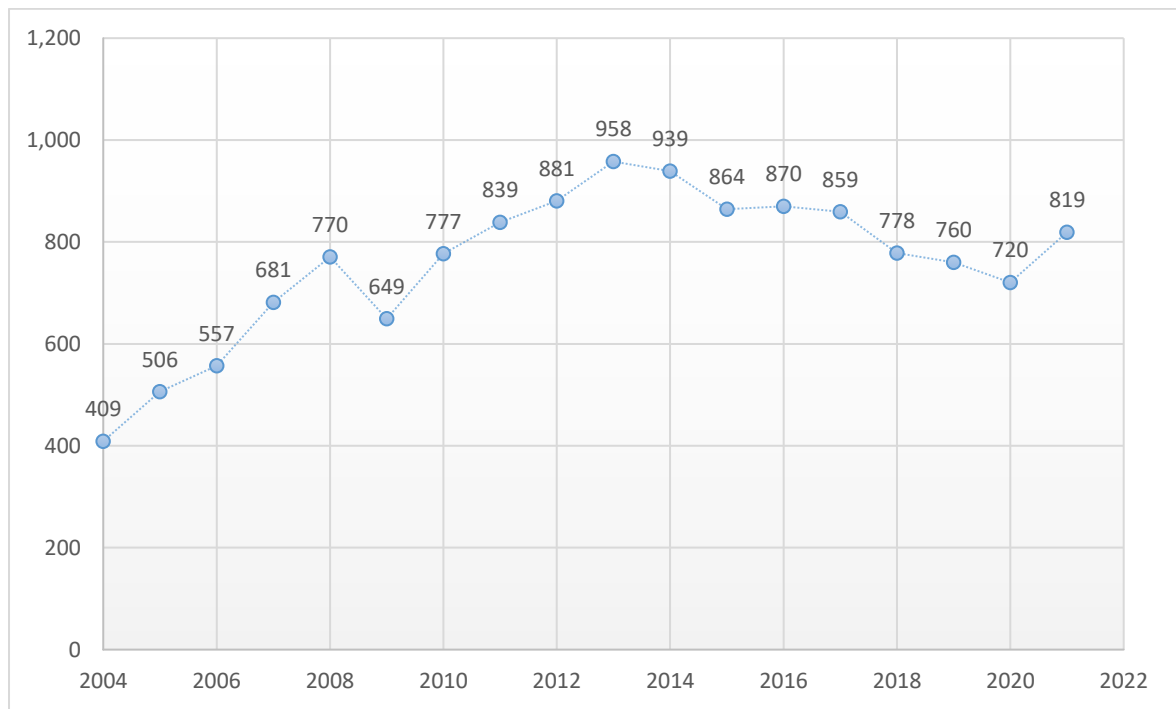
Tourism in Turkey, as a sector, has made great progress after the 1980s. In this context, it is seen that the tourism sector has come to an important position after these years on behalf of the development of the country.

On January 24, 1980, "Economic Stability Program" decisions were taken. In this context, the strategies made as "import substitution" have been replaced by the policy of "export-based industrialization". In addition, the tourism sector has been seen as an important sector because of the fact that the tourism sector has a structure suitable for the country and is a cheap, efficient and effective tool (Ozen et al., 2021).

Considering the policies followed and the investments made in 1980, the great development of the tourism sector draws attention. It is thought that these developments will continue in the future. The "Tourism Incentive Law" that entered into force in 1982 is cited as the important investment and financial support of Turkey (Yamak et al., 2012). In addition, it has been seen that Turkey's foreign trade deficit problem is tried to be solved with the revenues obtained from tourism, therefore the tourism sector is important in the country (Koçak et al., 2022).

In this section, primarily the change in Turkey's macroeconomic indicators between 2004 and 2021 will be discussed, and then both the development in tourism and the development of tourism within these indicators will be examined.

Figure 1. Turkey GDP (2004-2021) (Billion USD)



Source: Own processing based on data World Bank, 2023

Turkey's GDP values for the years 2004-2021 are graphed and shown above. A great increase has been observed in GDP and of Turkey since 2004. GDP, which was 409 billion USD in 2004, reached 819 billion USD by 2021. However, among these years, the GDP saw its highest level in 2013 and entered a downward trend as of this year. The GDP, which reached 958 billion dollars in 2013, decreased and reached 720 billion dollars in 2020, and reached 819 billion dollars in 2021 with a rise again.

As can be also seen from the figure above, Turkey's GDP decreased during the Covid-19 period and increased to 819 billion USD in 2021 with the reduction of the effects of Covid-19 pandemic.

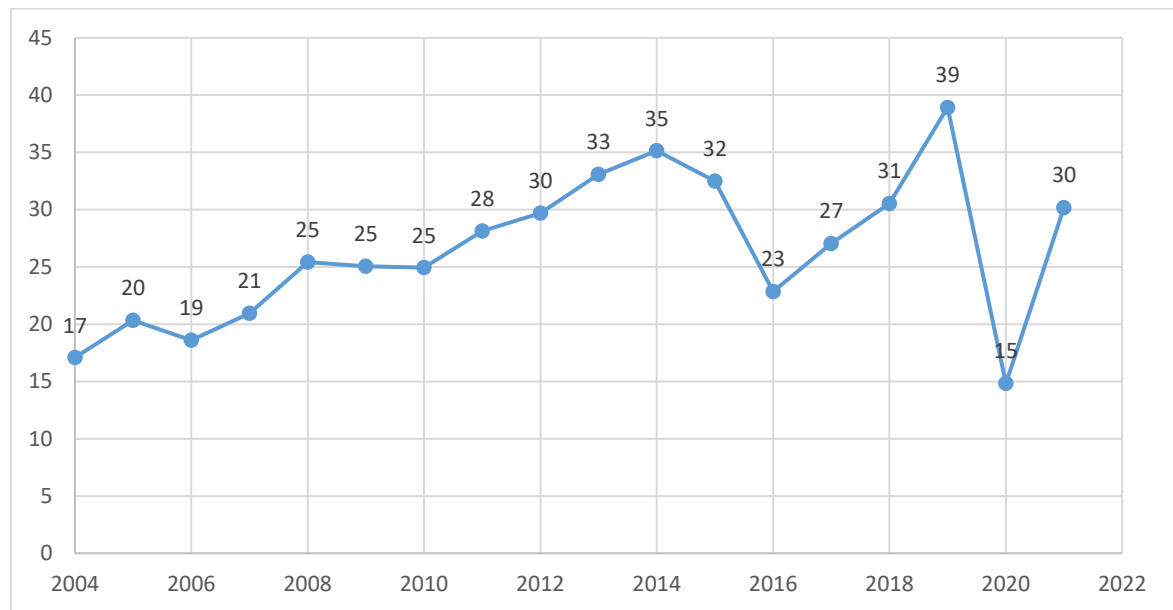
Table 2. GDP Growth of Turkey (Annual %)

Year	GDP Growth (Annual %)
2004	9.8
2005	9.0
2006	6.9
2007	5.0
2008	0.8
2009	-4.8
2010	8.4
2011	11.2
2012	4.8
2013	8.5
2014	4.9
2015	6.1
2016	3.3
2017	7.5
2018	3.0
2019	0.8
2020	1.9
2021	11.4

Source: World Bank, 2023

The effect of Covid-19 on macroeconomic indicators will be better understood through economic growth. For this reason, it is important to examine Turkey's GDP growth rates between 2004 and 2021 in order to better understand the economic impact of Covid-19. Turkey is a country that has been growing regularly since 2004. After the 2008 crisis, which started in the USA and took the entire world under its influence, Turkey, which narrowed by 4.8% in 2009, showed growth in other years. However, the lowest growth in the last 20 years was observed in 2008 and in 2019 and 2020, when the impact of Covid-19 was felt the most. It grew by 0.8% in the year of the 2008 crisis, by 0.8% in 2019 and by 1.9% in 2020. The years 2011 and 2021 were two years in which Turkey recorded a growth of over 10%. However, the only period in which Turkey has grown below 2% for two consecutive years has been the Covid 19 period. It is possible to see the negative effects of the effects of Covid 19 on macroeconomic indicators in Turkey as well as all over the world.

Figure 2. Turkey Tourism Revenues (2004-2021) (Billion USD)



Source: Own Processing based on data TURKSTAT, 2022

Turkey's tourism revenues have also been increasing since 2004. Tourism revenue, which was 17 billion dollars in 2004, doubled in 15 years and reached 39 billion dollars in 2019. However, with the effect of Covid-19, it went down even lower than in 2004 and regressed to 15 billion dollars in 2020. Turkey's tourism revenues between 2004 and 2021 are shown below.

When the figure given above is examined, it is seen that Turkey reached the highest tourism income in 2019 by 39 billion dollars and year after in 2020, it fell sharply, more than doubling to 15 billion dollars. As can be seen, Turkey's tourism revenue, which had been on an upward trend between 2010 and 2014, experienced a serious decline, especially in 2016 and 2020. However, it is observed that the largest decline among the years analysed occurred in 2020.

As can be seen in the figure given above, there has been a noticeable decrease in Turkey's tourism revenues during the Covid-19 period. With the decrease of the effect of Covid-19 and the gradual relaxation of restrictions in 2021, tourism revenues started to increase again.

Table 3. Export and Ratio of Tourism to Exports of Turkey (%)

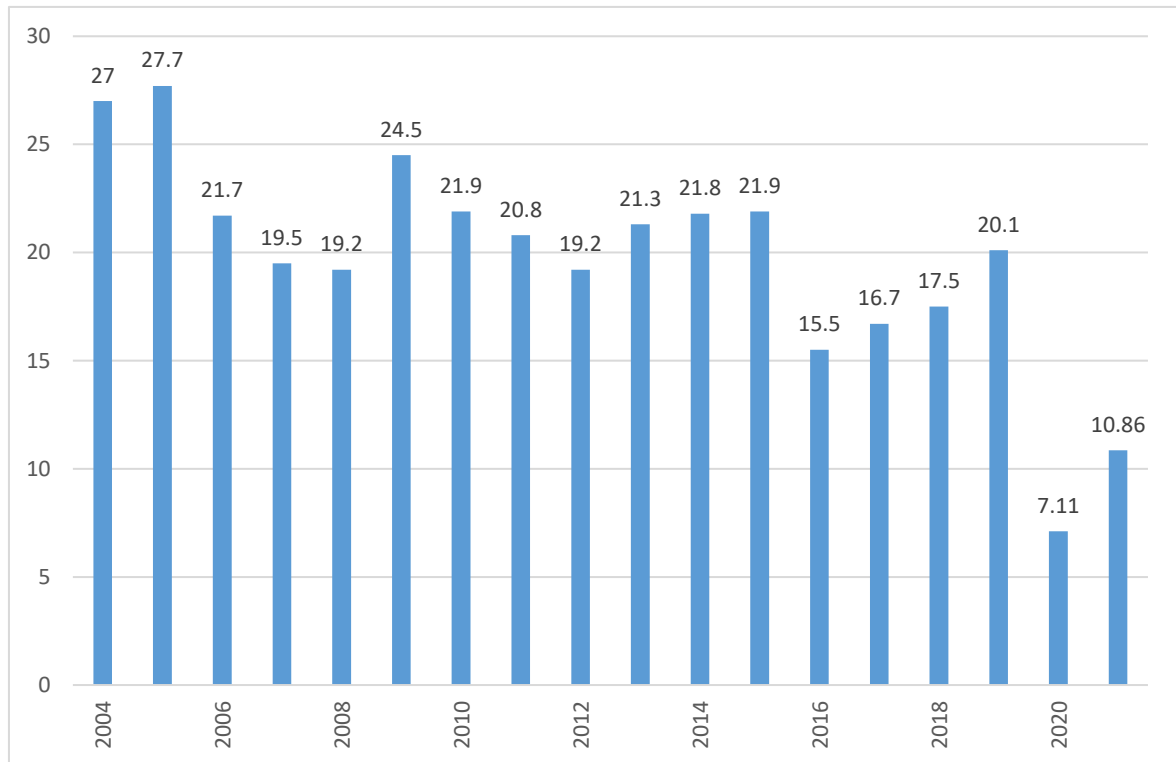
Year	Export (Thousand USD)	Ratio of tourism revenues to exports (%)
2004	63 167.0	27.0
2005	73 476.4	27.7
2006	85 534.7	21.7
2007	107 271.8	19.5
2008	132 027.2	19.2
2009	102 142.6	24.5
2010	113 883.2	21.9
2011	134 906.9	20.8
2012	152 478.5	19.2
2013	157 610.2	21.3
2014	151 802.6	21.8
2015	143 934.9	21.9
2016	142 606.2	15.5
2017	156 992.9	16.7
2018	167 967.2	17.5
2019	171 531.0	20.1
2020	169 514.1	7.11
2021	225 291, 0	10.86

Source: TURKSTAT, 2022

Since tourism revenues serve as an external source for countries, evaluating tourism together with export data is a method frequently used in the literature. Therefore, it is seen that the ratio of export revenues and tourism revenues to export revenues in Turkey between 2004-2021 is in the range of 20-25%. This rate, which was 27% in 2004 and 2005, continued to be around 20-21% in the following years. However, in 2020, when we saw the effect of Covid-19, this rate decreased to 7%.

The ratio of Turkey's export revenues and tourism revenues to export revenues for the 2004-2021 range is shown below.

Figure 3. Turkey Ratio of Tourism Revenues to Exports (%) (2004-2021)



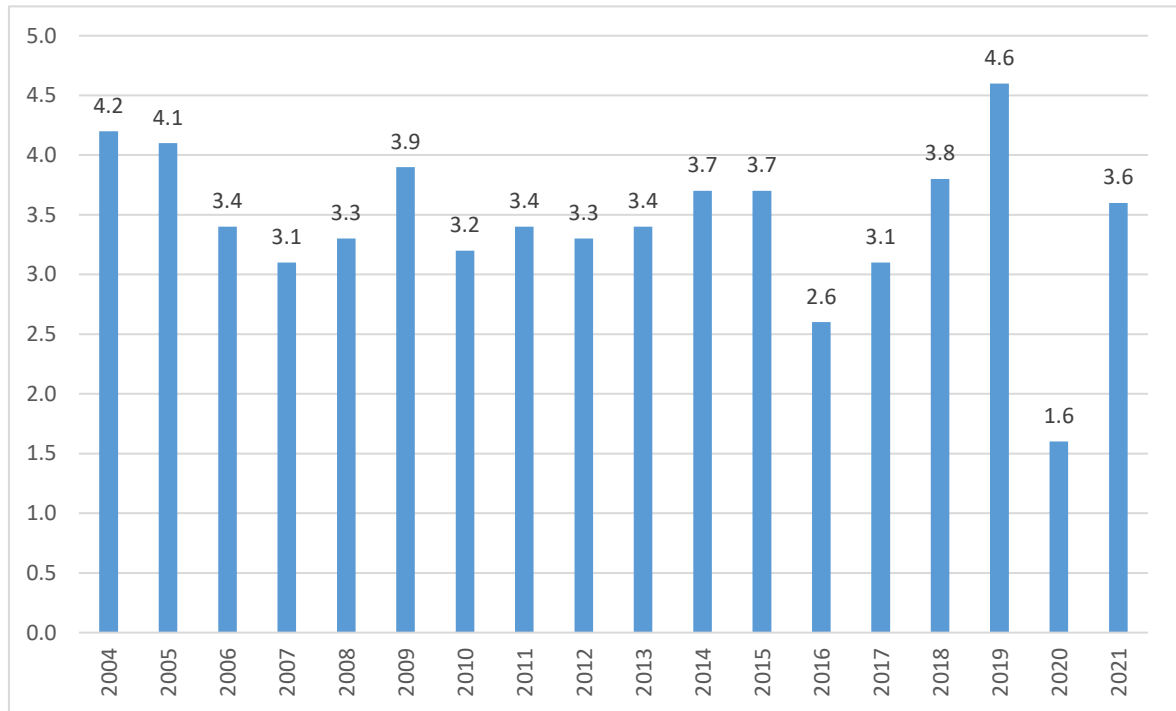
Source: Own Processing based on data TURKSTAT, 2022

When figure above is examined, although a partial decrease was observed in Turkey's export revenues in 2020, a significant decrease was observed in the ratio of tourism to exports. Although an increase in this rate is observed again in 2021, it is still far from the 2019 level. The ratio of Turkey's export revenues and tourism revenues is shown in figures below.

As can be seen from the figure given above, the lowest rate of tourism to exports in the last 17 years has been 2020. In addition, the share of tourism revenues in the country's GDP is also very important in terms of understanding the importance of tourism for countries and its contribution to the country's economy.

In this respect, it is useful to examine the place of tourism in Turkey's GDP. The share of Turkey's tourism revenues in GDP was between 3-4% between 2004 and 2021. However, by 2019, this rate increased to 4.6%. In 2020, it reached its lowest level with 1.6%. The ratios of tourism revenues to GDP between 2004 and 2021 in Turkey are given below.

Figure 4. Turkey Share of Tourism Revenues in GDP (%) (2004-2021)



Source: Own Processing based on data TURSAB, 2022

As can be seen from the figure given above, the contribution of tourism to the Turkish economy was very low in 2020, when Covid-19 caused the most restrictions. This situation is seen more clearly in the figure given below.

Turkey's share of tourism revenues in GDP was 1.6% in 2020. This was a significant decrease compared to the previous year when tourism revenues accounted for 4.6% of the country's GDP. The tourism sector faced significant challenges in 2020, and its contribution to the country's GDP decreased considerably.

The expenditures made by the consumers within the framework of touristic activities have positive effects on the balance of payments of the countries. If the foreign exchange gain from tourism is more than the foreign exchange loss, it is concluded that tourism makes a positive contribution to the country (Denk, 2018). When we look at the countries where this balance is not achieved, it is seen that efforts are made to achieve this balance by carrying out policies under the name of tourism promotion (Zorlu et al., 2022).

The share of tourism revenues in closing the foreign trade deficit is showed the table below.

Table 4. The Share of Tourism Revenues in Closing the Foreign Trade Deficit of Turkey

Year	Foreign Trade Deficit (USD)	Tourism Income (USD)	FTD Coverage share of Tourism Revenues (%)
2004	34,372,613	20,262,640	58.95
2005	43,297,743	24.124.501	55.72
2006	54,041,498	23,148,669	42.83
2007	62,790,965	27,214,988	43.34
2008	69,936.378	30,979,979	44.3
2009	38.785.809	32.006.149	82.52
2010	71.661.113	33,027,943	46.09
2011	105.934.807	36,151,328	34.13
2012	84,066.659	36,776.645	43.75
2013	99,858,613	32,308,991	32.35
2014	84,508,918	34.305.903	40.59
2015	63,268,398	31,464,777	49.73
2016	55,995,686	22,107,440	39.48
2017	76,736,291	26,283,656	34.25
2018	55,079,000	29,512,900	53.58
2019	31,174,000	34,520.300	110.73
2020	49,886,000	12,059,000	24.11
2021	46,133,000	24,482,300	53.06

Source: TURSAB, 2022

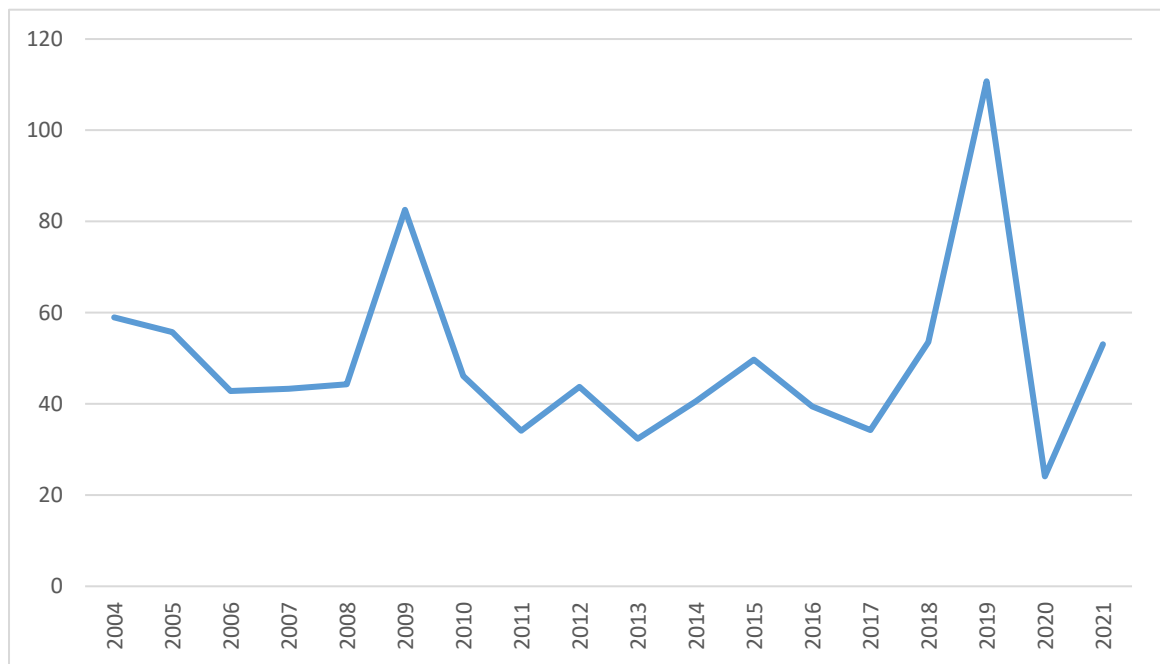
In 2019, the foreign trade deficit of 31.1 billion dollars in Turkey was closed with a net tourism income of 34.5 billion dollars. The foreign trade deficit, which reached 49.8 billion dollars in 2020, was closed with a net tourism income of 12 billion dollars.

When the table given above is examined foreign trade deficit reached highest in 2011 by 105 billion dollars and its lowest rate in 2019 by 31 billion dollars. In the perspective of net tourism income of Turkey highest rate was in the year 2012 by 36 billion dollars and lowest in 2020. In 2020, it can be said that the Covid-19 pandemic was effective in the decline in tourism revenues.

Turkey has been an important country in terms of tourism revenue for years, and the tourism sector has been a significant source of income for the country's economy. However, the pandemic dealt a major blow to the tourism sector. The number of tourists visiting Turkey decreased significantly due to border closures and travel restrictions. Turkey's tourism income in 2020 decreased by approximately 70% compared to the previous year. The government took a series of measures to support the tourism sector, but the industry is still trying to recover.

In order to better understand the relationship between Turkey's foreign trade deficit and tourism net income, the figure is shown below.

Figure 5. The Share of Tourism Revenues in Closing the Foreign Trade Deficit (%)



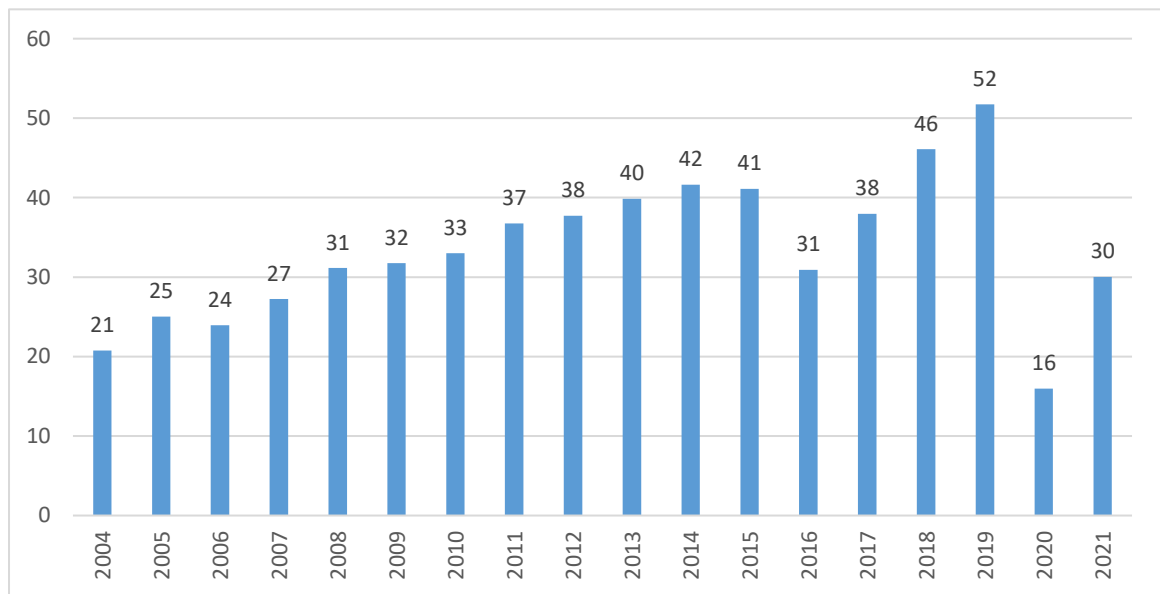
Source: Own Processing based on data TURSAB, 2022

It has been observed that there has been a great contraction in the foreign trade of countries since the Covid-19 pandemic. It is seen that the commercial relations that existed before the pandemic have changed with the pandemic, and disruptions have occurred in the supply chain. The disorder in the supply-demand balance resulting from the epidemic causes a contraction in the foreign trade volume (Yucel et al., 2022).

As it can be observed above figure and table the share of tourism revenues in closing the foreign trade deficit was lowest in the year 2020 by 21.11% beside that the highest rate is the year 2019 by 110.73%.

During the time period analyzed in the study, the share of tourism revenues in closing the foreign trade deficit between the years 2004-2018 was between the range of 30% and 50%, while in 2019 it reached a value of 110.73%, more than double the previous year.

Figure 6. Number of Tourist Arrivals to Turkey (2004-2021) (Millions)



Source: Own Processing based on data TURKSTAT, 2022

From the point of view of the number of tourists coming to the country, it is seen that there has been an increase of approximately 2.5 times in the number of tourists coming to Turkey from 2004 to 2019. The number of tourists, which was 20.7 million in 2004, reached 51.7 million in 2019. However, this figure decreased to 15.9 million in 2020. Statistics on the number of tourists coming to Turkey annually between 2004 and 2021 is shown below.

When the figure given above is examined, it is seen that there was a serious decrease in the number of tourists in 2020, the period when Covid-19 was most effective. It is seen that the number of tourists started to increase again in 2021, as the effect of Covid-19 began to decrease and the restrictions began to be lifted. The figure below shows the change in the number of tourists coming to Turkey.

The number of tourists to Turkey, which had been on an upward trend from 2004 to 2015 and experienced a serious decline in 2006, has started to rise again. Between 2016 and 2019, the number of tourists again started to increase, and in 2020, the number of tourists arrivals to Turkey showed the most serious decline in the period analyzed in the study.

As can be seen from the figure above, the year 2020 has been the year with the least number of tourists coming to Turkey in the last 16 years.

One of the important statistics in terms of tourism is the number of facilities, occupancy rates and the average length of stay of the guests. In terms of these data, there is a significant rise in Turkey from 2004 to 2019. However, there was a serious decrease in all these data in 2021.

The facility usage statistics of tourists are shown below.

Table 5. Facility Usage Statistics of Tourists

Year	Facility Number	Arrival Night	Duration of Stay (Days)	Fullness Rate (%)
2004	20,662,549	67,956,116	3.29	50.11
2005	23,294,348	74,639,458	3.20	51.71
2006	23,413,355	67,939,058	2.90	47.11
2008	24,923,009	77,720,083	3.12	52.13
2009	26,526,486	82,915,574	3.13	49.68
2010	29,753,966	98,158,007	3.30	49.91
2011	33,614,187	106,505,481	3.17	52.24
2012	36,183,162	121,154,085	3.35	55.28
2013	38,281,260	122,682,482	3.20	53.40
2014	40,901,438	130,029,917	3.18	52.62
2015	43,359,970	133,881,306	3.09	51.95
2016	36,945,637	112,545,478	3.05	42.22
2017	43,047,581	116,227,696	2.70	50.99
2018	50,344,818	144,415,267	2.87	56.43
2019	56,114,377	159,148,984	2.84	58.90
2020	27,166,430	64,804,422	2.39	22.83
2021	47,281,139	123,654,711	2.62	42.31

Source: TURKSTAT, 2022

The number of arrivals, overnight stays, and average length of stay and occupancy rates in accommodation facilities with tourism operation certificate published by the TR Ministry of Culture and Tourism in 2021 are shown above. According to this chart, while the average length of stay was 3.29 in 2004, it is seen that this rate was 2.62 in 2021. In addition, while the facility occupancy rate was 22.83% in 2020, this rate increased to 42.31% with the flexibility of the restrictions within the scope of Covid-19. In addition, while there were around 6767 million overnight stays in 2004, this rate increased to over 123 million in 2021. According to the table, the use of facilities by tourists in Turkey has decreased significantly due to the Pandemic. It is seen that this decrease is about three times compared to the pre-pandemic period. However, with the decrease of the effects of the pandemic, the percentage of tourists using the facilities has increased approximately twofold. Below are the monthly statistics of visitors to Turkey.

Table 6. Visitor Statistics to Turkey by Month

Months	2019	2020	2021	Increase Amount 2019-2020	Increase Amount 2020-2021
January	1 999 642	2 287 010	727 301	287 368	-1 559 709
February	2 113 909	2 196 453	764 314	82 544	-1 432 139
March	2 746 159	968 537	1 198 371	-1 777 622	229 834
April	3 809 819	24 239	1 072 496	-3 785 580	1 048 257
May	4 512 020	30 392	1 254 673	-4 481 628	1 224 281
June	5 969 981	216 408	2 540 872	-5 753 573	2 324 464
July	7 413 887	1 381 804	5 319 992	-6 032 083	3 938 188
August	7 016 330	2 192 251	4 630 334	-4 824 079	2 438 083
September	5 982 789	2 534 376	3 999 305	-3 448 413	1 464 929
October	4 818 001	2 044 001	3 967 363	-2 774 000	1 923 362
November	2 693 151	1 104 834	2 081 243	-1 588 317	976 409
December	2 671 511	990 896	2 482 697	-1 680 615	1 491 801
Total	51 747 199	15 971 201	30 038 961	-35 775 998	14 067 760

Source: TURKSTAT, 2022

The table above shows the variation of visitors to Turkey by months. Based on the total number of visitors, the number of visitors from 51.7 million in 2019 decreased by 35.7 million in 2020. In addition, when 2020 and 2021 are compared, there is an increase of 14 million. Based on this chart, Covid-19 has seriously reduced the number of visitors in 2020. Because of the policies carried out in 2021, it is seen that the number of visitors has doubled.

When the Turkish economy is examined, passenger mobility has ended with travel restrictions, distance education program has been put into practice, sports and artistic activities have been postponed, and the accommodation sector has faced a big customer problem. The measures taken within the scope of the pandemic have restricted activities in many sectors, which has seriously affected Turkey economically (Kocak et al., 2022).

Within the scope of the rules brought about social distance in Turkey, the closure of workplaces that do not meet the rules, especially in the service sector, along with the restrictions on the hotel, restaurant and travel sectors, cause a decrease in demand in general. In addition, the health sector is thought to be the least injured sector in the Covid-19 process. In addition, it is predicted that there will be a great increase in demand in the sectors engaged in medical equipment and pharmaceutical production activities, while other sectors will be adversely affected by the pandemic (Zorlu et al., 2022).

4.1.2 Impact of Covid-19 on Tourism in Turkey

When Turkey is examined in general, besides its historical, cultural and natural riches, there are various tourism opportunities together with historical values, ruins and cultural areas accumulated by the past. This provides an important advantage in world tourism. Almost every tourism activity can be performed in Turkey. Tourism activities in the country after Covid-19 show changes in every field (Özen et al., 2021).

The occurrence of any threat in the geographies where tourism activities are carried out causes the demands of tourists to be negatively affected and the activities to be postponed/abandoned immediately.

Due to Covid-19, this postponement/abandonment action is seen in tourism sectors around the world. This situation has seriously affected the Turkish economy as well as every country that is a tourism.

In terms of the number of tourists, Turkey ranks 4th in Europe and 6th in the world. In addition, based on tourism revenues, it ranks 6th in Europe and 15th in the world. Considering Turkey's pre-Covid-19 epidemic data, in 2019, which is described as the "last good year", 56.1 million guests were hosted in tourism facilities, and 34.5 billion dollars were obtained from tourism (Koçak et al., 2022).

The countries and annual numbers of foreigners coming to Turkey are shown below.

Table 7. Countries of Foreigners Coming to Turkey by Years

Country	2017	2018	2019	2020	2021
Russia	4 715 438	5 964 613	7 017 657	2 128 758	4 694 422
Germany	3 584 653	4 512 360	5 027 472	1 118 932	3 085 215
Ukraine	1 284 735	1 386 934	1 547 996	997 652	2 060 008
Bulgaria	1 852 867	2 386 885	2 713 464	1 242 961	1 402 795
Iranian	2 501 948	2 001 744	2 102 890	385 762	1 153 092
Iraq	896 876	1 172 896	1 374 896	387 587	836 624
Netherlands	799 006	1 013 642	1 117 290	271 526	645 601
France	578 524	731 379	875 957	311 708	621 493
Poland	296 120	646 365	880 839	145 908	585 076
Romania	423 868	641 484	763 320	269 076	496 178
Total	32 410 034	39 488 401	45 058 286	12 734 213	24 712 266

Source: TURSAB, 2021

The table above includes the 10 most popular tourist nationalities coming to Turkey and its grand totals. The three countries that visited Turkey the most in 2021 are Russia, Germany and Ukraine and least is Romania.

In the data of the ten countries given in the table, it is observed that there is a serious drop in the number of tourists coming to Turkey between 2020 and 2019. However, an increase in 2021 compared to 2020 is observed for all countries given in the table.

The situation in Turkey and other nations in the face of the epidemic is shown below.

Table 8. The Situation of Turkey and Other Nations in the Face of the Epidemic

Situation of Turkey and Other Nations in the Face of the Epidemic (%)						
Country	Use of Shopping and Entertainment Areas	Use of Public Transport	Use of Park areas	Work in Their Place Mobility	Use of Markets and Pharmacies	Stay at Home
Turkey	-74	-71	-58	-45	-39	17
UK	-85	-75	-52	-55	-46	15
Netherlands	-65	-68	-30	-35	-29	11
Germany	-77	-68	-49	-39	-51	11
USA	-47	-51	-19	-38	-22	12
Spain	-94	-88	-89	-64	-76	22
France	-88	-87	-82	-56	-72	18
Italy	-94	-87	-90	-63	-85	24

Source: Covid-19 Community Mobility Report, 2020

The statistics of other countries, especially Turkey, shown in table, highlight the serious problems of the epidemic. According to the table, there are serious decreases in the use of shopping and entertainment areas, use of public transportation, use of parking areas, mobility in workplaces and market-pharmacy use in Turkey and other countries. The only activity that is rising in the table is staying at home.

The increased stay at home during the pandemic period was necessary to reduce the spread of the highly contagious Covid-19 virus and protect public health. Measures taken by countries such as curfews and restrictions on people have been effective factors in increasing the rate of staying at home.

For the Republic of Turkey, the tourism sector serves as the fourth largest sector in the country. When the country data of 2004 is analyzed, 17 million foreign tourists entered the country during the year, and a return of 12 billion dollars was achieved (TURKSTAT, 2021).

The table of tourism revenues is shown below.

Table 9. Tourism Revenues Chart

Year	Quarter	Tourism Income (Thousand USD)	Rate of Change (%)	Number of Persons	Rate of Change (%)	Average Spending Per Person (USD)	Average Spend Per Night (USD)
	Yearly	12 059 320	-63.1	15 826 266	-69.5	762	61
2020	1	4 101 206	-11.4	5 639 413	-15.1	727	70
	2*	-	-	-	-	-	-
	3	4 044 356	-71.2	5 604 155	-74.1	722	61
	4	3 913 758	-50.4	4 582 698	-57.7	854	54
	Yearly	24 482 332	103	29 357 463	85.5	834	66
2021	1	2 452 213	-40.2	2 600 468	-53.9	943	56
	2	3 003 628	-	4 066 210	-	739	57
	3	11 395 117	181.8	13 640 672	143.4	835	74
	4	7 631 374	95	9 050 112	97.5	843	63

Source: TURKSTAT, 2022, *(Data related to 2nd quarter of 2020 was not published because survey cannot be conducted at border due to Covid 19 pandemic)

When table above is examined, it is seen that tourism income is 24 billion 482 million 332 thousand dollars in 2021 with an increase of 103% compared to 2020. It can also be concluded that this increase is due to the stretching of the restrictions made for the Covid-19 outbreak.

As in other tourism countries, this sector, which constitutes a serious foreign exchange resource in Turkey, provides new employment opportunities and creates a decrease in unemployment rates with this employment, produces solutions for the "Balance of Payments problem", is of great importance within the country. It can also be said that the tourism sector has a key role in the context of Turkey's "Economic Growth Strategy" (Akin et al., 2012).

In Turkey, when the months of January-June 2020, together with Covid-19, are analyzed, it is seen that domestic travel expenditures decreased by 57.1% compared to a year ago. According to the data published by the Turkish Hoteliers Association (TUROB) in 2020, half of the hotels in Turkey and most of the hotels in the so-called "coastal" area are closed, and as a result of these situations, the occupancy rate of the hotels in the period between January and September 2020 is 47% compared to the previous year. It is reported that the total occupancy rate was 35.4% in a nine-month period (TURSAB, 2020). Considering these data, it is seen that there has been a great decrease in important factors such as the number of visitors, facility occupancy rates and the duration of stay of the tourists caused by the Covid-19 epidemic all over the world.

4.2 Simple Linear Regression Analyses

In this analysis, whether there is a significant relationship between tourism data in Turkey and Turkey's GDP will be analyzed using the Simple Linear Regression method. First of all, a simple regression analysis will be made in which the annual tourism revenues of Turkey between 2004-2021 are independent and Turkey's GDP between these years is the dependent variable. Then, the relationship between the number of tourists coming to Turkey in the 2004-2021 period and the GDP will be examined with the basic regression analysis. Information on the variables used in each simple regression analyzes is given below.

Table 10. The Description of Dataset

Variable Name	Description	Source
GDP	GDP of Turkey	The World Bank
TRev	The Tourism Revenues of Turkey	Turkish Republic Central Bank Data Central
Tnum	The numbers of visitors to Turkey	Turkish Republic Central Bank Data Central

Source: Own Processing

The descriptive statistics of the data are shown below.

Table 11. The Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tourism Revenue	18	14817273	38930474,00	26400310	6539273
Number of Arrivals	18	15971201	51747199,00	33482790	9089811
GDP	18	408876042652	957783020853	757616742224	149031190972

Source: Own Processing

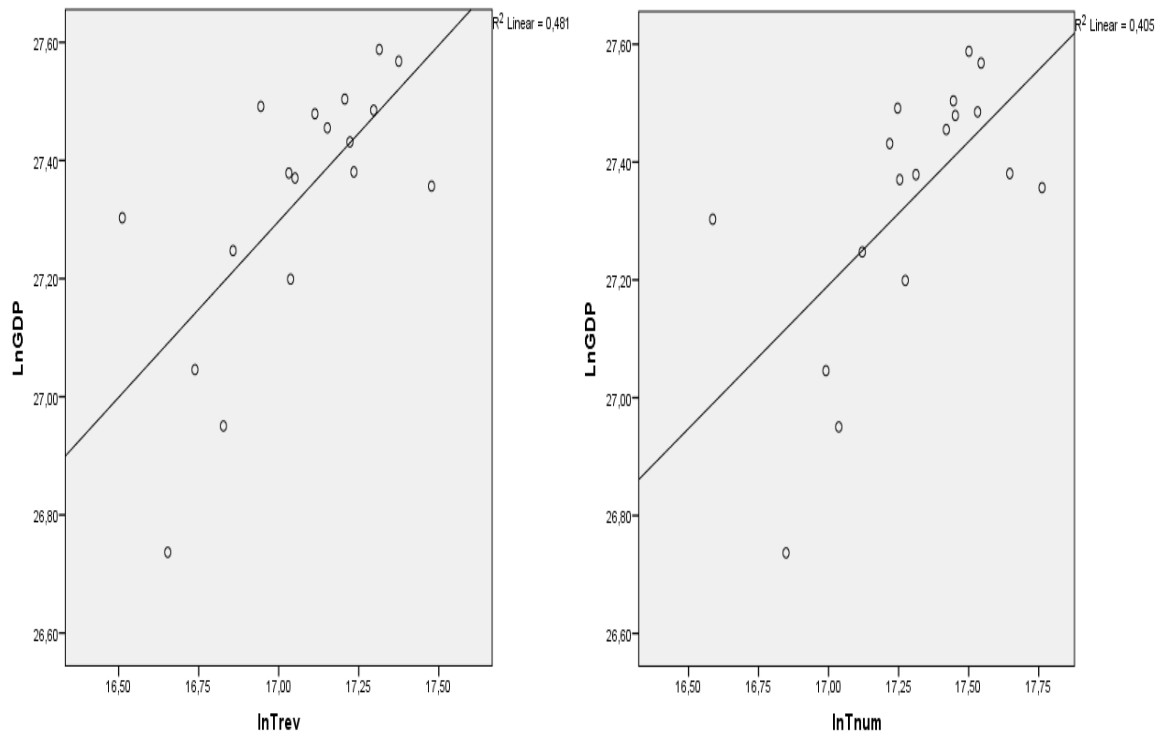
When the table given above is examined, it is seen that Turkey's maximum GDP over the 18-year period is 957 billion dollars and its minimum GDP is 408 billion dollars. In addition, it is seen that the number of tourist reaches 51 million at most and 15.9 million at least. In tourism income, 38,9 billion dollars is the highest and 14,8 billion dollars is the least annual tourism revenues.

In order to facilitate interpretation in the analysis, the logarithms of the variables were taken and included in the analysis. One of the prerequisites in linear regression analyzes is that the dependent and independent variables have a linear relationship with each other. In order to understand this, drawing a graph where the x coordinate is the independent variable and the y coordinate is the dependent variable is one of the methods.

The fact that the points formed in this graph are linearly clustered around a line is interpreted as a linear relationship between the variables.

Figures showing the linear relationship between both tourism revenues and tourist numbers and GDP are shown below.

Figure 7. The Graphs of Variables



Source: Own Processing

As can be seen from the graphs above, both variables have a linear relationship with GDP. In simple linear regressions, the variables must have a linear distribution. The distribution of the variables can be checked on a graph, or the distribution can be tested by using some test methods. One of these tests is the Kolmogorov-Smirnov test.

Another prerequisite for simple linear regressions is the distribution of variables. The Kolmogorov-Smirnov test is a statistical test used to determine whether a sample distribution has the same distribution as the population distribution forming the sample. In the Kolmogorov-Smirnov test, hypothesis states as follows:

H_0 : Variables have normal distribution. ($p > 0.05$)

H_1 : Variables are not normally distributed. ($p < 0.05$)

The results of the Kolmogorov-Smirnov test on tourism revenues, number of tourists and GDP are shown below.

Table 12. The Kolmogorov-Smirnov Test of Variables

One-Sample Kolmogorov-Smirnov Test				
		lngdp	lnTrev	lnTnum
		18	18	18
Normal Parameters	17,0579	17,2883	27,3317	172,930
	,26161	,29380	,22497	,30984
Most Extreme Differences	,127	,128	,211	,169
	,057	,081	,127	,092
	-,127	-,128	-,211	-,169
Kolmogorov-Smirnov Z		,537	,542	,893
Asymp. Sig. (2-tailed)		,935	,931	,402

Source: Own Processing

As the result of the Kolmogorov test, the Asymp Sig. (2-tailed) values of the variables were greater than 0.05, the H_0 hypothesis was accepted in all three variables, and it was concluded that the variables had a normal distribution.

Table 13. The Simple Linear Regression Analysis of Tourism Revenues and GDP

MODEL SUMMARY						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	.693	.481	.448	.16710	1.329	
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.414	1	.414	14.813	.001
	Residual	.447	16	.028		
	Total	.860	17			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.161	2.643		6.493	.000
	lnTrev	.596	.155	.693	3.849	.001

Source: Own Processing

Simple linear regression analysis was performed in order to understand the relationship of the independent variables, which have a linear relationship with the dependent variable and have a normal distribution, with the dependent variable. The results of the simple linear regression analysis are shown above.

The results of the simple linear regression analysis showing the relationship between Turkey's tourism revenues and GDP are shown above. Accordingly, it is seen that there is a significant and positive ($t=3.946$ and $p=0,001$) relationship between tourism revenues and GDP. Tourism revenues can explain 48% of GDP. When the coefficients table is examined, it is seen that the B value is 0.596.

If we rewrite the simple linear regression equation according to the results obtained as a result of the analysis, we will have a better understanding of the relationship between the two variables.

$$LN(GDP) = 17.161 + 0.596LN(Tourism\ Revenues) + \varepsilon \quad (3)$$

Table 14. The Simple Linear Regression Analysis of Number of Tourists and GDP

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	,636 ^a	,405	,367	,17894	,979	
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,348	1	,348	10,870	,005 ^b
	Residual	,512	16	,032		
	Total	,860	17			
COEFFICIENTS						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	18,912	2,554		7,404	,000
	lnTnum	,487	,148	,636	3,297	,005

Source: Own Processing

The results of the simple regression analysis showing the relationship between the number of tourists and GDP are shown above.

Looking at the result of the simple linear regression analysis, it is seen that there is a positive and significant relationship between the number of tourists and GDP. It is understood from the R square value that the number of tourists explains the GDP by 40%. Looking at the Coefficients table, it is seen that B Value is 0,487. If we rewrite the simple linear regression equation according to the results obtained as a result of the analysis, we will have a better understanding of the relationship between the two variables.

$$LN (GDP) = 18.912 + 0.487LN (Number\ of\ Tourists) + \varepsilon \quad (4)$$

In this section, another analysis to be made in accordance with the purpose of the thesis will be to examine the effect of Covid 19 on Turkey's tourism income and number of visitors. For this, the period between January 2018 for pre-Covid 19 and March 2020, the date when the first case was seen in Turkey and at the same time the Pandemic was announced, was chosen. For the post-Covid 19 period, the period from March 2020 to the end of December 2021 has been selected.

The descriptive statistics of the data are shown below.

Table 15. The Descriptive Statistics

Descriptive Statistics (Jan 2018-Dec 2021)					
	N	Minimum	Maximum	Mean	Std. Deviation
Tourism Revenue	48	175638	5921319	2288652,77	1474050,935
Tourists	48	50630	7018257	2511338,27	1768840,249

Source: Own Processing

When the table given above is examined, it is seen that the tourism income between January 2018 and December 2021 was minimum 175 million USD and maximum 5 billion USD on a monthly basis. In terms of the number of tourists, it is a minimum of 50 thousand tourists and a maximum of 7 million tourists.

In order to decide on the method to be used in the analysis, first of all, the distribution of the series should be checked. If the series are normally distributed, the t test should be applied, and if the series are not normally distributed, the Mann Whitney U test should be applied.

In order to understand whether the data are normally distributed, the series was tested for normality. The results of the Kolmogorov-Smirnov test are shown below.

Table 16. The Kolmogorov-Smirnov Test of Variables

One-Sample Kolmogorov-Smirnov Test			
		lnrev	Intourists
N		48	48
Normal Parameters ^{a,b}	Mean	14,3965	14,3621
	Std. Deviation	,79407	1,08997
Most Extreme Differences	Absolute	,081	,185
	Positive	,066	,106
	Negative	-,081	-,185
Kolmogorov-Smirnov Z		,560	1,280
Asymp. Sig. (2-tailed)		,912	,076

Source: Own Processing

Considering the results of the Kolmogorov-Smirnov test, it is seen that the H_0 hypothesis was rejected ($p > 0.05$). Therefore, we can say that both series are normally distributed. Due to the normal distribution of the series, the analysis will be done with the t-test method. Analysis results are shown below.

Table 17. Independent Samples t-Test

Group Statistics					
Covid-19		N	Mean	Std. Deviation	Std. Error Mean
Tourism Income	0	25	2484.08	1181.302	236.260
	1	23	1700.48	1261.193	262.977
Tourists	0	25	3429217.68	1683216.819	336643.364
	1	23	1513643.26	1263103.921	263375.374

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Tourism Income	Equal variances assumed	.032	.858	2.223	46	.031	783.602	352.537	73.982	1493.222
	Equal variances not assumed			2.217	44.983	.032	783.602	353.519	71.570	1495.633
Tourists	Equal variances assumed	5.032	.030	4.429	46	.000	1915574.419	432543.968	1044908.570	2786240.268
	Equal variances not assumed			4.482	44.276	.000	1915574.419	427428.757	1054299.881	2776848.957

Source: Own Processing

In the table given above, it has been analyzed whether Turkey's tourism revenues and the number of tourists differed significantly after the first Covid-19 case. In the analysis, the value of "0" for the months before March 2020 and "1" for the months after March 2020 was assigned to the Covid-19 variable.

Looking at the Sig.(2-tailed) values in the table, it is seen that $p < 0.05$ for both variables. For this reason, it is possible to say that both the number of tourists and tourism revenues have changed significantly since March 2020.

4.3 Opportunities in Turkey

All over the world, efforts are being made to turn the effects of the Covid-19 outbreak into an opportunity. Due to the existence of capital shortage, strategic partnerships with some companies are desired. For this reason, Turkey attaches importance to the development and increase of international cooperation in the fields of production and trade (TURSAB, 2021).

In addition, as of 2020, some companies that carry out contract manufacturing activities in China think that a "production base" can be established in Turkey with the success it has achieved in the Covid-19 outbreak. The balance that has deteriorated in China is due to the fact that it does not act in line with the win-win policy but prioritizes the country's economy and country's interests. In this context, it is thought that although Turkey needs capital, flexible and strong production and existing workforce may pave the way for China to establish a strong partnership with Turkey. In China, which has dominated the textile and ready-to-wear sectors, an "import slowdown" is observed due to Covid-19. In this context, due to the proximity of the EU market, it is predicted that Turkey's exports will be affected positively by this situation. In addition, the "modern" facilities created as a result of the "effective health activities" carried out by Turkey during the Covid-19 process, as well as the health policies it has carried out, have a structure that can constitute a "high preference" in terms of medical tourism, and in this context, they are of great importance (TIM, 2022).

In addition, the medical equipment production facilities in Turkey are undertaking important projects by creating an opportunity in line with the medical equipment and equipment problems that have become "needs" all over the world, and take important initiatives in line with its proximity to Europe, the Middle East and Africa.

As a result of the policies implemented by Turkey, it is thought that the visa convenience provided to the guests since 2021 will create an increase in demand in the tourism branches, considering that this facility has not been put into effect widely in other countries (TIM, 2022).

It is expressed as "medical tourism", which is an area with an increasing rate of development especially after Covid-19. Turkey is an important country in medical tourism. Considering the capacity and qualifications of health institutions in Turkey throughout the epidemic process, it is thought that Turkey is in a better position compared to developing countries, and this situation creates a positive image in the world (Yucel et al., 2022).

Turkey, which ranks 15th in the world based on tourism revenues, ranks 84th in terms of the number of Covid-19 cases in August 2020, and 66th in mortality rates. This situation is a "success" in the field of health and offers the world public the opportunity to demonstrate this success. According to the determination made by Bagci et al. in 2020, it is predicted that when Turkey can reflect the success it has achieved in the field of health to the tourism sector, it will be in the 15th place in the world in health tourism, and it will reach much better places (Bagci et al., 2020).

Turkey ranks 2nd in the world with 51 hospitals approved by the Joint International Commission (JCI). In addition, 10% of JCI approved hospitals provide service in Turkey (Bagci et al., 2020). It is seen that people want to receive a higher quality service as a result of the increase in their income. This contributes to the development of medical tourism. In addition, within the framework of the law that came into force as of 2011, all state and training hospitals were connected to the "Turkish Public Hospitals Institution". In addition, 42 hospitals within this institution serve as "priority health tourism hospitals" (Bağçi et al., 2020). The contribution of health tourism to the economy in Turkey is 60 billion dollars between 2010 and 2020. When we look at the world in general, it is seen that an annual income of 100 billion dollars is obtained from health tourism. In particular, the contributions of health tourism within the tourism sector are enormous (Ozen et al., 2021).

5 Results and Discussion

In the study, tourism was analyzed on GDP both statistically and with simple linear regression analysis, and as a result of the analysis, a significant relationship was found between tourism revenues and the number of visitors and GDP. These results are consistent with studies in the literature. For instance, Oh (2005) analyzed the impact of tourism on economic growth in Korea, finding a positive and significant relationship between the two variables (Oh, 2005). Similarly, Katircioğlu (2009) investigated the causal relationship between tourism and economic growth in Cyprus, concluding that tourism expansion significantly contributed to the country's economic growth (Katircioglu, 2009).

Furthermore, Tang and Jang (2009) examined the relationship between tourism and economic growth for 159 countries between 1995 and 2005, providing evidence of a positive and significant relationship between the two. They also found that the impact of tourism on economic growth is more significant for developing countries compared to developed ones. This finding supports the idea that tourism can serve as a critical driver of economic development for less developed nations.

Another result obtained from the statistical data and analysis in the study is that the Covid-19 process has adversely affected Turkey's tourism sector since the first case was seen in March 2020. This result is also compatible with the literature. Han et al., (2022) conducted a study on how the Turkish economy was affected during the pandemic process.

The pandemic has also led to significant job losses in the sector, with many workers either being laid off or facing reduced working hours and wages (Brouder et al., 2020). Furthermore, the uncertainty created by the pandemic has led to a drop in consumer confidence and a reduction in travel intentions (Gursoy and Chi., 2020).

Bahar and Ilal (2020) aimed to determine the economic effects on the tourism sector in their study. In this context, it has been determined that the Covid-19 epidemic, which has emerged, affects the tourism sector more than other sectors. In addition, it has been observed that the tourism sector is more affected by problems such as political problems, epidemics and economic crises. Moreover, the study reveals that there are countries, cities, and regions worldwide where tourism constitutes a significant portion of their livelihood.

They found that due to the restrictions imposed, demand in these regions decreases, resulting in substantial economic losses within these areas.

Alaeddinoglu and Rol (2020) focused on the effects of the Covid-19 pandemic on tourism in their study. With the In their study, Unluonen and Ceti (2019) made an evaluation on the causes of epidemics before Covid-19 and the effect of the "global crises" resulting from these reasons on the tourism sector. As a result of this evaluation, he concluded that all unforeseen events and crises such as epidemics have a direct impact on the tourism sector. In addition, in this study, it was observed that trust problems occur in people who want to travel to countries where the epidemic occurred. In the study, in which the effect of the number of tourists on the epidemic was observed, it was determined that the epidemic caused a serious decrease in the number of tourists. As a result of the restriction of tourism activities in Turkey, not only the economy in the country was damaged, but also many people were dismissed as a result of the sectoral employment being affected.

Information obtained in this context, it has been determined that the Pandemic has deteriorated the mental health of billions of people, as well as the death of many people. In addition, as a result of examining the past epidemics, a comparison was made with the current pandemic, and it was aimed to better understand the impact of Covid-19 on the World.

In the study of Gun and Tutcu (2021), an evaluation of the tourism sector in Turkey was made within the scope of Covid-19. Within the framework of this evaluation, it has been concluded that there is a structure that can be easily affected by external factors and crises in the tourism sectors, including Turkey. When the data is examined, Covid-19 has negatively affected the tourism sector in Turkey. In addition, in this study, 2019 and 2020 data were compared, and it was emphasized that the economy suffered from the tourism sector as a result of the lack of foreign exchange left by the tourist to the country, rather than the number of tourists that fell considerably.

Zeydan and Gurbuz (2020) associated the occurrence of virus types with "human intervention in nature" in their study, and examined the past and present epidemics and made inferences. In the study, he stated that all pandemics in the period of the tourism sector damaged this sector, but he emphasized that the impact of the Covid-19 pandemic was much greater because we are in the era of modern tourism.

In this study, it was stated that viruses are "the factor that increases the difficulty of human life", and it has been said that the emerging Covid-19 in this context has forced many countries to cope with a crisis as great as they have not experienced in the last 30 years. As stated in most of the studies, it is seen that the sector most affected by the crisis situations in the countries is the tourism sector.

Yasar (2020) dealt with the tendency of individuals to go on vacation after the new type of coronavirus (Covid-19) in his study. In this context, it has been stated that the pandemic has great effects on global and local tourism, and it is likely that its effects will continue in the coming years due to the magnitude of the economic, social and spiritual effects of the pandemic on individuals who will create tourism demand. In this study, it has been determined that the emergence of many new types of tourism and the direct effect of the pandemic on the changes that tourism and travel styles have undergone. In addition, it has been stated that people prefer to travel independently or more simply than in the past, rather than collective travel, and a planning is made in which eco-tourism and healthy life tourism are at the forefront. In global tourism, on the other hand, changes and contractions were emphasized. In this context, the "t-test" were examined and it was determined that the pandemic had a great impact on Turkey's economic indicators. In addition, it is predicted that the economic effects of this epidemic in the world do not completely disappear today, and its effects will continue in the future. In order to determine the economic problems that occurred during the pandemic, the pre-pandemic period was also examined, and in this context, the two periods were compared.

To mitigate the adverse effects of the pandemic on the tourism sector, various studies have proposed several strategies for recovery. Altuntas and Gok (2020) suggest that Turkey should focus on domestic tourism as a short-term solution, promoting lesser-known destinations and offering incentives to domestic travelers. In the long run, the authors argue that Turkey should invest in improving the quality of its tourism products and services, diversifying its offerings, and targeting new markets.

Digitalization and technology adoption have also been identified as essential tools for recovery (Sigala, 2020). Turkish tourism businesses should embrace digital marketing strategies, invest in online booking platforms, and utilize virtual reality technologies to showcase their offerings and attract potential visitors (Kocak et al., 2020).

6 Conclusion

Pandemic diseases lead countries to implement various restrictions and prohibitions across numerous sectors. In the context of these restrictive measures, the tourism industry is one of the most affected sectors. Given that tourism activities involve global interaction, it becomes necessary to prioritize the restriction or regulation of these activities. This, in turn, results in a sector-wide contraction.

The aim of this study is to determine how the tourism sector in Turkey has been affected during the pandemic and to analyze the impacts of the outbreak.

In the study, many factors affecting the tourism industry have been observed. As a result of these factors, the tourism sector can be described as having a fragile structure. In examining the effects of the pandemic, it has been found that, in addition to numerous economic effects, psychological impacts also play a role. These psychological effects have been identified as the primary cause for the decrease in demand from tourists.

As a result, economic problems are expected to arise from this decline in numbers, and an analysis of economic data suggests that the decrease in visits from citizens abroad has contributed to the economic downturn. In addition to Covid-19, political factors are also expected to impact tourism in 2022. In this context, considering the ongoing Russia-Ukraine war and the fact that these nations are among the highest contributors to Turkey's tourism revenue, it is expected that there will be a decrease in the number of tourists from these countries in Turkey.

In the study, the effect of tourism on GDP was also analyzed with the simple linear regression method, and as a result of the analysis, it was concluded that both tourism revenues and the number of tourists had a significant effect on GDP. In addition, the differentiation before and after Covid-19 was also tested, and it was also seen in the test result that there was differentiation in the independent samples t-test result.

However, as of 2023, the fact that Covid-19 is still continuing and its effects are still continuing is the limitation of the study. It is thought that the effects of Covid-19 can be analyzed with more precise results in the coming years.

The data analyses have shown that Turkey experienced more than a three-fold contraction in the tourism sector from 2019 to 2020. Moreover, an examination of the 2021 year-end reports reveals that Turkey hosted twice as many tourists in 2021 compared to 2020. In this context, it is observed that the effects of the pandemic are diminishing day by day in 2022, and an increase in the tourism sector is expected for 2022 compared to 2021.

In the analysis, it has been seen that there is a differentiation in the number of tourists and incomes of Turkey in the post-Covid-19 period compared to the pre Covid-19 period. The findings of this study show that the Covid-19 process has reduced the number of tourists visiting Turkey. Other studies also support this outcome. Furthermore, the data from these studies generally support the data from our research. It has been determined that the Covid-19 process has reduced Turkey's tourism revenue.

However, it is crucial to consider that the psychological effects of the pandemic and other external factors, such as political events and ongoing conflicts, may continue to influence the tourism sector in the coming years. Therefore, it is essential for policymakers and industry stakeholders to closely monitor these developments and adapt their strategies accordingly to support the sustained growth and resilience of Turkey's tourism sector.

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