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This book, which was created by scientists from various disciplines in which the different effects of the pandemic process were investigated, was prepared with the contributions of 11 different authors who continue their academic activities at Selcuk University. I would like to take this opportunity to thank the authors who contributed sincerely and hope that the work will be useful to all readers.

Multidisciplinary Researches During the Pandemic

Editor: A. SELÇUK KÖYLÜOĞLU



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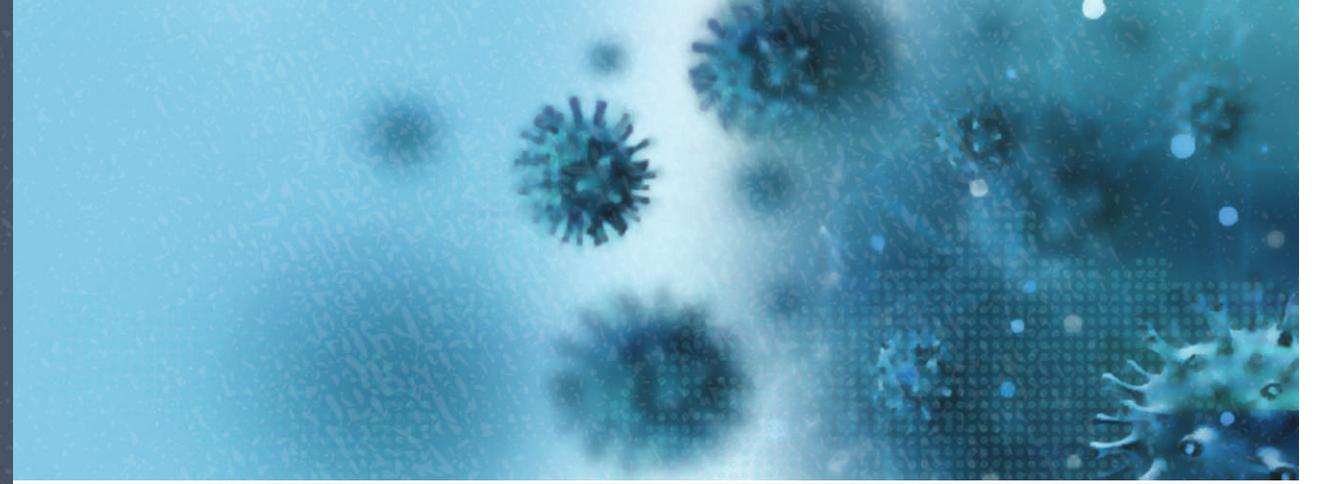


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MULTIDISCIPLINARY RESEARCHES DURING THE PANDEMIC

Editor

A. Selçuk Köylüođlu



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Audit Fraud and Errors: An Overview of the Studies During Covid-19 Pandemic Period

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PREFACE

Epidemics have been mentioned frequently throughout history. COVID-19 is one of these diseases that causes disruptions in social, economic and cultural activities and completely upsets the flow. It first appeared in Wuhan, China, and then spread all over the world. Therefore, it was declared a "pandemic" by the World Health Organization on March 11, 2020. The fact that this newly emerged virus spreads easily from person to person is the most important criterion in this decision. The Covid-19 epidemic has deeply affected the education, economy and social dynamics of the population, especially the health sector. It has started to be discussed by all segments of society, especially in business and academic life. Therefore, scientists who continue their activities in different scientific fields such as health sciences, social sciences and engineering sciences have made theoretical and practical contributions to the subject both in the national and international arena.

With this understanding, the first study in this book, in which scientists from various disciplines continuing their studies at Selcuk University, evaluated the different effects of COVID-19, belongs to Servet SAY. In his study titled "Resource Consumption Accounting as a Modern Costing Method: An Application for The Pandemic Period", SAY addressed the subject on the basis of accounting science and talked about the applications of the subject during the pandemic period. Yasin AKKEMİK and Egemen GÜRDEMİR talked about food safety, which is one of the most important issues during the pandemic process. Linking the changes in the field of marketing with the COVID-19 process, Ü. Saliha Eken İNAN covered the topics of metaverse, digital transformation, marketing and pandemic process. Ayşe CABİ focused on tourism activities during the pandemic process. In its study, CABİ has thoroughly discussed the analysis of studies on COVID-19 in the field of tourism. In their study titled "The Contribution of Corporate Resource Planning to The Supply Chain and The Negative Effects of The Pandemic", Memiş KARAER and Nursel TOSUN discussed the negative effects of the pandemic process in the contribution of corporate resource planning to the supply chain. Ümmü Özlem ÇERÇİ addressed the issue of social responsibility with the application of the white goods sector in the COVID-19 pandemic. Mürsel KAYA evaluated the impact of

the pandemic on the tourism sector in a wide range with his study titled “An Assessment on the Impact of the Covid-19 Pandemic on Tourism Sector”. The relationship between consumer behavior and COVID-19, which is an important topic in marketing science, was researched by H. Serhat ÇERÇİ. The last work in the book belongs to Abdurrahman GÜMRAH. In its study, GÜMRAH evaluated the studies on audit fraud and errors during the COVID-19 pandemic period.

This book, which was created by scientists from various disciplines in which the different effects of the pandemic process were investigated, was prepared with the contributions of 11 different authors who continue their academic activities at Selcuk University. I would like to take this opportunity to thank the authors who contributed sincerely and hope that the work will be useful to all readers.

Assist. Prof. A. Selçuk KÖYLÜOĞLU

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CHAPTER IV

Analysis of the Studies on the Covid 19 Pandemic in the Field of Tourism

Ayşe Cabi Bilge

Introduction

The rapid spread of the new corona virus, which emerged in the city of Wuhan, China in November 2019, all over the world has led to a significant decrease in all kinds of economic activities all over the world. The covid 19 epidemic, which was declared a pandemic by the World Health Organization, caused all kinds of commercial activities to come to a standstill and caused unpredictable global wave effects in all economic sectors (Deb & Nafi, 2020: 2). As of June 2022, the number of covid 19 cases seen all over the world has reached 542 million and the number of deaths has reached 6.3 million (Google News, 2021). 2022 The distribution of the observed cases as of June 2022 by country is shown in Figure 1.

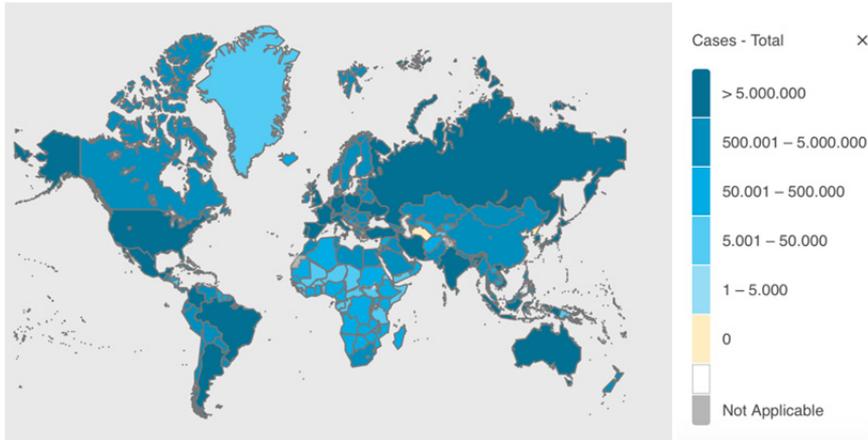


Figure 1: Covid-19 Cases By Country As of June 2022

Source: WHO (2020)

It is seen in the figure that more than half of the countries in the world have reached over 50,000 total cases. The whole world is struggling against the coronavirus epidemic by taking strict measures and vaccine applications. In this process, which lasted for almost 2.5 years, many of the measures (such as the application of wearing a mask) were removed with the decrease in the cases. However, although the rate of spread of the epidemic in many countries has come to an end in recent months, the emergence of a new variant has shown that the risk continues. This situation can be observed in the last week's case data taken on 26 June 2022.

Table 1: Weekly Coronavirus Trends

	Country	Cases in the last 7 days	Cases in the last 7 days/1M pop	Deaths in the last 7 days	Deaths in the last 7 days/1M pop	Population
1	USA	657,305	1,963	1,536	5	334,839,943
2	Germany	566,633	6,721	442	5	84,313,543
3	France	383,989	5,857	259	4	65,559,029
4	Brazil	368,457	1,709	1,356	6	215,546,627
5	Italy	336,283	5,578	355	6	60,286,103
6	Taiwan	329,259	13,775	1,071	45	23,901,988
7	Australia	197,761	7,581	324	12	26,084,840
8	UK	108,183	1,577	369	5	68,591,005
9	Spain	105,862	2,262	286	6	46,790,574
10	DPRK	104,4	4,015	0	0	26,002,157
11	Japan	100,842	802	104	0.8	125,711,253

* According to data from 26 June 2022

Source: Worldometer (2022)

Table 1 shows countries with a weekly case count of more than 100,000. In some countries in the table, the number of cases increased significantly, reaching over 100,000. Looking at the list, there has been an increase in cases in some countries (30.25% in Germany, 15.05% in France, 61.74% in Italy, 7.52% in Australia, 14.18% in England, 119.48% in Spain) in the last week (WHO, 2020). This situation is thought-provoking in terms of the epidemic causing negative consequences again.

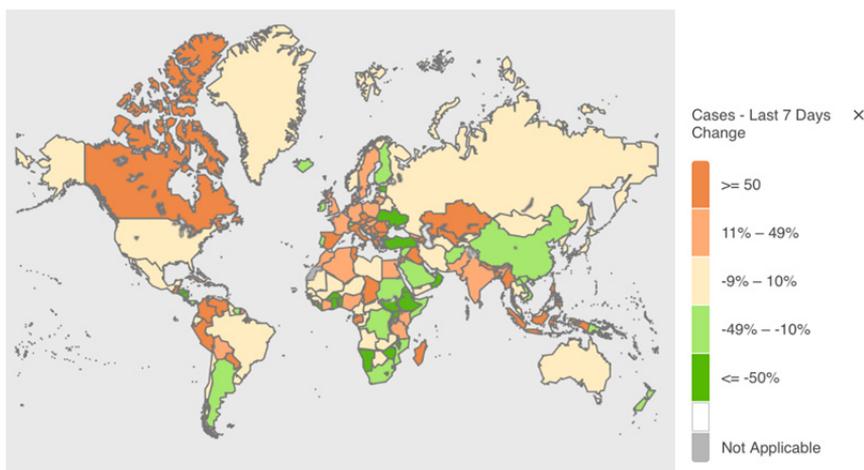


Figure 2: Covid-19 Case Change Rate in the Last 7 Days by Country

* According to data from 23 June 2022

Source: WHO (2020)

Looking at Figure 2, it is observed that the dark-colored regions, that is, the countries with an increase in cases, are considerably higher. According to a news based on these data, it was stated that there was an increase in coronavirus cases in England. Experts point to the dominance of the new omicron-derived BA.4 and BA.5 sub-variants in the increase and suspect that these variants are more resistant to antibodies. According to the National Health Service (NHS) data in England, the number of people who caught Covid-19 and had to be treated in hospital is increasing. The UK Office of National Statistics (ONS) states that BA.4 and BA.5 sub-variants are detected in the vast majority of these people. The World Health Organization (WHO) first began examining these subvariants in April. WHO is trying to determine the contagion rate and hazard level of BA.4 and BA.5 compared to previous variants. The British press points to studies on these sub-variants at the University of Tokyo. Preliminary findings from these studies suggest that subvariants BA.4, BA.5 and BA.2.12.1 may re-target the lung similar to Alpha and Delta (BBC News, 2022).

According to another news about new developments, it is stated that the increasing trend of COVID-19 cases in China's Hong Kong Special Administrative Region has caused concern in the city, which could barely control the epidemic wave triggered by Omicron cases between February and April. Chief Executive Carrie Lam stated that in the

current situation, there is no need to tighten the measures again, the number of serious patients has not increased even though the number of cases has increased, and the occupancy rate of the hospitals is normal (TRT Haber, 2022).

On the other hand, Chaoyang, the most densely populated area of Beijing, announced that it will launch a three-stage mass test to control the "severe" increase in coronavirus cases. The epidemic was seen again shortly after the end of the curfew, which was implemented to stop the epidemic in the city in April. A spokesperson for the Beijing city administration said at a press conference that the epidemic that reappeared in the city was "severe". "Right now, there is still a risk of further spread of the epidemic. Our most urgent task is to find the source, manage and contain the risks," the spokesperson said (TRT Haber, 2022).

1. Conceptual Framework

In March, the Americas and Europe Regions repeatedly became the epicenter of the pandemic (WHO, 2020). This epidemic disease, which threatens human health very seriously, has also affected societies economically. Tourism systems around the world have been directly affected as travel restrictions and social isolation were the first measures taken to control the spread of COVID-19 (Çavuşgil Köse, 2020: 100). The reason why the tourism sector is the sector most affected by the epidemic is the measures taken due to the pandemic. In order to reduce the spread of this epidemic that affects the whole world, all countries have imposed curfews and restricted domestic and international travel (Deb & Nafi, 2020: 2). The health crisis and economic crisis caused by the pandemic have brought significant challenges to the tourism industry due to local and international traffic restrictions, which have significantly affected the development of tourism demand (Värzaru, Bocean & Cazacu, 2021: 1) Since travel is essential for tourism activity, any factor hindering travel can have a profound effect on the tourism industry. An international problem such as the COVID-19 (Coronavirus) pandemic is particularly typical. The devastation of such an event re-emphasizes the vulnerability of the tourism industry (Jiang & Ritchie, 2017 as cited in Yeh, 2021: 188). In this sense, it comes to the fore that more intensive studies should be done on the concept of resilience in the tourism sector.

The tourism sector has an increasingly significant contribution to the local gross domestic product (GDP). Considering these contributions, tourism has become a strategic industry in many countries. Despite the importance of the tourism industry,

which is an important source of income for many countries, it is also one of the most vulnerable industries (Zhang, Song, Wen & Liu, 2021: 1). In fact, considering that the tourism sector has a fragile structure, it is a normal event that the crises in the world affect tourism (Dolnicar & Zare, 2020; Gössling, Scott & Hall, 2020). Destinations are affected by crises such as man-made or natural disasters. To minimize this influence, efforts have been made over the years to develop resilience tactics and strategies (Ritchie & Jiang, 2019: 1). However, the crisis resulting from the Covid-19 pandemic has been different and unique in many ways from the crises that previously affected the tourism industry. The fact that there are travel restrictions all over the world due to the pandemic has caused a serious decrease in accommodation and tourism and has turned it into a worldwide problem (UNTWO, 2020). On the other hand, the ongoing crisis has the potential to cause significant changes in many segments of tourism (Dolnicar & Zare, 2020: 1). Moreover, the end of the crisis is not in sight (Collins-Kreiner & Ram, 2020: 2). Although many restrictions have been lifted as of June 2022, the emergence of new different variants still makes the danger alive.

Many tourism researchers around the world are working on COVID-19, which affects the whole world and seriously affects the tourism industry (Zenker & Kock, 2020: 1). It can be said that COVID-19, which has serious economic, social, environmental and technological effects in the international arena, has a very large literature since the day it emerged. In a study conducted on September 12, 2020, according to a search on Google academic, approximately 1.750.000 results were found in the international arena with the keyword Covid, and 25.100 results were found in the search on COVID-19 and tourism impact (Kunt, 2021: 35). In the middle of 2022, these numbers increased even more, and in the search made in Google academic, approximately 4,900,000 results were found internationally with the keyword covid, and 132,000 results were found in the search on covid and tourism impact.

Due to the nature of the pandemic, it is remarkable for many researchers in the literature, and therefore many studies have been carried out. In fact, in approximately 2.5 years, the number of publications on coronavirus is much more than the sum of the studies on other subjects for years. This situation causes researchers to spend more time examining the studies on covid 19. Therefore, the aim of this study is to examine the studies on the Covid 19 pandemic in the field of tourism and to see the orientation of the studies by presenting a summary literature information.

2. Method of the Research

In the study, bibliometric analysis was used to examine the weight and orientation of the studies on the Covid 19 pandemic in the field of tourism. Bibliometric analysis is the type of analysis in which scientific documents are examined and visualized with analysis types and sub-units (Akın & Kurutkan, 2021: 72).

In this study, 3,409 studies including the words covid and tourism published in the international web of science database between November 2019 and June 2022 were examined through the VOSviewer program. The distribution of the studies by years and the number of citations were provided by the web of science database from which the data were drawn.

While 3,409 publications drawn from the Web of science database, which is a worldwide database, were analyzed with the co-occurrence technique, the minimum number of repetitions of the keyword was determined as 15. In addition, the data from the list provided by the VOSviewer program were arranged and the terms of tourism, covid and similar terms were removed from the list. The aim here is to see more clearly the other keywords in the studies on the Covid 19 pandemic in the field of tourism. In addition, some data were combined in order to see the keywords used in the same sense under a single title. After all these processes, a network map, time map and density map were created by using the co-occurrence technique in order to see what topics the publications containing the words covid and tourism contain. Thus, it has been tried to reveal the types of studies written on researches on the Covid 19 pandemic in the field of tourism.

3. Findings of the Research

In the research, researches on the Covid 19 pandemic in the field of tourism were drawn from the web of science database and 3.409 publications were identified. First of all, the distribution of publications and citations to publications by years was examined. The figure obtained from the database from which the data was drawn is given below.

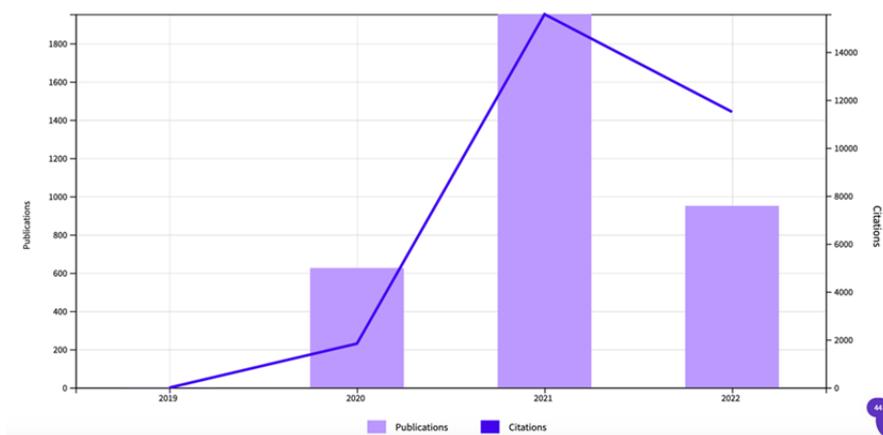


Figure 3: Times Cited and Publications Over Time

Source: Web of Science Database

As can be seen in Figure 3, it is observed that the studies carried out showed a significant increase especially in 2021. Likewise, the number of citations made in 2021 has increased in direct proportion. It is expected that there will be an increase in publications after it was announced as a worldwide epidemic in March 2020. Looking at the year 2022, it is seen that a substantial number of publications have been made. Considering the data on which a significant amount of publications is still being made in 2022, it can be said that researchers think that the risk for the tourism industry still continues. On the other hand, it is possible that the issue is still on the agenda in order to show what needs to be done when faced with a similar risk from around the world.

The VOSviewer program was used to analyze the data in the research. VOSviewer places the terms with strong relationships in the same cluster and colorizes them accordingly. While the distance between the colored terms shows the proximity of the words to each other, the words tend to be close to each other in the same article summaries and titles. The co-occurrence and author keywords data matrix is visualized with a topic network as seen in Figure 4. After calculating the number of occurrences and the total number of links with other keywords for all keywords, the network was divided into 6 clusters, and as a result of the network analysis made with the word association method, the image in Figure 4, consisting of 79 nodes, was obtained.

Studies in the cluster, which includes the words tourism management, social media, sentiment analysis and sharing economy, have examined some innovations brought by technology to our lives in terms of the epidemic problem and included social media, sharing economy and sentiment analysis in tourism management for this purpose.

In another cluster, which includes the words economy, technology, innovation, medical tourism and education, the words seem independent from each other, but when the research details are examined, it is meaningful. Studies in the cluster include research that will contribute to the tourism economy by using the health awareness of people around the world, which has increased with the pandemic, as a motivating issue in the tourism sector with a focus on technology.

The last cluster includes the words quarantine, well-being, anxiety, physical activity, leisure, higher education and travel. In this group, researchers examined people's concerns in quarantine, deprivation of physical activity, concerns about the pandemic and these situations in the context of tourism during the pandemic process.

The usage density of the most used keywords in the studies is shown in Figure 5.

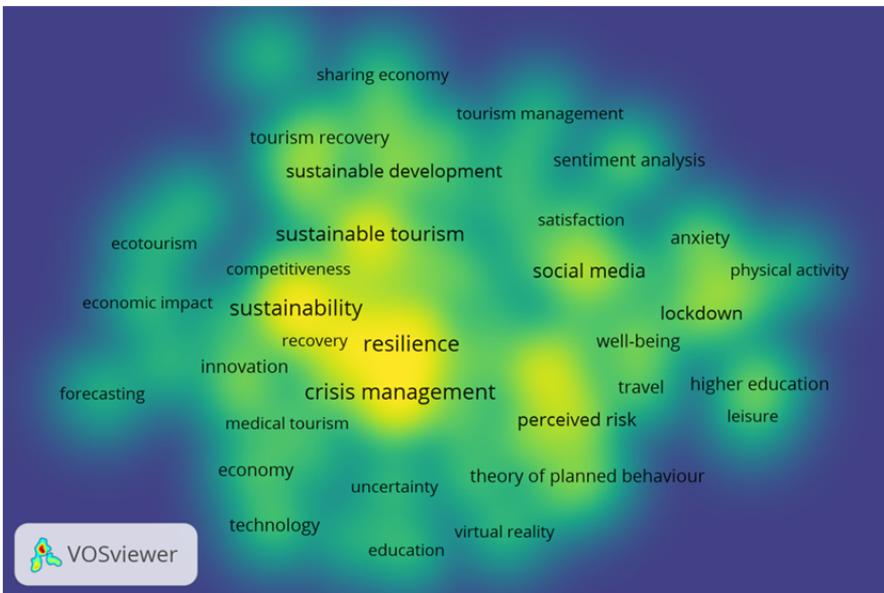


Figure 5: Word Mining Analysis Density Map

analyzes to see which concepts the researches are working with. In the analyzes made using the co-occurrence technique, studies were carried out with concepts such as forecasting and economic impact in the early days of the pandemic period. It is natural that researchers first try to see the future of a newly emerged risk factor and conduct studies to examine its impact on the economy, which is an important issue for the whole world. One of the analysis results is the intense use of the concepts of crisis management, sustainability and resilience in the studies examined. The Covid 19 pandemic is a serious risk factor for businesses around the world. Especially businesses in the tourism sector have experienced this risk much more deeply. It can be thought that the researchers' doing a lot of work on risk management is for the purpose of determining the steps to be taken in the face of both the current coronavirus risk and the risks that may arise due to other reasons that may occur in the future. In addition to this, it can be said that researchers are trying to turn existing risks into opportunities by bringing up the sustainability policies that have been tried to be realized in tourism for a long time. In addition, the issue of resilience is among the studies carried out in the context of the crisis on how the fragile structure of tourism, which is constantly mentioned, can become more durable. Finally, there are studies on new tourism management approaches in the context of tourists' reactions to current risks, their behaviors, and the concept of digital transformation in the reviewed publications. So much so that whether there is a crisis or not, there are rapid developments in digitalization in the world. With the pandemic, the digitalization fever has been fueled and penetrated people's lives much faster. This is a situation that cannot be ignored in the tourism sector, as it is in every sector. For this reason, it is inevitable that the studies, especially recently, are aimed at the new understanding of tourism with digitalization among the examined publications. As a result, when we look at the publications drawn from the web of science database, it is seen that the publications are made with many different concepts and have developed in a way that will guide new tourism management approaches. In this sense, in future studies, researches on eliminating the vulnerability of the tourism sector against risk factors such as pandemics, making it more sustainable and developing it in a way that can adapt to digital transformation will make important contributions to the literature.

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