



Chapter 43

Review of the Studies Related to COVID-19 and Tourism Using Text Mining Techniques

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ABSTRACT

This study aims to provide a roadmap for research dealing with the tourism sector. In this context, by conducting a study in the form of a literature review, researchers are informed about what has been done and what is missing. In the study, articles that have been accepted from scientific journals indexed in the SCOPUS database before January 18, 2021 and dealing with COVID-19 and tourism issues are examined. The study was carried out in two stages. In the first stage, descriptive statistics were given in terms of the region studied in the articles, the journal in which the articles were published, and the methods used in the articles from a general perspective. In the second stage, articles are divided into sections such as title, keywords, abstract, and conclusion. Each article section has been analyzed separately with text mining and clustering analysis, taking into account both single and double-word groups. As a result of analysis, it was determined that theoretical studies were carried out and quantitative methods were used in most of the studies.

INTRODUCTION

The COVID-19 pandemic, which started to take effect in the last quarter of 2019, continues to affect all countries in the world, especially in the field of health, education, economy, trade and tourism. In addition to the fact that the problems in the areas where the basic needs of the countries are met, such as

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health and education, are very important, these disruptions should be minimized, especially for countries where the tourism sector contributes significantly to the national economy. Especially for countries whose economies are largely dependent on the tourism sector, it is important to develop solutions to problems and/or to identify and implement alternative solutions. For this reason, it is of great importance that the studies conducted in this field are examined by both other researchers and managers in the tourism sector and their results and recommendations are applied. Within the scope of this study, it is aimed to analyze the article studies made in the field of tourism after the emergence of the COVID-19 virus with descriptive statistics and text mining methods. Thus, it is envisaged that this study will be a guide resource for academicians and administrators working in this field, where the general lines of the studies are revealed and field gaps are determined. The articles to be used in this study were obtained from the SCOPUS database, which allows bibliographic searches especially in the field of social sciences. Articles in the database are filtered according to keywords. Articles written in English with the words “COVID-19” and “Tourism” in the keywords of the studies form the data set of the study. The increase in the storage space of computers and the development of internet technologies enable all kinds of data to be recorded, processed, interpreted and estimates. In addition to basic statistical techniques to analyze the rapidly increasing data size, algorithms including data mining are now emerging. All these proposed algorithms vary according to the structure and number of data. Within the scope of this study, text mining, which is one of the important areas of data mining, will be used since it is envisaged to make an analysis on written sources. Although text mining is included in data mining and is seen as a part of data mining, it has a different approach from conventional data mining. The main difference in approach is that text mining examines texts that are unstructured data sources (Ergün, 2012: p.22). In this respect, text mining is the advanced form of data mining application. Because texts, which are unstructured data sources in text mining, are transformed into structured data by passing through various processes, and then, information is obtained by applying data mining models to these structured data.

Researchers need to provide fast solutions to rapidly developing issues such as COVID-19. In order to find correct and effective solutions, it is necessary to look at all studies related to the field. While this means dealing with a large batch of data, reaching a solution will take time with classical methods. With this study, it has been shown that the text mining method gives effective results for issues that require fast solutions. This study fills this gap in the literature as it is the most comprehensive literature review in the field, showing the general trend of COVID-19 studies in the field of tourism.

In the first stage of the study, literature studies on tourism and COVID-19 were included. Since this study is also a literature study, only literature studies and articles using data mining methods are included in this section. Then, the main and sub objectives of the article were mentioned. In the methodology section, a brief about text mining and cluster analysis used in the study is given and the dataset is introduced. Results and recommendations of the analyzes are included in the solutions and recommendations section. Suggestions for future studies are collected under the title of future research directions. The general results of the study are included in the conclusion section.

BACKGROUND

In recent years, it has been observed that many studies have been carried out using artificial intelligence and data mining algorithms. These methods, due to their nature, can work with large-scale data compared to other statistical and econometric methods. This feature allows researchers to examine many

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