Bibliometric Analysis of Consumer Behaviour Research Conducted During the Covid-19 Pandemic Period[*]

(Araştırma Makalesi)

Covid-19 Pandemisi Sürecinde Gerçekleştirilen Tüketici Davranışı Araştırmalarının Bibliyometrik Analizi

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ABSTRACT

In recent years, the Covid-19 pandemic has brought with it changes in consumer behaviour. The purpose of this article is to examine the evolution and trends of consumer behaviour research during the Covid-19 pandemic period. The publications written on the subject of "covid" from the WoS database with the words "consumer behaviour" or "consumer behavior" in their titles were scanned in the business and management category, limiting the years 2020, 2021 and 2022. A total of 642 accessed publications were subjected to bibliometric analysis using the CiteSpace 6 program. The findings show that the number of studies in this field has increased. According to country collaboration analysis, there is a strong country collaboration network between the USA, China, India, Australia, South Korea and the UK. The most studied topic clusters are green consumer behaviour, consumer engagement behaviour and effective service quality. The three most used keywords are impact, consumer behaviour, and model. The study is important as it reveals the trend of consumer behaviour publications during the Covid-19 pandemic period. It is expected that the findings of the study will guide the consumer behaviour researches.

1. INTRODUCTION

In general terms, the consumer is defined as a person who has needs and wants and who buys the product/service by searching the product/service to meet these needs and then consumes it (Noel, 2009). Consumer behaviour covers physical activities such as evaluating, researching, purchasing, using and disposing of products/services that individuals think can meet their

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personal needs and the decision-making processes that affect these activities (Buruonu, 2014). Consumer behaviour is affected by physiological, socio-cultural, and personal factors as well as by global crises. One of these crises is the Covid-19 pandemic period, which emerged in 2019 and affected the whole world.

Covid-19 pandemic has shut down entire industries, forced industries to go almost entirely online, and revolutionized the nature of consumer spending (He and Harris, 2020). Shaikh (2020) argues that after the Covid-19 pandemic, there will be permanent changes in consumer behaviour and marketing, and brands that are aware of this situation and are prepared for it will emerge stronger from the epidemic. According to Shaikh (2020), it has changed the lifestyle habits of consumers until everything improves after Covid-19. Therefore, studies focusing on consumer behaviour in the Covid-19 pandemic period have gained momentum.

The purpose of this study is to make a bibliometric analysis of the studies published in the WoS database during the Covid-19 pandemic period and focusing on consumer behaviour. Thus, trends in consumer behaviour study in the Covid-19 pandemic period can be revealed and suggestions can be made for future studies. Within the scope of the study, answers will be sought to questions such as "What is the focus of consumer behaviour studies in the Covid-19 pandemic period?", "What is the current status of consumer behaviour studies in the Covid-19 pandemic period?" and "What are the subject trends in consumer behaviour studies in the Covid-19 pandemic period?".

2. BIBLIOMETRIC STUDIES ON MARKETING

Bibliometric analysis is one of the methods that can be used to reveal an overview of a field of study or a journal. This technique evaluates and measures scientific progress. Bibliometric data is visualized with social network analysis and made more visible (Okumus et al., 2018; Vishwakarma and Mukherjee, 2019). Ozel and Kozak (2012) stated that bibliometric studies are needed to gain a comprehensive perspective on different study areas of sciences. It is seen that the number of bibliometric analyses related to marketing has increased in recent years. In the field of marketing, there are studies focusing on different subjects in the context of bibliometric studies.

Cetinkaya Bozkurt and Gurbuz (2018) bibliometrically analysed the articles published in the Journal of Marketing and Marketing Studies between 2008 and 2016. They analysed a total of 75 articles bibliometrically. According to the findings, the most frequently researched topics are consumer behaviour, brand, and marketing studies. Catı and Ocel (2018) analysed 308 articles on marketing published in journals scanned in the TR index with the bibliometric method. According to the findings, the most frequently studied topics are marketing management and strategy, social marketing, marketing communication and green marketing.

Zeren and Kaya (2020) studied bibliometrically 334 publications related to digital marketing scanned in Ulakbim and Yoktez. It was determined that the first study on this subject was published in 2003. According to the findings, the most used keywords are digital marketing, mobile marketing, and social media marketing. Kavak and Kazancı Sunaoglu (2020) studied 558 postgraduate theses prepared in the field of marketing in the period of 2010-2020. In theses, it was determined that the most convenient sampling and data were collected from consumers by questionnaire. According to the findings, the subjects of consumer behaviour, marketing communication and brand management were mostly studied.

Ozturk (2020) bibliometrically studied 32 studies published on niche marketing and included in the WoS database. According to the findings, it was determined that the most of the studies were from the USA. It has been determined that the most commonly used words in the studies are agriculture, textile, clothing, and information technologies. Eren and Eren (2020) conducted a bibliometric analysis of publications on e-wom. 439 articles in the WoS database were studied. According to the findings, it was determined that the most focused subject was "business economy".

Kurnaz (2021) examined the studies published in the field of marketing science in the period of 2000-2021 with bibliometric analysis. The 3,234 articles published in the three journals with the highest impact factor in the field of marketing were selected as samples. According to the results, the studies in the journals dealt with the consumer behaviour mostly from the psychological point of view. Cici Karaboga (2021) carried out a study to examine the concept of "brand love" bibliometrically in the marketing literature. Articles on brand love published in the Scopus database since 2009 were examined. According to the findings, most of the articles on brand love were published in the "Journal of Product and Brand Management".

Yalcın and Sumerli Sarıgul (2021) conducted a study to bibliometrically examine the studies published on green marketing and green accounting in the marketing literature. The publications made in the WoS database between 1975 and 2020 were analysed with VOSviewer. According to the findings, the most widely published source countries in the field of green marketing are the USA, China, India, England, and Taiwan. Gider and Duygun (2021) bibliometrically examined 62 articles on the marketing approach in the Dergipark system during the 2018-2020 period. According to the findings, green marketing and social media marketing topics were mostly studied. It has been determined that the publications usually have two authors.

Cruz-Cardenas et al. (2021) systematically reviewed 70 studies on Covid-19 pandemic and consumer behavior in the Scopus database. They used descriptive analysis, emphasizing the importance of quantitative methods and the use of China and the United States as research settings. According to the results, measures taken by governments, technology and social media came to the fore as external factors. However, revised marketing strategies have been developed to counter various consumer risks. Saher et al. (2021) bibliometrically examined the effect of the brand on consumer behavior during the Covid-19 pandemic period. A review of 1,014 publications was made from the Scopus database (1996-2020). As a result of the analysis, it was determined that the largest number of studies were conducted by scientists from Europe, North America, Asia and Australia.
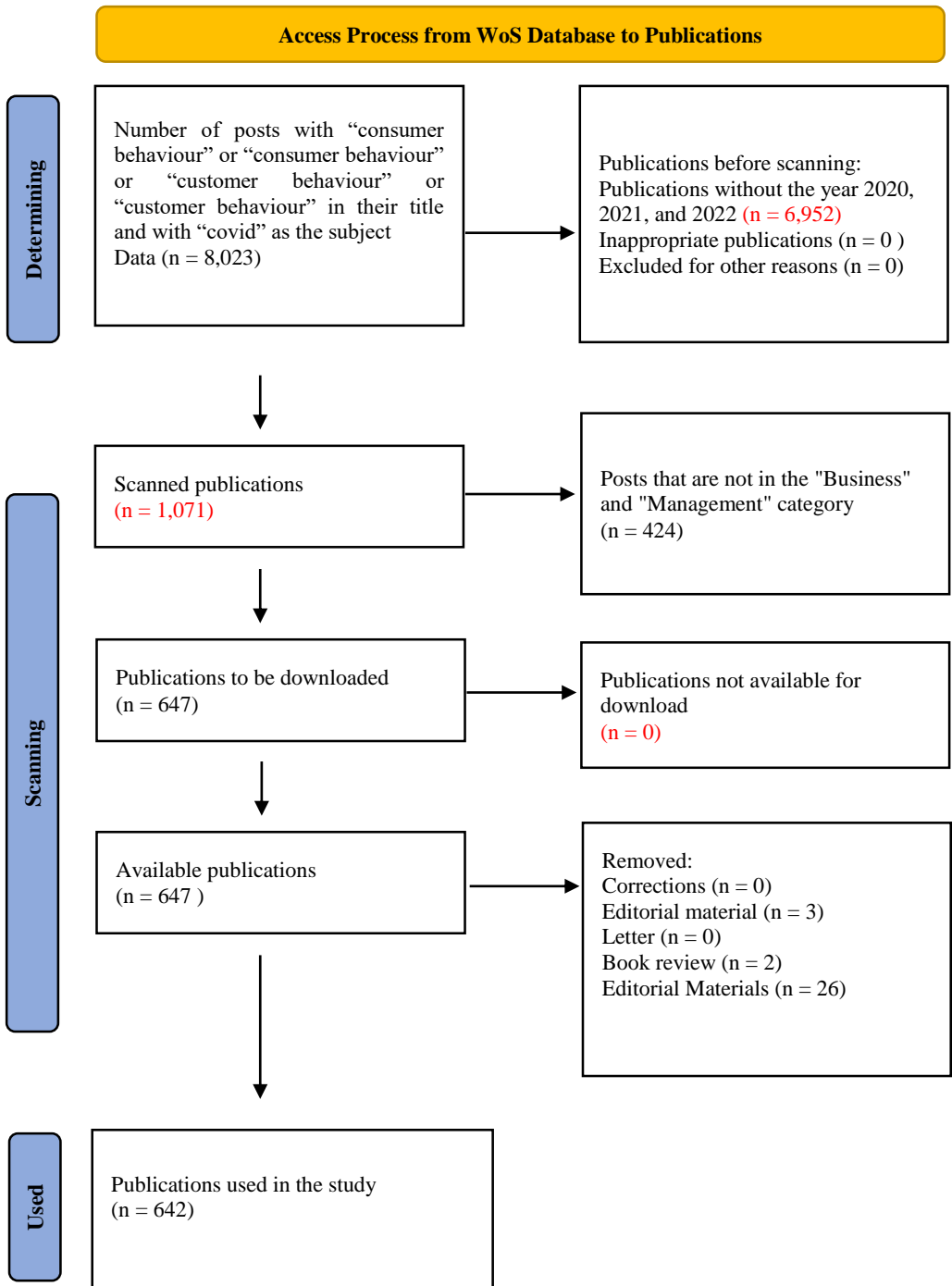
Pratika et al. (2022) examined the development of research in the context of entrepreneurial marketing bibliometrically. In the study, entrepreneurial marketing and pandemic keywords and data from the Scopus database were analyzed. According to the findings, the number of studies on entrepreneurial marketing during the pandemic has increased significantly in the last one and a half years. In addition, the country that made the most publicity in this regard during the pandemic period was determined as the USA. Hasibuan and Soemitra (2022) bibliometrically analyzed a few selected studies from Google Scholar in the last 4 years. As a result of the study, it was determined that online marketing increased the sales levels of SMEs during the Covid-19 pandemic that hit the last few years and helped SMEs learn technology literacy. Fiandari and Fuadiputra (2022) bibliometrically examined digital marketing studies carried out during a pandemic in which the use of digital marketing was widespread. The results

showed that digital marketing was dominated by sales of foodstuffs and household appliances during the pandemic, while sales of electronic equipment fell.

3. METHODOLOGY

Data were obtained from the WoS database by scanning the publications with the words "consumer behaviour" or "consumer behavior" or "customer behaviour" or "customer behavior" in the title and written on the subject of "covid". Since the study focused on the articles published during the Covid-19 pandemic period, the year 2020, 2021, and 2022 were limited. In this search, it was determined that there were 1,071 publications. In terms of the subject of the study, only the publications in the "business" and "management" categories were filtered, and as a result of this, it was determined that there were a total of 647 publications. When book criticism and editorial materials were removed from these publications, 645 publications remained. The scanning process was done on 20.04.2022 and the PRISMA flow diagram is given below.

Data such as study type, publication year, authors, publication language, abstracts of studies, study title, keywords, countries of studies, and references used in studies of 642 accessed publications were downloaded. Social network analysis was conducted to determine country co-citation networks, publication co-citation networks, author co-citation networks, journals co-citation networks, keyword and subject trends and collaborations. In the study, the data were analysed by loading into the CiteSpace 6 statistical program. CiteSpace 6 is a Java application and is used to analyse trends in scientific publications (Chen et al., 2010). The bibliometric study method is based on the determination of processes and properties related to files (Thelwall, 2008). Bibliometric study is one of the methods to reveal the development process of the field by examining the publications in a specific field (Al, 2012). Rey-Marti et al. (2016) defined bibliometric analysis as a method used to reveal qualitative and quantitative changes in study carried out in a certain field, to create a profile of research on the subject and to detect trends.

Access Process from WoS Database to Publications

Determining

Number of posts with "consumer behaviour" or "consumer behaviour" or "customer behaviour" or "customer behaviour" in their title and with "covid" as the subject Data (n = 8,023)

Publications before scanning:
Publications without the year 2020, 2021, and 2022 (n = 6,952)
Inappropriate publications (n = 0)
Excluded for other reasons (n = 0)

Scanning

Scanned publications
(n = 1,071)

Posts that are not in the "Business" and "Management" category
(n = 424)

Publications to be downloaded
(n = 647)

Publications not available for download
(n = 0)

Available publications
(n = 647)

Removed:
Corrections (n = 0)
Editorial material (n = 3)
Letter (n = 0)
Book review (n = 2)
Editorial Materials (n = 26)

Used

Publications used in the study
(n = 642)

Diagram 1. PRISMA Flow of the Study
Source: Prepared using the PRISMA model (Page et al., 2021).

In the study, country collaborations, author co-citation network, journal co-citation network, publication co-citation network, keyword trends, subject clusters and bibliometric visualization were used within the scope of bibliometric analysis. In the analyses, network densities, modularity values and average silhouette values of the networks were calculated. Network density refers to how many potentially available connections in a network are used (Al and Dogan, 2012). While the number of nodes in the network indicates the number of countries or citations in the connection, the connection values represent the number of collaborations (Guzeller and Celiker, 2017). The modularity value of the network expresses whether a network can be divided into independent clusters and takes a value between 0 and 1. A low modularity value represents a network that cannot be reduced to clusters with clear boundaries, while a high modularity value represents a well-structured network. The average silhouette value is between (-1) and (1). The average silhouette value is used to determine the number of clusters, and a value greater than 0.7 means a strong cluster (Simovici, 2007).

Country collaborations, author co-citation network, journal co-citation network, publication co-citation network, keyword trends and subject clusters analyzes made within the scope of the study were made using centrality values. The level of centrality indicates the frequency of cooperation between studies (Guzeller and Celiker, 2017). Citation bursts were also calculated for authors, studies, and journals cited in the study. The burst indicates whether a particular frequency has statistically significant fluctuations over a short period of time in the total year (Chen et al., 2010). Topic trends were determined using the log-likelihood ratio algorithm.

4. FINDINGS

4.1. Distribution of Publications

The distribution of the examined publications by years is given in Table 1. There are 273 publications in 2020 and 306 in 2021 published on the topic of consumer behaviour and Covid in the WoS database. In 2022, there are 63 publications until 20.04.2022.

Table 1. Distribution of publications by year

Years	n	Percentage (%)
2022*	63	9.82
2021	306	47.66
2020	273	42.52
Total	642	100

*As of 20.04.2022

The distribution of the publications examined in the study according to their types is given in Table 2. The most common type of publication is article (n=564). The article is followed by conference paper, review article, book chapter and book, respectively. The reason why the total distribution of publication types is higher than the number of publications examined is that some book chapters in some books are counted as separate publications on the WoS database.

Table 2. Distribution of publications by genres

Publication Type	n	Percentage (%)
Article	564	86.77
Conference Paper	45	6.93
Review Article	26	4.00
Book Chapter	11	1.70
Book	4	0.6

Total	650	100

A total of 642 publications reviewed cited 2,368 studies. The reviewed publications received a total of 2,866 citations. When those who cite their own publication are excluded from the citations received, the total number of citations received becomes 2,693. The average number of citations per publication is 4.43 and the h-index is 22. It means that 22 of the reviewed publications were cited at least 22 times.

The first 10 names of the institutions/organizations where the examined publications were made are given in Table 3. Ranking is from the institution/organization with the most publications to those with the least. The most widely published institution is the Indian Institute of Management Systems with 15 publications. Florida State University is in second place with 8 publications, while Pennsylvania Commonwealth institution is in third place.

Table 3. Institutions/organizations with the highest number of studies (top 10)

Institution:	n	Institution:	n
India Management Systems Institute	15	Griffith University	5
Florida State University	8	Hanyang University	5
Pennsylvania Commonwealth	7	Hong Kong Polytechnic University	5
California State University	6	Huazhong Science and Technology University	5
National Institute of Technology	6	Monash University	5

The first 5 of the journals in which the reviewed publications were published are given in Table 4, from the most to the least. The first three journals in which the publications examined within the scope of the research were published are respectively "Journal of Retailing and Consumer Services" with 40 publications, "Journal of Business Research" with 24 publications and "Journal of Consumer Behaviour" with 23 publications.

Table 4. Journals in which publications are published (top 5)

Journal Name	N
Journal of Retailing and Consumer Services	40
Journal of Business Research	34
Journal of Consumer Behaviour	23
International Journal of Consumer Studies	19
Journal of Asian Finance Economics and Business	18

The first 5 countries related to the source countries of the publications are given in Figure 1. The source countries of the reviewed publications are the United States of America with 126 publications, China with 101 publications, India with 62 publications, Australia with 48 publications and England with 37 publications, respectively.
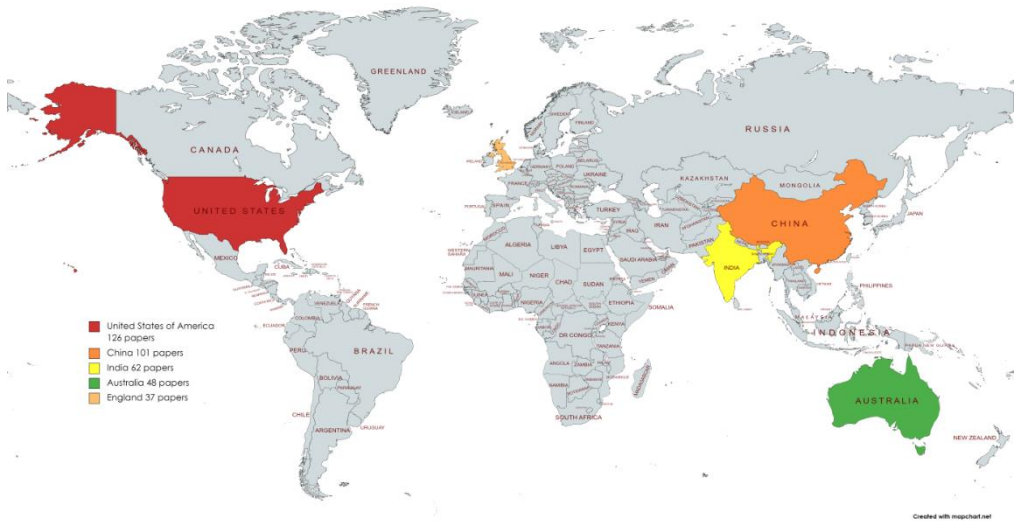
Figure 1. Source country distribution of publications (first 5 countries)

When the publication language is examined, 624 publications are in English, 12 publications in Portuguese, 5 publications in Spanish and 1 publication in Chinese. The distribution of the WoS index in which the reviewed publications were scanned is given in Table 5.

Table 5. WoS index type distribution of publications

WoS Index Type	n
Social Science Citation Index	363
Emerging Sources Citation Index	226
Conference Proceedings Citation Index	52
Science Citation Index Expanded	18
Book Citation Index – Science	17

Of the reviewed publications, 363 are scanned in SSCI, 226 in ESCI, 52 in CPCI, 18 in SCI-E and 17 in BCI-S. The reason why the sum of Table 5 is higher than the number of publications reviewed is because some journals are scanned in more than one index.

4.2. Country Collaborations

Country collaborations were examined to identify studies published in collaboration with different countries. While establishing the country cooperation network, studies with more than one author but originating from the same country were counted once. In Figure 2, the network image created with country names in country cooperation is given. The country cooperation network consists of a total of 216 connections and 75 nodes. Each node represents a source country and each link shows the cooperation of source countries with each other. The thickness and size of the pink and yellow circles around the nodes indicate that the node has a higher degree of centrality than other nodes (Uksul, 2016). There are 12 clusters in the network. The density degree of the network is 0.077, the average silhouette value is 0.77, and the modularity degree is 0.39. These values show that the country cooperation network shows a strong cluster structure. According to the findings, there is a strong country cooperation between the USA, China, India, Australia, South Korea and the UK.

Figure 2. Country cooperation network

In Table 6, the cooperation values and frequencies of the top 10 countries that have an important place in the country cooperation network are given. The country that cooperates most with other countries is the USA with 92 publications. The USA is followed by China with 83 publications, India with 49 publications and Australia with 41 publications.

Table 6. Country collaborations (top 10 countries)

Country	F	Year	Cluster #
USA	92	2020	0
China	83	2020	0
India	49	2020	1
Australia	41	2020	1
South Korea	29	2020	0
England	28	2020	3
Brazil	25	2020	4
Taiwan	20	2020	0
Vietnam	20	2020	0
Italy	20	2020	2

4.3. Journal Common Citation Network

Journal co-citation analysis was carried out in order to determine the journals in which important studies on consumer behaviour published during the Covid-19 pandemic period were published and the journals that were jointly cited. In Figure 3, a visual of the journal's common citation network is given.

Journal common citation network consists of 2,240 links and 499 nodes in total. There are 64 clusters in the network. The mesh has a density degree of 0.018, an average silhouette value of 0.78, and a modularity degree of 0.52. These values show that the journal co-citation network has clusters that are clearly separated from each other and that the clusters have a strong cluster structure.
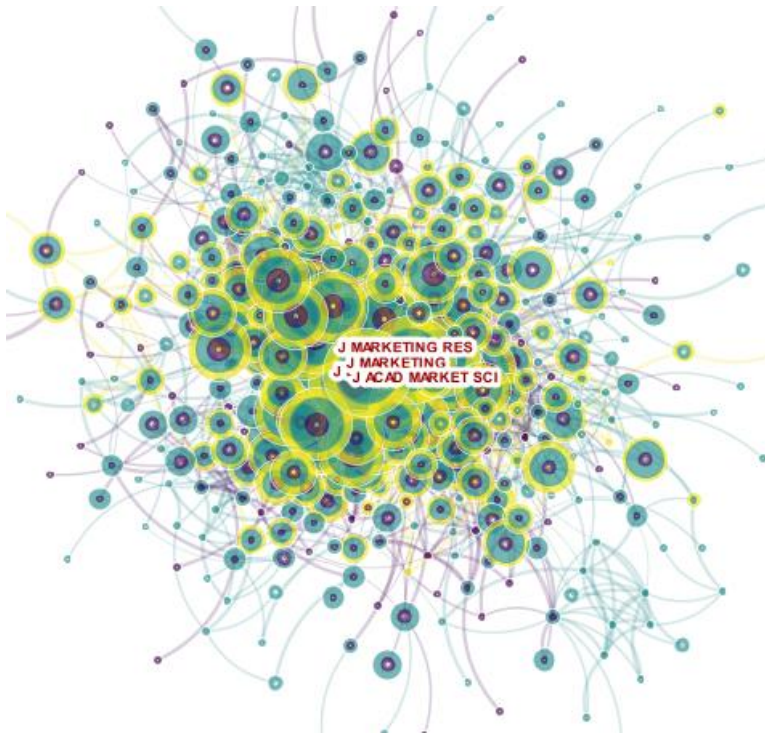
Figure 3. Journal co-citation network image

The values of the first 10 journals, which have an important place in the clusters, are given in Table 7.

Table 7. Top 10 Co-Cited Journals

Journal	F	Year	Cluster #
Journal of Business Research	346	2020	2
Journal of Marketing Research	296	2020	2
Journal of Marketing	290	2020	2
Journal of Academy Marketing Science	250	2020	2
Journal of Consumer Research	237	2020	2
Journal of Retail and Consumer Services	222	2020	2
Psychology of Marketing	207	2020	2
Journal of Retailing	192	2020	2
European Journal of Marketing	176	2020	1
Journal of Consumer Marketing	170	2020	2

The first journal with the highest number of citations in studies published on consumer behaviour in the Covid process is the "Journal of Business Research" with 346 citations. While the second journal is "Journal of Marketing Research" with 296 citations, the third journal is "Journal of Marketing" with 290 citations.

4.4. Author Co-Citation Network

Author co-citation network analysis was conducted to identify the authors who published and co-cited important studies on consumer behaviour published during the Covid-19 pandemic period. The author co-citation network consists of a total of 355 links and 1,615 nodes. There are 30 clusters in the network. The mesh has a density degree of 0.025, an average silhouette value of 0.80, and a modularity degree of 0.56. These values show that the author co-citation network has clusters that are clearly separated from each other and that the clusters have a strong cluster structure. In Figure 4, the image of the author co-citation network is given.
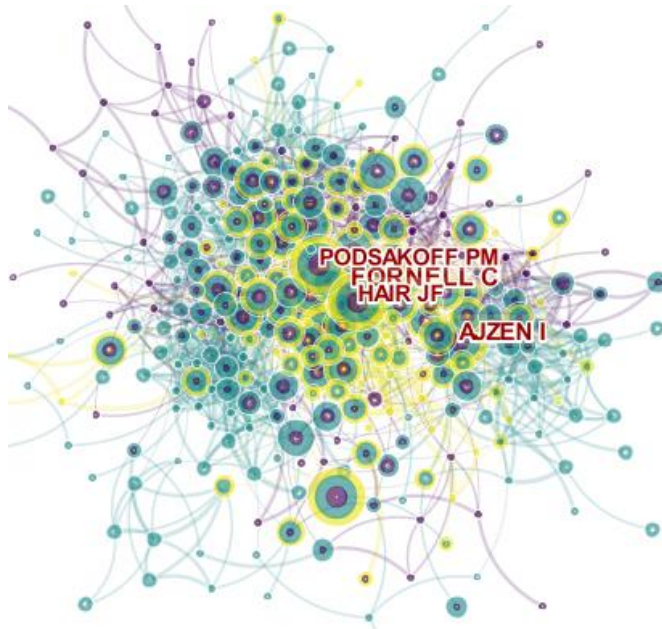
Figure 4. Author co-citation network image

The number of citations of the first 5 authors, which have an important place in the clusters, and the number of clusters are shown in Table 8.

Table 8. Top 5 co-cited authors

Journal	F	Year	Cluster #
Fornell C	132	2020	4
Ajzen I	92	2020	2
Hair JF	89	2020	4
Podsakoff PM	85	2020	4
Bagozzi P	69	2020	4

As seen in Table 8, the studies published on consumer behaviour in the Covid process and examined in this study refer to Fornell's work with the most 132 citations. After Fornell, the most cited authors at this time are Ajzen, Hair, Podsakoff, and Bagozzi.

4.5. Publication Common Citation Network

Publication co-citation network analysis was carried out to identify the publications that were jointly cited by the studies published on consumer behaviour during the Covid-19 pandemic and examined in this study. Figure 5 shows the publication partner network. The publication co-citation network consists of a total of 690 connections and 211 nodes. There are 18 clusters in the network. The density degree of the network is 0.03, the average silhouette value is 0.893, and the modularity degree is 0.70. These values show that the publication co-citation network has clusters that are clearly separated from each other and that the clusters have a strong cluster structure.
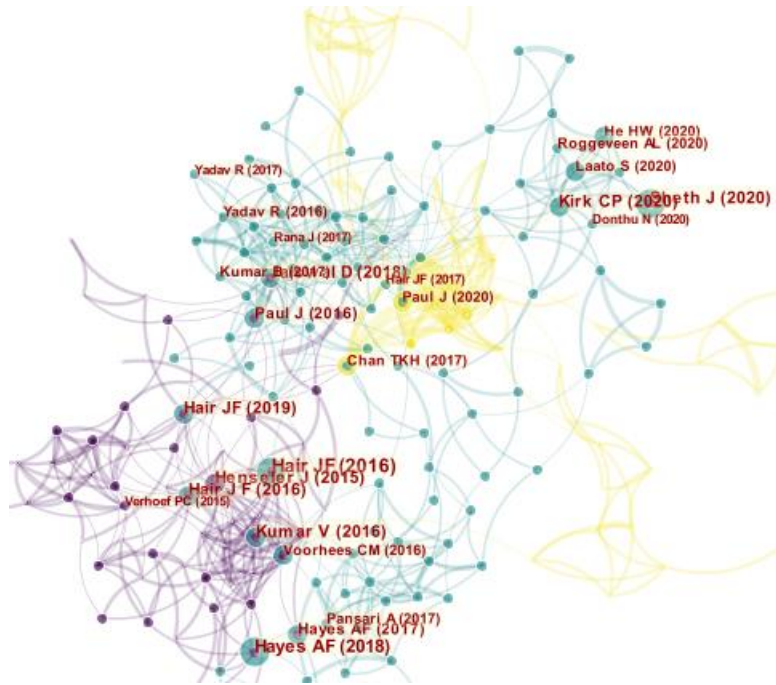
Figure 5. Publication co-citation network image

The citation numbers and publication tags of the first 5 publications, which have an important place in the clusters, are given in Table 9.

Table 9. Publications cited by reviewed publications (top 5 publications)

Author(s)	Citation #	Publication Place	Title	Cluster #
Hair JF., Hult, GT, Ringle CM and Sarstedt M. (2016)	29	SAGE	A primer on partial least squares structural equation modeling	1
Hayes AF (2018)	23	Guilford	Introduction to Mediation, Moderation, and Conditional Process Analysis	1

Kumar V and Pansari A. (2016)	12	Journal of Marketing Research	Competitive Advantage through Engagement	1
Kirk CP and Rifkin, LS (2020)	11	Journal of Business Research	I'll trade you diamonds for toilet paper: Consumer reacting, coping and adapting behaviours in the Covid-19 pandemic	3
Sheth J (2020)	11	Journal of Business Research	Impact of Covid-19 on consumer behaviour: Will the old habits return or die?	3

The most cited publication with 29 citations is the book published by Hair et al. (2016). The second most cited book was published by Hayes (2018). These two books are statistics books. Since analyzes were made in the reviewed publications, it can be said that these two books were used as supporting citations. The other three are related to consumer behaviour. Most cited Kumar and Pansari (2016) focused on competitive advantage, Kirk and Rifkin (2020) and Sheth (2020) focused on the impact of Covid-19 on consumer behaviour.

4.6. Covid Process Consumer Behaviour Topic Clusters

With the publication common citation network, clusters of topics related to a topic can also be determined. As a result of the analysis, it was determined that there were a total of 10 subject clusters. The clusters of topics related to consumer behaviour in the Covid-19 pandemic period are given in Table 10.

Table 10. Subject Sets of Publications

Subject	LLR p-value	Cluster #	F	Silhouette	Year
Green consumer behaviour	65.16, 1.0E-4	0	38	0.85	2017
Consumer participation behaviour	42.87, 1.0E-4	1	30	0.91	2016
Effective service quality	48.51, 1.0E-4	2	25	0.87	2017
Covid-19 pandemic	92.58, 1.0E-4	3	23	0.91	2018
E-commerce	50.06, 1.0E-4	4	23	0.85	2016
Future study agenda	91.68, 1.0E-4	5	19	0.84	2018
Psychological distance	35.77, 1.0E-4	6	13	0.98	2018
Consumer loyalty	28.2, 1.0E-4	7	13	0.91	2019
Corporate social responsibility	101.33, 1.0E-4	8	11	0.95	2016
Mobile payment	21.04, 1.0E-4	9	6	0.96	2018

The cluster with the most clusters is the green consumer behaviour issue. Since the silhouette value of the green consumer behaviour cluster and other clusters is 0.85 and above, the cluster has a homogeneous structure (Uksul, 2016). Other clusters are consumer engagement behaviour, effective service quality, Covid-19 pandemic, e-commerce, future research agenda, psychological distance, consumer loyalty, corporate social responsibility and mobile payment, respectively.

4.7. Keyword Analysis

Keyword network analysis was carried out to determine the most frequently used keywords in the studies published on consumer behaviour during the Covid-19 pandemic period and examined in this study. The keyword network consists of 1,163 links and 254 nodes in total. There are 11 clusters in the network. The network has a density degree of 0.036, an average silhouette value of 0.71, and a degree of modularity of 0.46. These values indicate that the network clusters of keywords have a strong cluster structure. The frequency of the 20 most frequently used keywords is given in Table 11.

Table 11. Most used keywords

Keywords	F	Keywords	F
Effect	103	Trust	40
Consumer behaviour	98	Product	37
Model	81	Determinants	35
Intent	69	Social media	33
Consumption	59	Performance	32
Satisfaction	54	Loyalty	31
Attitude	51	Experience	28
Premises	50	Purchase intent	27
Perception	48	Intermediary role	26
Word of mouth communication	42	Conclusion	25

In the studies published on consumer behaviour in the Covid-19 pandemic period and examined in this study, the most frequently used first keyword is the word "effect", which is used 103 times. The second keyword is "consumer behaviour" (n=98) and the third is the word "model" (n=81). Some of the other keywords are those such as model, intention, consumption, satisfaction, attitude.

5. CONCLUSION AND RECOMMENDATIONS

Examining different kinds of academic studies related to a discipline with the bibliometric analysis method plays an important role in evaluating the development phase of the discipline in terms of quantity and quality (Law and Cheung, 2008). Consumer behaviour is changing due to the Covid-19 pandemic, technological developments, rapid urbanization, globalization, and increasing industrialization. In this study, publications on consumer behaviour in the Covid-19 pandemic period were examined bibliometrically. 642 publications accessed from the WoS database were studied. The most common type of publication is the article. The first three journals in which the publications examined within the scope of the study are published are respectively "Journal of Retailing and Consumer Services", "Journal of Business Research" and "Journal of Consumer Behaviour". The first three journals with the highest number of citations in studies published on consumer behaviour during the Covid-19 pandemic period are the "Journal of Business Research", "Journal of Marketing Research" and "Journal of Marketing". Therefore, it is recommended that researchers who want to study consumer behaviour in the Covid-19 pandemic should examine the publications published in these five journals. Also, it can be said that those who prepare publications on consumer behaviour should examine these five journals and have their publications published in these journals, which will increase the impact value of their publications.

The top five countries where publications are made are the USA, China, India, Australia, and the UK. In the database we researched, there is not study on consumer behavior originating from Turkey during Covid-19 pandemic period. Conducting research on consumer behaviour originating in Turkey and publishing them in WoS-based journals will contribute to the international literature. According to the findings, there is a strong country cooperation between the USA, China, India, Australia, South Korea and the UK. Covid-19 pandemic has been intense in other European Union countries, especially in Turkey and Italy. It may be suggested to investigate how consumer behaviour has changed during the Covid-19 pandemic period by cooperating between these countries. Most cited Kumar and Pansari (2016) focused on competitive advantage, Kirk and Rifkin (2020) and Sheth (2020) focused on the impact of Covid-19 pandemic on consumer behaviour. It is recommended that those who want to do research on consumer behaviour should examine these three publications.

The cluster with the highest density is the green consumer behaviour issue. Other clusters are consumer engagement behaviour, effective service quality, Covid-19 pandemic, e-commerce, future research agenda, psychological distance, consumer loyalty, corporate social responsibility and mobile payment, respectively. In addition to these issues, researchers can focus on the impact of technology and government bans and measures on consumer behaviour during the Covid-19 pandemic period. In the studies published on consumer behaviour in the Covid-19 pandemic and examined in this study, the most frequently used first keyword is the word "effect". The second keyword is "consumer behaviour" and the third is the word "model". Some of the other keywords are those such as model, intention, consumption, satisfaction, attitude. It is recommended to examine the trends in consumer behaviour after Covid-19 pandemic by focusing on these issues and variables in future studies.

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