

## Consumer Behavior in E-commerce: Evidence from Asia and Europe

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### ABSTRAK

*The COVID-19 pandemic has changed the conventional trading and direct buying. The concept of consumer shopping during a pandemic is changing the way of buying. Purchase online through third party platforms. This study identified through the SLR (Systematic Literature Review) method using the VosViewer application. The literature collected through the official website scopus.com and selected according to topics relevant to the research objectives, namely consumer behavior in Asia and Europe using e-commerce platforms during the covid-19 pandemic. The results show, research since the beginning of the COVID-19 pandemic has increased. This can be seen from the total articles in 2020 as many as 1 and 2022 as many as 16. The keywords that are the main trends are e-commerce and the covid-19 pandemic. The most popular clusters of 11 items. The results of the article review show that consumers in Asia and Europe have shifted their way of shopping, namely the type of shopping goods that are more urgent for daily needs.*

### INTRODUCTION

The COVID-19 pandemic is a virus that can cause respiratory tract infections. Was first discovered in Chinese area, precisely in Wuhan at the end of 2019 (WHO, 2020). In fact, this virus can spread from one human to another with high and malignant intensity (WHO, 2020). The spread of the virus that is not easily controlled has resulted in depressed and limited business operations and community activities.

Business activity is very slow. The study in Poland focused on the clothing industry, which had to create a new strategy during the COVID-19 pandemic. Clothing distribution continues to run by adopting online-based sales through e-commerce (Milewska, 2022). The limited activities of this community have become a spur for the government to set its own regulations. The shift in people's behavior in shopping is also felt by the community. Lin et al. (2021) explain the factors that have an influence on consumer purchase intentions. Namely, during this pandemic, many consumers have products that have product characteristics that

contain both chemical and natural nutrients. The goal is for consumers to consume products that can supply nutritional needs and meet the immune formula to block the virus. In addition, consumers' purchase intentions also depend on the application or purchase platform.

Before choosing a buying platform, consumers also have a focus on their own shopping motives. According to (Parsad et al., 2021) that consumers decide to make a purchase is influenced by mood. When the mood is good, it can control the hedonic impact to tend to buy things humanly through e-commerce. Shopping using e-commerce platforms makes shopping more practical. Because the use of e-commerce has supported consumers to buy goods/services from anywhere. With a payment method that is also practical. In the e-commerce platform, apart from competing in terms of service, they also compete in payment effectiveness. Through research Noer et al. (2022) who looked at the motives of Indonesian consumers to buy books during the pandemic. There is a comparison of consumers using 2 platforms and payment methods. Consumer hedonism using the Tokopedia platform with the OVO payment method has more hedonistic motivation in buying books online. On the other hand, consumers who choose the Shopee platform have reasons of hedonism due to situational influences. Conditions that force people to carry out activities from home (lockdown) also encourage changes in public purchases. One of them is consumers in consuming alcohol in purchasing portions more than usual. This is due to the perception of not getting goods when they need it, so people choose to buy more (Plata et al., 2022)

Asia and Europe were selected as the focus of this study because they represent two of the largest and most dynamic e-commerce markets in the world. The Asia-Pacific region dominates global e-commerce, contributing more than 57% of worldwide e-commerce revenue in 2024 (Eurostat, 2025). This growth is driven by high internet penetration rates, widespread mobile device usage, and the rapid expansion of digital platforms in countries such as China, Japan, South Korea, and several Southeast Asian nations. Furthermore, the region has become a hub for digital commerce innovation, characterized by the growth of mobile commerce and the increasing integration of digital payment systems. On the other hand, Europe is one of the regions with the highest levels of e-commerce adoption globally. According to Eurostat data, 77% of European Union citizens purchased goods or services online in 2024, an increase from 59% in 2014. In several countries, such as Ireland and the Netherlands, online shopping participation has exceeded 90% of internet users. Although both regions exhibit high levels of e-commerce usage, Asia and Europe differ in terms of social and cultural characteristics, market maturity, and consumer behavior. Therefore, comparing these two regions is essential for understanding how consumers adapted their consumption patterns and use of e-commerce platforms during the COVID-19 pandemic .

The Covid-19 pandemic condition encourages people to live healthy and restrict activities. WHO as a world health organization urges the public not to underestimate the impact of the COVID-19 pandemic. The advice from WHO is to always prevent transmission by means of social distancing. In addition, diligently washing hands, wearing masks when

traveling, eating nutritious and healthy food, and avoiding crowds or crowds. Prevention of corona virus infection encourages people to always use technology in their activities. One of them is in transacting through e-commerce which is more effective and efficient. Orders are made from anywhere and the goods will arrive in accordance with the estimated time. The effectiveness of using e-commerce during the pandemic really helps the community.

Research that focuses on the topic of e-commerce during the pandemic is on the rise. Therefore, researchers want to see other research through articles published on the scopus.com website. The researcher's analysis includes how consumer behavior in Asia and Europe uses e-commerce platforms to make shopping decisions during the pandemic.

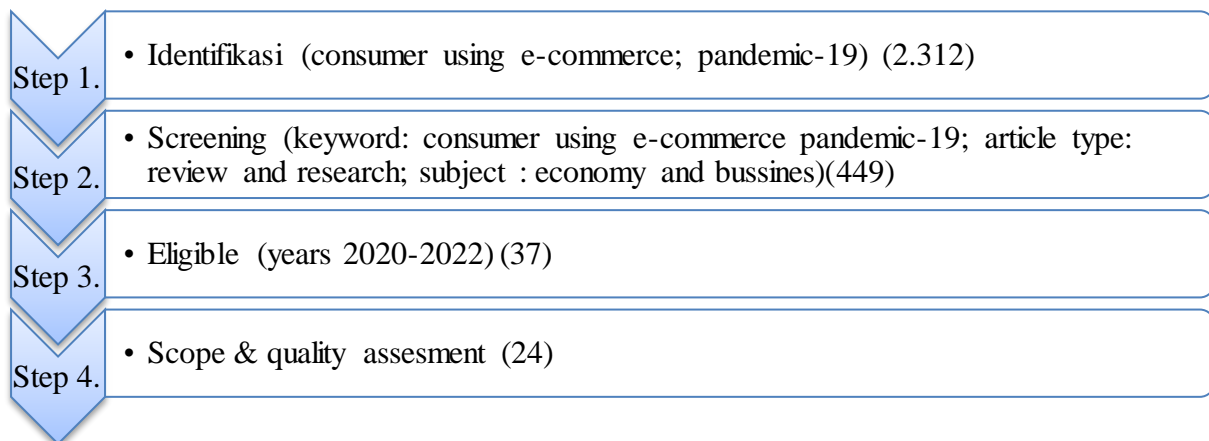
## **METHOD STUDY**

This research method was carried out using a systematic literature review (SLR) method. This method is done by collecting and selecting articles that are relevant and in accordance with the research topic (Sagita et al, 2026). The benefit of using the systematic literature review method is that it can provide identification, provide a literature review, evaluate to provide research interpretation (Amam & Rusdiana, 2022; Wati & Widodo, 2024). In Triandini et al. (2019) stated that SLR is a method for conducting research and developing research evaluations that focus on research topics.

The stages of compiling research using the SLR method by Wahono (2015) in (Amam & Rusdiana, 2022) are divided into three stages:

1. Planning includes identification of article needs
2. Screening stage for article material to be reviewed and information extracted
3. Eligibility stage includes determining article criteria
4. Inclusion stage, search for research scope that fits the criteria

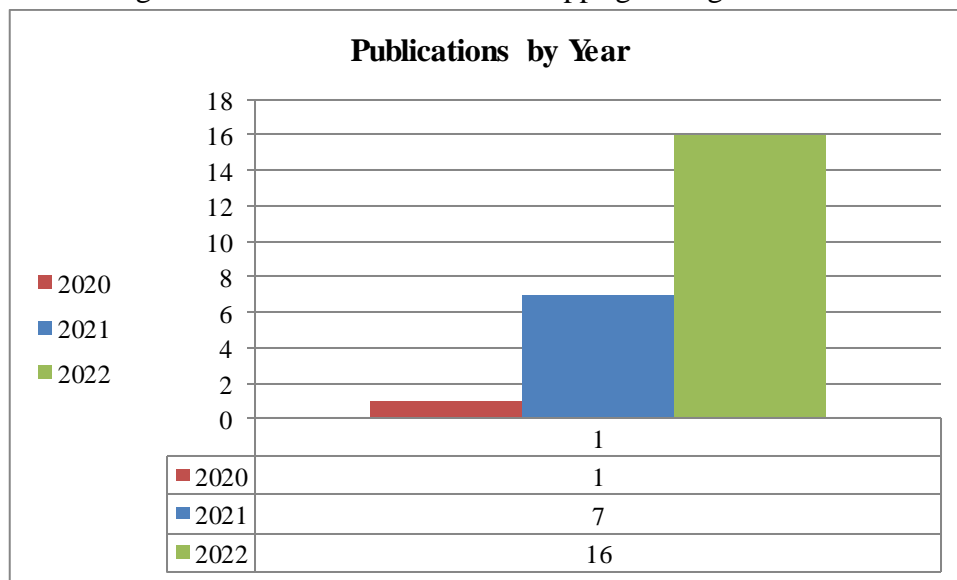
To collect data, the researcher took from articles sourced from Scopus through the website, namely scopus.com. Data collection was carried out in May 2022. The object of research is consumer behavior using e-commerce in the era of the covid-19 pandemic. The type of publication used is limited to the year the covid-19 pandemic occurred, namely from 2020 to 2022. This study uses the keyword covid-19 e-commerce. The purpose of this study was to determine consumer shopping behavior using e-commerce during the Covid-19 pandemic. Selected articles based on author profiles, journals published on Scopus with keywords e-commerce pandemic-19. Data analysis was carried out through a software application called Vosviewer to provide network information and data visualization (Canda et al, 2026; Van Droogenbroeck & Van Hove, 2022). To summarize, the following is the determination of search criteria based on keywords:



**RESULT AND DISCUSSION**

**Number of Publications**

Based on the search for articles about e-commerce during the pandemic and consumer behavior that the author identified, there were 24 articles selected and in accordance with the author's provisions. Below is a graph to identify the 24 articles published on the scopus.com website. The targeted articles are based on 2020 to 2022, according to the topic of the COVID-19 pandemic. Through the graph below, the author chose the article in 2020, there is 1 article, because 2020 is the first year of the spread of the virus which was made a COVID-19 pandemic by WHO. Furthermore, in 2021 there will be a total of 7 articles, most of which review consumer behavior using e-commerce. In 2022 there are 16 articles, with a lot of mapping and looking at the factors of consumers shopping through e-commerce.



**Graph 1. Number of Publications by Year**

In the total articles in the author's collection, below is the identification of the journal that contains the name of the author's journal and the journal that publishes articles on the topic of consumer behavior using e-commerce during the pandemic:

| Number | Authors, Years                       | Jurnal   |
|--------|--------------------------------------|--|
| 1      | (Ahmar, 2020)                        | Science of The Total Environment                                       |
| 2      | (Erdmann & Ponzoa, 2021)             | Technological Forecasting and Social Change                            |
| 3      | (Guthrie et al., 2021)               | Journal of Retailing and Consumer Services                             |
| 4      | (Lin et al., 2021)                   | Electronic Commerce Research and Applications                          |
| 5      | (Magalhães, 2021)                    | Research in Transportation Economics                                   |
| 6      | (Parsad et al., 2021)                | Journal of Retailing and Consumer Services                             |
| 7      | (Pernot, 2021)                       | Research in Transportation Economics                                   |
| 8      | (Zhou et al., 2021)                  | Technology in Society  |
| 9      | (Alam & Rahman, 2022)                | International Journal of Electrical and Computer Engineering           |
| 10     | (Alkhunaizan & Ali, 2022)            | Indonesian Journal of Electrical Engineering and Computer Science      |
| 11     | (Bazi et al., 2022)                  | Journal of Theoretical and Applied Electronic Commerce Research        |
| 12     | (Fedushko & Ustyianovych, 2022)      | Journal of Open Innovation: Technology, Market, and Complexity Article |
| 13     | (Gulfraz et al., 2022)               | Journal of Retailing and Consumer Services                             |
| 14     | (Inoue & Hashimoto, 2022)            | Heliyon  |
| 15     | (Li et al., 2022)                    | Technological Forecasting and Social Change                            |
| 16     | (Milewska, 2022)                     | Sustainability   |
| 17     | (Noer et al., 2022)                  | Publishing Research Quarterly  |
| 18     | (Plata et al., 2022)                 | International Journal of Gastronomy and Food Science                   |
| 19     | (Purcărea et al., 2022)              | Sustainability   |
| 20     | (Rashid et al., 2022)                | Frontiers in Psychology  |
| 21     | (Sajid et al., 2022)                 | Psychol.   |
| 22     | (Scutariu et al., 2022)              | Journal of Theoretical and Applied Electronic Commerce Research        |
| 23     | (van Droogenbroeck & van Hove, 2022) | Journal of Theoretical and Applied Electronic Commerce Research        |
| 24     | (Young et al., 2022)                 | Regional Science Policy & Practice                                     |

**Table 1. Authors and Publishing Journals**

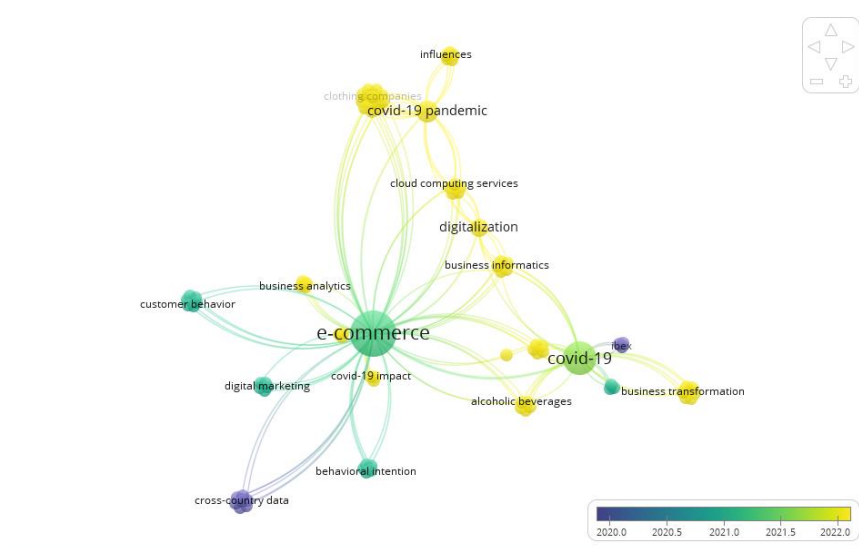
The process of searching for articles through the scopus.com website is mostly found from journals that are included in the technology, science, and economics category journals. This can be seen in the table above. There is more than 1 article in the journal selected by the author, namely in the journal Research in Transportation Economics with the authors

Magalhães (2021) and Pernot (2021). The author's focus is also slightly different in (Magalhães, 2021) using a quantitative study technique using logit and mixed models using decision making. The purpose of the article focuses on the factors that influence the logistics needs and consumer decisions to shop for groceries online (Li, 2022). Meanwhile, Pernot (2021) has a research objective to measure consumer behavior in shopping online and offline. The method used is survey and tabulated using the chi-square test.

In addition to the Research in Transportation Economics journal, there is the Journal of Theoretical and Applied Electronic Commerce Research, with a total of two articles. (Scutariu et al., 2022) aims to determine the behavior of companies when there is a new shopping model through e-commerce during the pandemic. With a focus on companies in 31 European countries, research results show that the Covid-19 pandemic has shifted economic development and forced companies to adopt new buying and selling technology, namely using e-commerce. This is appropriate seen from the percentage of e-commerce sales value in 2020 in Belgium, Ireland and the Czech Republic. In e-commerce, customer relationship management and secure transactions, Denmark and Sweden are ahead in 2020. to the above countries, which were dominant in 2018. For the other two indicators, Finland and Norway are the top countries entering in the analysis in both years. In the article entitled "Are the Time-Poor Willing to Pay More for Online Grocery Services? When 'No' Means 'Yes'" by authors Van Droogenbroeck & Van Hove (2022) investigating consumers' willingness to pay for grocery services. Through data collected from supermarkets in Belgium and the Netherlands, more precisely at Delhaize and Colruyt supermarkets. The results showed that consumers who were willing to make payments and those who did not differ mainly in terms of household characteristics, namely, the presence of children, the relative number of full-time partners, and household size. The authors find that, as the cost of the service increases, users who do not have relatively sufficient time will retain a higher frequency of ordering for as long as other users (and even slightly longer).

With vosviewer analysis tool, through the overlay visualization it can be seen that from 2020 to 2022 through quarters and keywords. In the visual results, it can be seen that cluster 4 includes keywords cross-country data, e-sales, firm size, ICT usage, labor productivity growth, manufacturing and services are keywords included in 2020. Through keywords, it can be seen that the keywords that are often searched for are e-commerce from 2020 to 2021. And there is a mutual connection with the covid-19 pandemic, and a lot of connection with digitalization. This connection is shown in Figure 1 below where there is a line connecting one keyword to another.

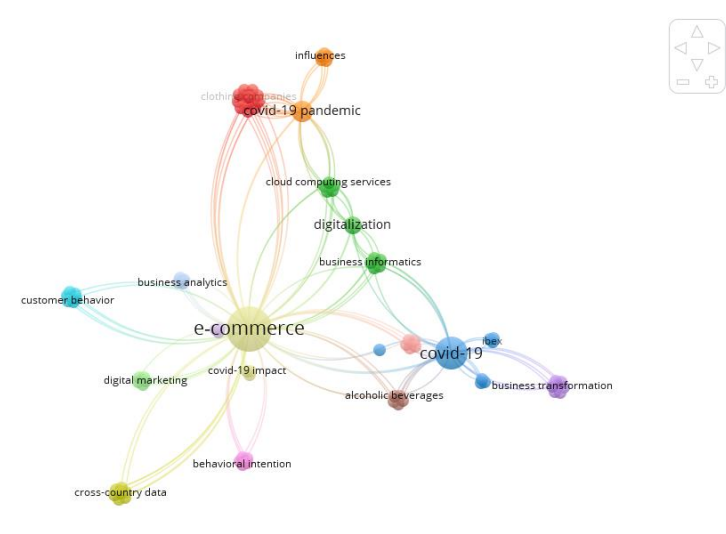
Currently the author can collaborate on digitalization associated with business transformation carried out by e-commerce which is related to the era of the covid-29 pandemic. And the most important thing is to look at the factors of Asian consumers who choose to shop online through digital transformation, namely using an e-commerce platform. Data visualization using the Vosviewer application can be seen in the image below:



**Figure 1. Visualization of VosViewer based on Overlay Visualization which identifies the relationship between keywords**

**Research Topic**

Through visualization using the VosViewer application and mapping the topics below, there are a total of 14 clusters with a total of 87 items. Clusters and items can be seen in the image below:

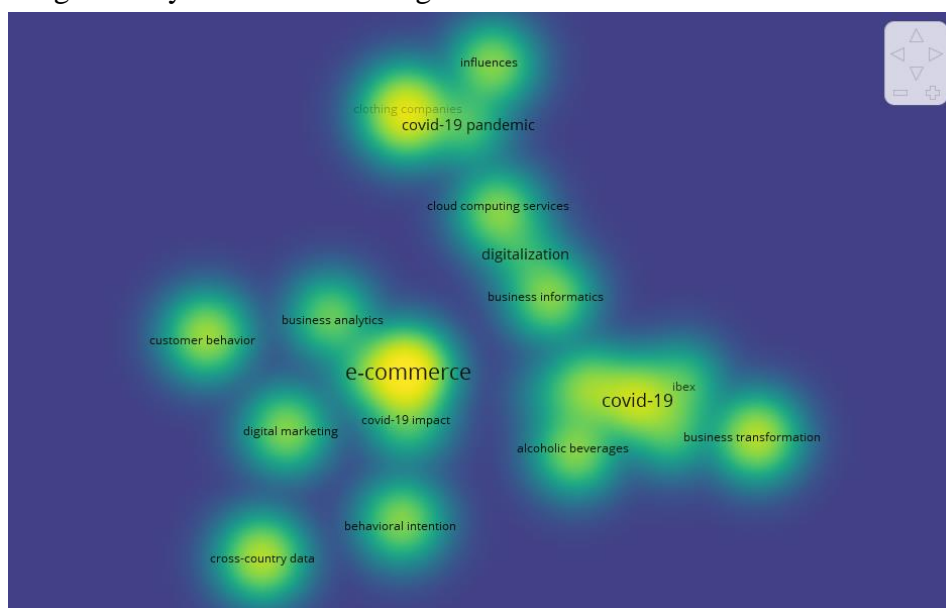


**Figure 2. Visualization of VosViewer based on Network Analysis that identifies the relationship between keywords**

Using the VosViewer data processing application, researchers can create a mapping based on text or keywords. Because the researchers collected articles from scopus.com sources where the discussion about consumer behavior who shopped using e-commerce was very broad, so the researchers gave their studies based on keywords. The most popular keywords are “e-commerce” which is most searched for in 2021, and “covid-19” in 2021.

Based on the cluster the most items are cluster 1 with a total of 11 items. In group 1 there are mostly articles published in 2022. Furthermore, in group 2 there are also 11 items related to the informatics business. The group with the fewest items is the last group with 3 items including e-wallet, online book shopping and research models. This is because the researchers did not sort out published articles related to online payment methods. Not specific about that.

The topics that are often discussed in the 24 articles selected by the authors are the most popular as shown in the image below, which looks the brightest or yellow. Meanwhile, color blending is a topic that is rarely discussed in 24 articles. Below are the results of the analysis through density visualization using VosViewer.



**Figure 3. Visualization of VosViewer based on Density Visualization which identifies popular keywords used**

## Discussion

The purpose of this study is to determine the behavior of Asian and European consumers shopping using e-commerce during the Covid-19 pandemic era. The research design chosen by the researcher is using the SLR method with the help of VosViewer analysis software to help researchers explore how consumer shopping behavior is. The basis of this research is from articles collected by the author and selected in 24 published and indexed articles on scopus.com when accessed by the author in May 2022. The results show that there is a transition in consumer behavior when there is a COVID-19 pandemic situation and consumer behavior takes advantage of digital transformation. Purchasing goods online helps consumers to get goods effectively (Bazi et al., 2022). But on the other hand, there is also consumer behavior becoming more consumptive to buy some needed items such as food, personal care, alcohol (Guthrie et al., 2021) (Plata et al., 2022) (Alam & Rahman, 2022).

In addition, there is also a transition in shopping behavior through e-grocery, the availability of consumers and producers to increase sales of goods through e-commerce (Alkhunaizan & Ali, 2022). Company behavior to support smooth shopping in e-commerce is also the evolution of a company during this pandemic (Scutariu et al., 2022). The research of Sajid et al. (2022) stated that the factor of respondents during this pandemic was switching to sustainable products, this was related to the pressure of the Covid-19 condition. Starting from the high mortality rate, so that it affects the psychology of consumers to switch shopping in a healthy manner. Research in another Asian country, namely Pakistan by Rashid et al. (2022). stated that by collecting respondents, shopping experiences through social commerce platforms can be well integrated during the pandemic (Erdmann & Ponzoa, 2021). Another study in Europe that tried to estimate the COVID-19 pandemic through the Arima model, specifically in Spain with the second highest number of Covid-19 in the world, by doing a lockdown and crippling the country's economic status with the aim of suppressing the spread of Covid-19. Causing consumers to not have the option to stop shopping both online and offline due to state policy conditions in Europe (Ahmar & del Val, 2020).

## CONCLUSION AND SUGGESTION

Consumers are experiencing a shift in shopping, from offline or traditional shopping to using technology adoption. Namely using e-commerce to get needed goods. During the pandemic consumers shop through e-commerce. Even during the pandemic, it is possible for consumers to shop consumptively. This is due to the government's policy to carry out regional closure conditions within a certain time with a period of 14 days.

From the results of the study above, of course, it has limitations. Research whose results are looking for research gaps that are still limited to 24 selected articles. The topics used are popular topics to use but are still not too specific on the main topic model, namely consumer shopping behavior during the COVID-19 pandemic. Researchers do not look specifically at the factors that consumers shop for, because by transacting online, of course, consumers have their own preferences to decide to shop.

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