

## The Influence of Covid-19 and the Development of Digital Technology on Customer Behavior and How Consumers Shop



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**ABSTRACT:** This study was conducted to determine the effect of covid19 and the development of digital technology on customer behavior and how to shop for consumers. In this study there are four variables, namely Covid19 (X1), digital technology (X2), *customer behavior* (Y1) and how to shop (Y2). The population in this study were consumers who had bought and used a digital platform to shop at covid19 with a sample of 50 respondents selected using purposive sampling method. Collecting data in this study by giving questionnaires to respondents. While in terms of data analysis, this study uses the path analysis method with the help of SPSS version 26 and smart-PLS. The results showed that: 1) The impact of COVID19 has a positive and significant effect on *Customer Behavior*, 2) Digital technology has a positive and significant effect on *Customer Behavior*, 3) The impact of COVID19 has a positive and significant effect on How to Shop, 4) Digital Technology has a positive and significant effect on How to Shop, 5) *Customer Behavior* has a positive and significant effect on how to shop, 6) The impact of COVID19 has a positive and significant effect on How to Shop through *Customer Behavior*, 7) Digital Technology has a positive and significant effect on How to Shop through *Customer Behavior*.

**KEYWORDS:** Covid19, Digital technology development, Customer Behavior, Ways of Shopping

### INTRODUCTION

The COVID-19 pandemic has changed the way people live and behave around the world. One aspect that has been significantly impacted is consumer behavior. The digital age has played a key role in facilitating such changes. The COVID-19 pandemic has had a significant impact on consumer behavior around the world. Social distancing policies, lifestyle changes, as well as the economic crisis associated with the pandemic have affected how consumers shop, consume, and interact with brands and products.

Consumer behavior is the study of how individuals and groups make decisions related to the purchase, use, and disposal of products and services that satisfy their needs. Consumer behavior is influenced by various factors, including social, cultural, psychological, and economic factors. However, when the COVID-19 pandemic hit the world, consumer behavior underwent significant changes. (Suprihadi, 2023).

Consumers are now more likely to choose to shop through *e-commerce* platforms, shopping apps, and official websites of certain brands. This provides an opportunity for companies to increase their online presence and provide a more personalized shopping experience. Before the pandemic, online purchasing had been a growing trend. However, the COVID-19 pandemic accelerated the growth in the number of online consumption users significantly. Movement restrictions and social distancing policies made people turn to online shopping to purchase various goods and services. (Wiadi & Sajili, 2023).

Before the pandemic, online purchases were generally related to products such as clothing, electronics, and beauty products. However, during the pandemic, basic necessities such as groceries, health products, and household supplies became a priority. This leads to an increased demand for online stores that provide such goods (Wati et al., 2022).

In addition, consumers are also experiencing changes in product preferences. Health and hygiene are becoming the main focus in choosing products. Demand for products such as face masks, hand sanitizers, and health care products has increased significantly. Consumers also tend to look for food and beverage products that increase body immunity and offer health benefits. (Wati, 2022).

During the COVID-19 pandemic, consumers have also shown changes in spending behavior. Economic uncertainty and threats to employment have caused consumers to be more cautious in their spending. Many consumers prefer to save rather than spend their money, due to concerns about the future and financial security. (Dira & Kartika, 2021).

The entry of changing times has shifted people's shopping style from conventional activities to practical activities, namely online sales sites, and gave birth to many online buying and selling sites. Changes in consumer behavior in the rapid advancement of markets and technology have led to competitive competition with the use of the internet, traditional marketing has been replaced by digital marketing. Likewise, marketing communication that was previously done *face to face* (conventional) has become *screen*

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to face (*digital marketing*).

This has also led to an increase in internet users in Indonesia, which is directly related to the increase in interest in online shopping. This situation also requires companies to change their marketing strategies to be more appropriate for use in the digital era, hence the emergence of digital marketing strategies. (Pamungkas & Sigit, 2022)..

Data from Bank Indonesia shows the phenomenon that online shopping and digital banking transactions, on the one hand, are a solution to prevent the spread of Covid-19 while on the other hand, without us realizing it, consumers will become more consumptive and wasteful from a financial perspective. The ease of shopping, getting the desired goods/services, and the ease of payment makes consumers sometimes buy "unnecessary" items or those that are not really needed. Consumers become "blindfolded" so that they become consumptive, overspend, and buy goods/services beyond their needs. (Lupiana & Andika Kusumajaya, 2021).

Based on this description, the researcher is interested in examining how covid19 and the development of digital technology affect *customer behavior* and how they shop.

## LITERATURE REVIEW

### *Covid-19*

*Covid-19 is an infectious disease caused by a new type of coronavirus infection. The disease is known to have first appeared in Wuhan, China in December 2019. Covid-19 is an acute respiratory disease that has become a global pandemic and is caused by a novel coronavirus or SAR-Cov-2. Symptoms of Covid-19 include fever, dry cough, and shortness of breath. Some patients experience cold-like symptoms and experience throat pain and diarrhea. Some infected people are asymptomatic and feel well. Some can recover on their own, while others experience worsening of their condition so that they have difficulty breathing and need to be hospitalized.*

Covid-19 can be transmitted from an infected person to other people around them through coughing or sneezing droplets. Covid-19 can also be transmitted through objects contaminated with the coughing or sneezing droplets of a person with Covid-19. Other people who touch these contaminated objects and then touch their eyes, nose and mouth can contract the disease. The virus that causes Covid-19 can survive in the air for about an hour, while on the surface of objects it can survive for several hours. On plastic and stainless steel surfaces, the virus can last up to 72 hours, on cardboard for 24 hours and on copper for 4 hours. (Sari, 2020).

The covid-19 impact indicator consists of :

1. Impact on income,
2. Impact on economic activity.
3. Impact on expenditure (Sayuti & Hidayati, 2020).

In addition, some of the Covid-

19 prevention measures recommended by WHO in 2020 include:

1. Wash your hands frequently using soap and running water or alcohol-based hand rubs. Detergents in soap and alcohol in antiseptics can kill viruses on hands.
2. Keep your distance from other people at least one meter. This is to prevent contracting the virus that causes Covid-19 from sneezing or coughing droplets.
3. Avoid touching your eyes, nose and mouth before you make sure your hands are clean by washing your hands with soap and running water or an antiseptic. Contaminated hands can carry the virus to the eyes, nose and mouth where it can enter the body and cause Covid-19 disease.
4. Stay indoors to avoid being infected by others outside the residence.

### **Digital Technology**

The use of information technology is an activity that utilizes information systems in carrying out operations with the aim of obtaining benefits for its users. The application of information technology can also be related to the company's efforts to improve its performance. Understanding the link between the use of information technology and results is very important to determine how information technology leads to the desired results or performance. (Cahyani et al., 2023). With technological advances in the field of trade is very developed through internet media, even mushrooming in Indonesia using *e-commerce*. The many various conveniences in shopping and various types of products and services offered, make people, especially the city of Medan, make online businesses as one of the new shopping places besides shopping centers such as modern markets. This makes many online business sellers compete to offer their products in various ways to attract consumers to shop, they take advantage of the situation where online shopping is in demand by the public. (Sigalingging, 2020).

As for the indicators (Zulham, 2017)The indicators of Digital Technology are as follows:

- a *Knowledge*
- b *Digitization*
- c *Virtualization*

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d *Molecularization*

## Customer Behavior

According to Kotler and Keller, consumer behavior is the study of how individuals, groups, and organizations choose, buy, use, and how goods, services, ideas, or experiences satisfy their needs and wants. Then, Kotler and Keller explained that consumer purchasing behavior is influenced by cultural, social, personal, and psychological factors. Cultural factors have the broadest and deepest influence. *Consumer behavior* includes:

1. How does the environment affect consumer behavior?
2. How do product promotions and campaigns influence consumer purchasing decisions?
3. What do consumers think about your competitors?
4. Among the many alternatives, how do consumers choose products?

There are several types of consumer behavior, namely:

1. Complex buying behavior where before buying a product, consumers tend to think long.
2. Dissonance-reducing buying behavior. When they have this behavior, consumers are highly engaged in the buying process. However, they have difficulty determining the differences between brands.
3. Habitual buying behavior, where brand selection tends to be based on habits. That way, purchasing decisions are not influenced by the loyalty or campaign of the product purchased.
4. *Variety seeking behavior*. In this type, consumers buy different products. However, this is not done because they are dissatisfied with the previous product. This behavior is based on the motivation to look for variations from the products they already have. (Lupiana&Andika Kusumajaya, 2021). *Consumerbehavior* can be measured through :

1. Product Brand.
2. Product Knowledge.
3. One's feelings towards the product.

## Shopping

Shopping is a cultural phenomenon that occurs within a society. The use of objects is always framed by the cultural context through the acquisition, use and exchange of objects, individuals then have a social life. Linking the macro processes of social reproduction with the formation of social projects of consumption and the interactions between them results in the concept that buying goods means buying impressions and experiences, and shopping is no longer a "simple" economic transaction, but rather a symbolic interaction in which individuals buy and consume impressions (Lupiana & Andika Kusika Kusika, 2014). (Lupiana & Andika Kusumajaya, 2021).

Online shopping behavior is an individual's overall perception and evaluation of products or services during online shopping in terms of good or less good. such behavior is a multi-dimensional arrangement and has been conceptualized in different ways. (Pratama, 2018). Online shopping or *e-commerce* is a transaction process carried out through media or intermediaries, namely in the form of online buying and selling sites or social networks that provide goods or services that are traded. (Hernikawati, 2021).

The number of e-commerce customers has increased by 38.3 percent during the Covid-19 pandemic. This data corresponds with the records reported by Exabytes, a hosting service provider company in Indonesia. On the one hand, the economic situation is in a slump. On the other hand, technological developments have created new opportunities, especially in the field of e-commerce. (Juniar & Jusrianti, 2021).

Shopping can be identified through several indicators as follows:

1. Searching
2. Purchasing
3. Using (Cholilawati, 2021).

## RESEARCH FRAMEWORK

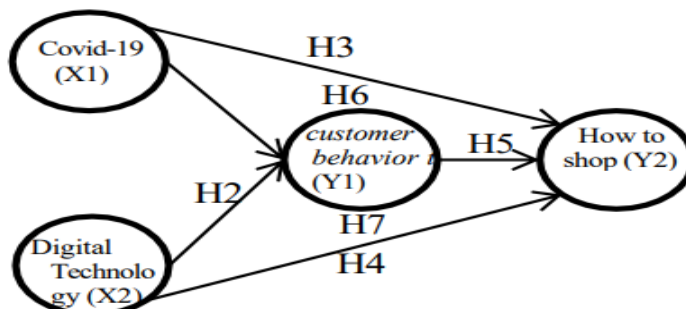


Figure 1. Research Framework

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## Research Hypothesis

Based on the research framework above, the hypothesis in this study can be formulated as follows:

H1 : Covid19 has an effect on *Customer Behavior*.

H2 : Digital Technology affects *Customer Behavior*.

H3 : Covid19 has an effect on How to Shop.

H4 : Digital Technology affects the Way of Shopping.

H5 : *Customer Behavior* affects the Way of Shopping.

H6 : Covid19 affects How to Shop through *Customer Behavior*

H7 : Digital Technology affects the Way of Shopping through *Customer Behavior*.

## RESEARCH METHODS

### Research Location

The location in this research was conducted in the city of South Jakarta.

### Population and Sample

The population in this study are consumers who have bought and used digital platforms to shop at covid19. The sample in this study used a *nonprobability sampling* method and the type of sampling technique used was *purposive sampling*, which is a data sampling technique based on certain considerations. Determination of the number of samples was carried out using the Hair formula. With this formula, a sample of 50 respondents can be obtained in this study. In this study, the customers selected as respondents were:

1. The people of south Jakarta.
2. Ever purchased and used digital apps.

### Data Analysis

The data analysis used is Path Analysis using SPSS 26.0 *software*. *Path analysis* will estimate the causal influence between variables and the position of each variable in the path either directly or indirectly. The indirect effect of an independent variable on a dependent variable is through other variables called *intervening* variables or intermediate variables.

## RESEARCH RESULTS AND DISCUSSION

### Descriptive Statistics Test

Descriptive statistics is a method to describe and provide an overview of the frequency distribution of variables in a study. The purpose of using descriptive statistics is expected to provide a general explanation of the problem being analyzed so that readers can understand it more easily. The following are the results of descriptive statistical tests:

**Table 1** Descriptive Statistical Test load value or *loading factor* with  $> e$  following are the results of lidity test based on the *loading value*:

	Descriptive Statistics			
	N	Minimum	Maximum	Mean
X1.1	50	3.00	5.00	4.7800
X1.2	50	3.00	5.00	4.5600
X1.3	50	3.00	5.00	4.4200
COVID19 Impact	50	11.00	15.00	13.7600
X2.1	50	3.00	5.00	4.6400
X2.2	50	3.00	5.00	3.9400
X2.3	50	3.00	5.00	4.2600
X2.4	50	3.00	5.00	4.4200
Digital Technology	50	14.00	20.00	17.2600
Y1.1	50	3.00	5.00	4.6400
Y1.2	50	3.00	5.00	4.4600
Y1.3	50	3.00	5.00	4.4600
Customer Behavior	50	11.00	15.00	13.5600
Y2.1	50	3.00	5.00	4.6000
Y2.2	50	3.00	5.00	4.3400
Y2.3	50	3.00	5.00	4.5200
How to Shop	50	11.00	15.00	13.4600
Valid N (listwise)	50			

Source: SPSS 26 Processing Results, 2024

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Based on the results of the descriptive statistical test above, it can be explained that in the variable impact of covid-19, digital technology, *customer behavior* and how to shop, all question items have the lowest value of 3.00 and the highest value is 5.00.

## Validity Test

Instrument testing is carried out using the validity test and reliability test to determine whether the research instrument has met the quality test results. If the instrument is valid and stable in measuring the components to be known, it can be said that the instrument is qualified. The validity test is carried out by determining based on the factor

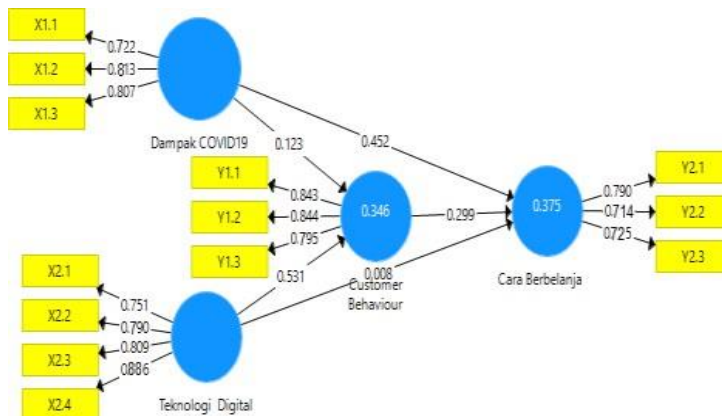


Figure 1. Validity Test Results

The results of data processing, all from the covid19 impact variable s), digital technology (4 items), *er behavior* (3 items), how to 3 items) are declared valid. This o all items having a *standardized factor* value greater than 0.70.

## Table 2. Reliability Test

	Cronbach Alpha	Composite Reliability	Kesimpulan
Dampak COVID19	0.839	0.869	Reliabel
Teknologi Digital	0.851	0.718	Reliabel
Customer Behaviour	0.756	0.753	Reliabel
Cara Berbelanja	0.848	0.733	Reliabel

Source: SEM-PLS Processing Results, 2024

The reliability test results show that based on the *Cronbach alpha* value, and *composite reliability*, all variables are said to be reliable because they are more than 0.70.

## Direct Effect Test

The criteria used to test the hypothesis are to use the *positive coefficient* value or the *original sample* value which shows a positive effect and the t-statistic which is  $> 1.96$  and P value  $< 0.05$  (Ghozali et al., 2015) which shows the significance of the independent variable affecting the dependent variable. The following are the results of the direct effect test:

Table 3. Direct Effect Test and the t-statistic which is  $> 1.96$  and P value  $< 0.05$ .

	Original Sample (O)	T Statistics ( O/STDEV )	P Value
Dampak COVID19 -> Customer Behaviour	0.123	4.856	
Teknologi Digital -> Customer Behaviour	0.531	4.375	
Dampak COVID19 -> Cara Berbelanja	0.489	3.820	
Teknologi Digital -> Cara Berbelanja	0.151	3.963	
Customer Behaviour -> Cara Berbelanja	0.299	2.484	

Source: SEM-PLS Processing Results, 2024



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The test results show that H1 where the impact of COVID19 has a positive and significant effect on *Customer Behavior* ( $O = 0.123$ ,  $t$ -statistic = 4.856,  $p < 0.05$ ). Then the relationship between Digital Technology and *Customer Behavior* in H2 is accepted because it has a positive and significant effect of ( $O = 0.531$ ,  $t$ -statistic = 4.375,  $p < 0.05$ ). H3 shows that the Impact of COVID19 has a positive and significant effect on How to Shop ( $O = 0.489$ ,  $t$ -statistic = 3.820,  $p < 0.05$ ). Furthermore, the relationship between Digital Technology and How to Shop has a positive and significant effect supported by H4 ( $O = 0.151$ ,  $t$ -statistic = 3.963,  $p < 0.05$ ). Meanwhile, H5 between *Customer Behavior* and Ways to Shop is positively and significantly supported by ( $O = 0.299$ ,  $t$ -statistic = 2.087,  $p < 0.05$ ).

### Indirect Effect Test

In the indirect effect test in this study using the *bootstrapping* method to find the indirect effect of the *Customer Behavior* variable which is the mediating variable. This study examines two hypotheses that have an indirect effect using the *positive coefficient* value or the original sample value which shows a positive effect and the  $t$ -statistic which is  $> 1.96$  and  $P$  value  $< 0.05$ .

**Table 4. Indirect Effect Test**

	Original T Statistics		
	Sample (O)	(O/STDE V)	P Values
Dampak COVID19 -> Customer Behaviour -> Cara Berbelanja	0.122	3.186	0.014
Teknologi Digital -> Customer Behaviour -> Cara Berbelanja	0.453	2.438	0.000

Source: SEM-PLS Processing Results, 2024

The test results show that H6 where the impact of COVID19 has a positive and significant effect on how to shop through *Customer Behavior* ( $O = 0.122$ ,  $t$ -statistic = 3.186,  $p < 0.05$ ). Then the effect of Digital Technology on how to shop through *Customer Behavior* in H7 is accepted because it has a positive and significant effect of ( $O = 0.453$ ,  $t$ -statistic = 2.438,  $p < 0.05$ ).

## CONCLUSIONS AND SUGGESTIONS

### Summary

1. The impact of COVID19 has a positive and significant effect on *Customer Behavior*. This means that the impact of covid-19 has an influence on how the behavior patterns of consumers when making purchases.
2. Digital technology has a positive and significant effect on *Customer Behavior*. This means that the greater the development that occurs in digital technology, consumer behavior has changed due to the ease of accessing various platforms for shopping or for ease of mobility. Such as the gojek, grab, shopee, lazada applications etc.
3. The impact of COVID19 has a positive and significant effect on How to Shop. This means that the impact of covid19 can make changes to the way individuals shop. This is because during the covid 19 pandemic, there were many limitations such as the *lockdown* and PSBB movements which caused changes in the way of shopping which all switched to online, due to a reduction in interaction or physical contact during the pandemic.
4. Digital Technology has a positive and significant effect on How to Shop. This means that the better the development of Digital Technology in the consumer environment, the more it will increase changes in the way consumers shop. This is because it is easy to access and do shopping digitally including for payment.
5. *Customer Behavior* has a positive and significant effect on how to shop. This means that the higher the level of consumer behavior patterns, the higher the diversity of shopping methods carried out by consumers in carrying out shopping activities.
6. The impact of COVID19 has a positive and significant effect on How to Shop through *Customer Behavior*. This means that the impact of covid 19 has an influence on how to shop where this influence is reinforced by the increasingly varied patterns of consumer behavior from consumers.
7. Digital Technology has a positive and significant effect on How to Shop through *Customer Behaviour*, meaning that the greater the development of digital technology, the way of shopping will also develop and be strengthened by the patterns of consumer behavior that arise from consumers.

### Advice

Based on the research results, suggestions that can be given by future researchers, namely that they can develop this research by examining other factors that influence *Customer Behavior* and how to shop, for example Social Media Marketing, Social Media Influencers, and other factors, besides that further researchers can expand the scope of research locations and conduct research in other research objects.

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