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ANALYSIS OF INTEREST IN USING E-COMMERCE SHOPEE DURING THE COVID-19 PANDEMIC

[1]ANNISA NOFITRIANDI, [2]SFENRIANTO
[12] Information Systems Management Department, BINUS Graduate Program - Master of Information Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480
[1]annisa.nofitriandi@binus.ac.id, [2]sfenrianto@binus.edu

ABSTRACT

The increasing number of people using the internet encourages a bigger online market. Some marketplaces dominate the Indonesian market, one of which is Shopee. In the current pandemic situation, almost everything the community needs, both primary and secondary needs, can be met from online services. Therefore, there is a demand for shopee companies to know and understand the needs or preferences of consumers. If the company can know and understand the needs or preferences of consumers, the company can win people's hearts to buy on the shopee application. This study aims to find out what factors influence the interest in using e-commerce by customers during the covid 19 pandemic. The method used is SEMPLS analysis, tests carried out by the inner and outer models, which help test the TAM Factor variables, Social Factors, and E-Service Quality. The results obtained Factors that influence attitudes towards the use of e-commerce by customers during the pandemic are factors; Perceived usefulness, Perceived ease of use, Peer Influence Customer Service on attitude toward using in the use of mobile e-commerce applications during the covid 19 pandemic.

Keywords : *E-Commerce, TAM Factor, Social Factors, E-Service Quality, Covid 19*

1. INTRODUCTION

The development of information technology that is increasingly advanced and very rapidly forces humans indirectly to remain aware of the existence of new technologies around them. Almost every second technology products are created in all parts of the world. Humans should appreciate technological developments because of course it will increasingly help human life. Along with the rapid development of technology, the development of the internet also increases. Indonesia itself is one of the countries with high internet users in the world.

A survey conducted by the Association of Indonesian Internet Service Providers (APJII) revealed that the number of internet users in Indonesia reached 196.7 million or 73.7% of the Indonesian population in the second quarter of 2020. This was an increase of 25.5 million users from 2015. 2019 which recorded 63 million internet users in Indonesia.

With the increasing number of people using the internet, this encourages a bigger online market. There are marketplaces that dominate the Indonesian market today, such as Lazada, Tokopedia, Bukalapak, OLX, Shopee, and so on.

Figure 1 : Internet User Penetration in Indonesia

In the current pandemic situation, almost everything the community needs, both primary and secondary needs, can be met from online services. However, it is undeniable that offline services such as markets are still in demand by the public. At this time online services are starting to be in demand compared to offline services, even though both can provide needs. This is because at this time people want to live more practically, get fast service and the availability of the products they need, as well as the current pandemic situation that makes all things have to be done from home.

This is not only felt by housewives or employees, but also has an impact on students. Current student activities cannot be far from the internet, ranging from online learning activities, conducting thesis trials and online graduations, to carrying out task results via online. Online learning in today's literacy

goes into digital information or universal human connection that can make it easier for humans to work (Ismail, 2018). Not only that, now students can open online businesses and shop online. Although this activity took place before the pandemic, this activity is increasingly mushrooming when everyone is limited in their activities and only at home.

Several efforts continue to be made by the government to deal with the spread of the COVID-19 virus, including implementing Large-Scale Social Restrictions (PSBB) in stages in areas that are indicated to accelerate the spread of the Covid-19 virus. The implementation of PSBB at least has a significant impact on community activities. The PSBB continues, but the necessities of life during the PSBB period must always be met. Therefore, many people end up using e-commerce to shop for various needs.

The effects of the COVID-19 pandemic have many influences in various aspects, including people's behavior as consumer actors. In a journal compiled by Yusup, et al (2020) explained that the PSBB policy forced business actors to change their business model towards online so that it had a positive and significant effect on changes in consumer behavior in online shopping.

The e-commerce platform is an online shopping service that is being loved today. Various types of payment products and services have been integrated into one application, even during this pandemic, people are able to shop for basic necessities through e-commerce. Along with its development, there is an increase in physical stores that join and open their online stores so that consumers turn to e-commerce. Before the Covid-19 pandemic hit, e-commerce was only a second choice, but now it is very important for physical stores and manufacturers to sell products through e-commerce platforms so that sales can increase and be able to maintain their business. This also has an impact on consumers because they will be more accustomed to shopping online.

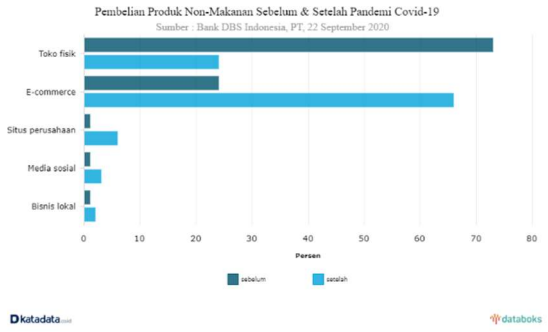

Figure 2 : Purchase of Non-Food Products Before and After the Covid-19 Pandemic

Source: Bank DBS Indonesia, PT, 22 September 2020 (Databoks.Katadata.co.id).

The above research released by databoks.katadata.co.id explained that before the Covid-19 pandemic hit, 73% of respondents still shopped for non-food products such as clothes, shoes, beauty, furniture, and electronic goods, in physical stores (offline). . However, after the Covid-19 pandemic hit, respondents who shopped for non-food products in e-commerce rose to 66%. This percentage increase was followed by 6% of the company's website and 3% of social media. This survey was conducted online from 18 June – 13 June 2020 by DBS Bank, and involved 545 respondents in Sumatra, Java, Kalimantan and Sulawesi. The survey results are in line with the results of interviews conducted regarding the products that students often look for and buy, which varies widely, such as food, school supplies, fashion (clothes, bags, etc.), make up and skincare.

Bank Indonesia (BI) noted that the number of buying and selling transactions in e-commerce electronic commerce has almost doubled in the midst of the corona virus or covid-19 pandemic. The number jumped from 80 million transactions in 2019 to 140 million transactions as of August 2020. [1]

In addition, Micro, Small and Medium Enterprises (MSMEs) in Indonesia are among those affected by the Corona virus pandemic. With many shopping centers having to close due to social restrictions, many MSMEs in Indonesia are turning to e-commerce. The latest data from Sea Insights found that 45% of business actors are more active in selling in e-commerce to change their sales strategy in the midst of a pandemic. This data is the result of a survey in June 2020 conducted on 20,000 young people aged 16-35 years, and 2,200 of them are business actors. [2]

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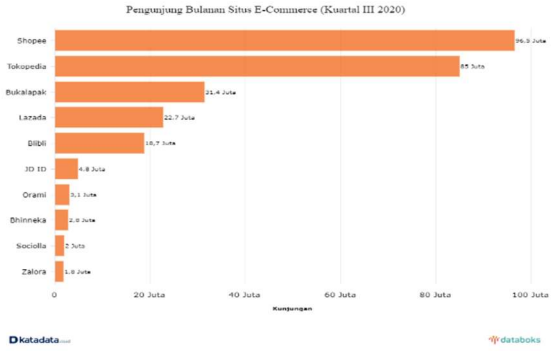

Figure 3 : E-Commerce Site Monthly Visitors

In the research above, we can see that Shopee is still leading as e-commerce with the largest site visitors in the third quarter of 2020, reaching 96.5 million. The next position is occupied by Tokopedia with 85 million, followed by Bukalapak with 31.4 million. Then, Lazada with 22.7 million. Sirclo CEO Brian Marshal said that there have been 12 million new e-commerce users since the pandemic, of which 40 percent said they would continue to rely on e-commerce even after the pandemic ended. Under normal conditions, this acceleration of the increase in the number of users can be achieved within 1.5-2 years.

Along with the large number of people, especially students who shop online, many e-commerce companies make strategies to stay afloat and attract consumers. For example, there was Shopee when it held a promotion entitled Harbolnas. The promotions offered start from free shipping (shipping), flash sales of basic needs products up to 50%, and there will be Sembako Day with discount offers of up to 70%. Meanwhile, as reported by katadata.co.id, seeing the opportunity from the new habits of today's people in shopping, Tokopedia CEO William Tanuwijaya revealed three new strategic priorities from Tokopedia. First, Tokopedia ensures that people can fulfill various needs from home, with maintained product prices and availability, as well as ease of delivery and free shipping features (postage). Second, keep the wheels of the Indonesian economy turning by ensuring that sellers can continue their business through Tokopedia. Third, Tokopedia participates in encouraging economic recovery which is slowing down due to the pandemic.

The number of competitors in the E-Commerce industry indicates that consumers are increasingly faced with various services or what is called the various attributes of each E-Commerce itself. The variety of attributes provided by all E-Commerce makes the public or consumers more selective in choosing. Thus, consumers have many things to consider in choosing E-Commerce, the inherent attributes are taken into consideration by consumers to like or dislike and accept or not accept. Therefore, the existing competition requires companies to be able to know and understand the needs or preferences of consumers. If the company is able to know and understand the needs or preferences of consumers, then the company can win the competition.

The concept in this study uses the Technology Acceptance Model that a person's intention to use a system or technology is determined by two factors, namely perceived usefulness, is the level of individual belief that the use of technology will improve performance, and perceived ease of use. , is the individual's level of belief that the use of technology makes it easier to complete work.[3]

Based on the data and information presented above, there has been a significant increase in the use of e-commerce since the COVID-19 pandemic, from 25% to 66% where the application that ranks the top monthly visitor is Shopee. Therefore, researchers are interested in researching further about what factors influence customer interest in using e-commerce during the covid 19 pandemic. The focus of this research is on Shopee e-commerce. One theory to determine a person's interest in using a technology is the TAM (Technology Acceptance Model) theory. TAM theory is a type of behavioral information system model that aims to explain how technology users are interested in accepting and using the technology.

In previous research, consumer behavior in this case the context of attitude toward use in TAM is too general so that another approach is needed using services to examine usage behavior in order to identify its influence on interest in using the E-Commerce platform. To support the success of B2C E-commerce is determined by how much customer loyalty to e-service quality is.[11]

Based on the background and related problems, the main issues that will be discussed are what factors influence Attitude Toward Using in the use of the Shopee e-commerce mobile application during the covid 19 pandemic? and Does Attitude Toward Using have a significant influence on Intention to Use in the use of the Shopee e-commerce mobile application during the covid 19 pandemic?

2. LITERATURE REVIEW

2.1 E-Commerce

E-commerce is an abbreviation of Electronic Commerce which is a medium for carrying out the process of selling and purchasing transactions for goods and services through the use of electronic networks that can be used as a means of doing business. E-Commerce can be defined as the process of buying, selling, transferring or exchanging products, services or information through computer networks, including the internet[4]. E-Commerce is generally a business through electronic media that focuses on business transactions using services, the internet network as a medium for exchanging goods or both between two institutions or organizations called business to business (B2B) or between institutions and consumers called business to customer (B2C).). Meanwhile, according to Fingar, E-Commerce is a provider of facilities for companies that are expanding their internal business to go external without the need to face time and space barriers[5]. Dalam strategi E-Commerce, Beverland menyatakan bahwa ada pembagian bisnis internet menurut pihak-pihak yang terlibat dalam transaksi penjualan yakni, Business to Business, Business to Consumer, Consumer to Consumer, Consumer to Business[6].

E-commerce is a process of buying and selling products electronically by consumers and from company to company with computers as intermediaries for business transactions. E-commerce is business activities involving consumers, manufactures, service providers and intermediary traders using computer networks, namely the internet. It can be concluded that the notion of e-commerce is all forms of trade / commerce transactions of goods or services (trade of goods and services) using electronic media[7].

2.2 Technology Acceptance Model

According to [8] that TAM shows perceptions of ease of use and usefulness is a belief in the existence of new technologies that affect user attitudes towards technology use. TAM has been tested as a benchmark in user goals and behavior in utilizing technology. In general, technology users will have a positive perception of the technology provided. This means that negative perceptions develop after users have tried the technology or users have bad experience with the use of the technology in question. This negative perception can be sourced or closely related to the second factor of TAM, namely the user's perception of the ease of using technology. User perception of the ease of using technology is influenced by several factors. The first factor focuses on the technology itself, for example user experience with the use of similar technologies. The good user experience of similar technology will affect the user's perception of the new technology provided, and vice versa. The second factor is the reputation of the technology that users gain. A good reputation that is heard by users will encourage user confidence in the ease of use of the technology, and vice versa. The third factor that influences user perceptions of the ease of using technology is the availability of reliable support mechanisms. A trusted support mechanism will affect user confidence in the ease of technology, for example, users feel confident that there is a reliable support mechanism if they have difficulty using technology, it will encourage a more positive user perception.

The initial TAM model was developed by Davis in 1989 [9]. According to the TAM model, behavioral intention of technology users (behavioral intention) is determined by perceived ease of use and perceived usefulness of the technology. Perceived ease of use is defined as an individual's level of belief that using technology will bring them free from physical and mental effort. Meanwhile, perceived usefulness is defined as the degree to which a person believes that using a system will improve his or her performance. The TAM model which was first developed by Fred Davis in 1989 is as follows :

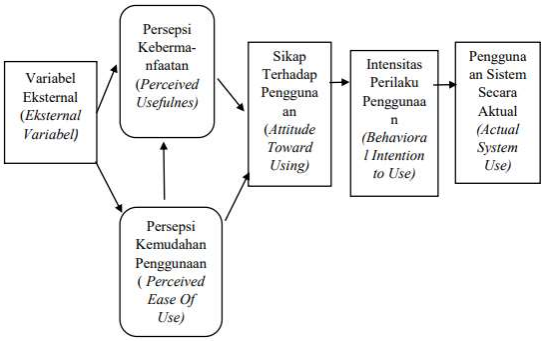

Figure 4 Technology Acceptance Model[9]

2.3 E-Service Quality

E-service quality is defined as the degree to which a website facilitates efficient and effective shopping, purchasing and delivery. e-service quality is defined as meeting customer expectations without the service encounter relying on human-to-human interaction. e-service quality is a broader form of

service quality with internet media that connects sellers and buyers to fulfill shopping activities effectively and efficiently. From the above definition the author can conclude that e-service quality is a service provided through the website to consumers in facilitating purchasing and distribution activities effectively and efficiently. The quality of e-service is measured by how consumer needs are met by the services provided. Therefore, the perceived quality of the services provided is through consumers, expectations in what they will receive after making a purchase. With this, it is determined that the quality of e-service is an important determinant for B2C E-commerce to achieve its success

2.4 Social Influence

Social influence is defined as the extent to which users change their behavior under the influence of others. It consists of two aspects. The first, known as subjective norm, is the individual's perception of the expectations of others; The second, referred to as descriptive norms, is the attitude perception shared by significant other people's behavior (internalization) [10]. Demonstrability of most people's actions affect the behavior of a single individual. That is, people tend to believe that certain behaviors make sense when they observe many others doing them. This explains the meaning of terms such as 'many people' and 'subjective norms', which distinguish social influence from peer influence because 'many people' cannot be shaped by peer groups and 'subjective norms' are determined by groups larger than peers. own partner.

It has been suggested that when individuals decide whether to adopt or reject an application, they also consider the effects of this decision on their relationships with others. As a result, people tend to agree with the majority opinion.

2.5 Peer Influence

The term 'Peer Influence' includes (but is not limited to) an intimate group of people who interact with each other on a regular basis, current friends and acquaintances, five closest friends and best friends. Research on peer-to-peer interactions in the environment found that reference power had the greatest influence on peer compliance.The interactions and information-sharing mechanisms between friends can consequently translate into peer influence on each other.

During technology use, peers may feel pressure and perceived influence exerted through messages and signals that help form favorable perceptions of the value of an activity. The underlying logic is that if close friends adopt a certain technology, peer pressure to do the same will increase. In the context of social media such as Instagram, it shows that people are more likely to 'like' photos that have been 'liked' many times by their friends than those who have few 'likes'. These findings reveal important effects of peer influence on behavior.

2.6 Related Research

Research on the analysis of interest in the use of shopee e-commerce during the COVID-19 pandemic has been widely carried out before. Table 1 presents several previous studies that tested the relationship between the variables studied in this study.

Table 1 Related Research

Researcher Name / Year	Title	Result
[11]	Would you like to shop via mobile app technology? The technology acceptance model, social factors and purchase intention	This study focuses on how TAM and social factors determine customer buying behavior. The findings show that perceived usefulness has no significant effect on attitudes towards mobile application use, but perceived ease of use, social influence and peer influence positively affect attitudes in this regard. Intention to buy is also positively swayed by individual attitudes on application use.
[12]	Social influence in technology adoption: Taking stock and moving forward	Social influences have been studied with respect to technology adoption in recent years and found indications of increasing pluralism and interdisciplinary approaches.
[10]	*Technological Forecasting & Social Change*	App providers should incorporate community and

	Effect of perceived value and social in fl uences on mobile app stickiness and in-app purchase intention	forum functions to encourage users to share their social lives and opinions, and thereby encourage them to use the app more often and for a longer time. This will, in turn, increase their intention to make in-app purchases.
[13]	The effect of benefits generated from interacting with branded mobile apps on consumer satisfaction and purchase intentions	Branded mobile apps that make them smarter and up-to-date on the things they care about, stimulate them to think about things in new ways, lighten their mood and grab their attention, increase the reputation or prestige of consumers among peer customers and app sponsors, promoting values similar to those of their consumers and making them feel more part of their community, will improve consumer decision making, thereby, increase customer satisfaction.

3. RESEARCH METHODOLOGY

3.1 Research Model

The theoretical framework was created as a basis for answering the objectives of the research, namely to find out and explain perveived usefulness (X1), perceived ease of use (X2) social influence (X3), peer influence (X4), web design (X5), fulfillment (X6), customer service (X7), security (X8), Attitude toward using (Y) towards Intention to use (Z).

Based on the theoretical explanation described above, there are variables that affect Attitude Toward Using to see the effect of Intention to Use, these variables are from the TAM Factor, namely Perceived Usefulness and Perceived Ease Of Use. Then there are Social Factor variables including Social Influence and Peer Influence. In addition, there are also E-Service Quality Factor variables including Web Design, Fulfillment/Reliability, Customer Service, Security/Privacy. Thus, it can be used as a research model in the form of a chart which will be presented in Figure 3.2. Research Model as follows:

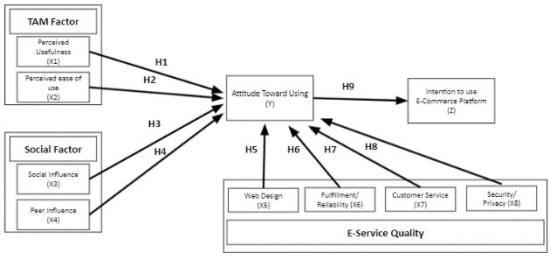

Figure 5 Research Model

3.2 Data Collection

Data collection methods used in this study are:

1. Literature Study, is a method of collecting data and information by carrying out library activities through books, journals, previous research and so on related to the research conducted.
2. Questionnaire, a primary data collection method that uses a number of items with a certain format and the most commonly used data collection method in a field study and survey (Abdillah and Jogiyanto, 2015). The questionnaire is a list of questions that includes all the questions that will be carried out in this study, the process of collecting questionnaire data in this study online using a google form link that will be shown to the shopee user community in West Jakarta

3.3 Data Analysis

Validity test is a test analysis to ensure that the research variables used are valid. According to [14] validity is the level of how deep the measurement represents the characteristics that exist in the phenomenon under study. Testing the validity of each question item using item analysis. By collaborating the scores for each question item. Items that have a positive correlation with the total score and high correlation indicate that the item has high validity. Validity test is used to determine the feasibility of the items in a list of questions in defining a variable. The minimum requirement to be considered eligible is if the correlation coefficient of the question item score with a minimum total score of 0.5 so that the question item is declared valid. So,

if the correlation between items with a total score of less than 0.5 then the items in the instrument are declared invalid [15].

Measurement of reliability in the study was measured in two ways, namely cronbachalpha and composite reliability. According to [14] the cronbach-alpha value set in this study is 0.60 and composite reliability with a value > 0.6 [10]

3.4 Hypothesis

From the research model, 9 research hypotheses were examined to determine which hypothesis should be accepted and which hypotheses should be rejected, the hypotheses proposed in this study are as follows:

- **H1** : There is a significant effect between *Perceived Usefulness* (PU) to *Attitude Toward Using* (AT)
- **H2** : There is a significant effect between *Perceived ease of use* (PE) to *Attitude Toward Using* (AT)
- **H3** : There is a significant effect between *Social Influence* (SI) to to *Attitude Toward Using* (AT)
- **H4** : There is a significant effect between *Peer Influence* (PI) to *Attitude Toward Using* (AT)
- **H5** : There is a significant effect between *Web Design* (WD) to *Attitude Toward Using* (AT)
- **H6** : There is a significant effect between *Reliability* (RL) to *Attitude Toward Using* (AT)
- **H7** : There is a significant effect between *Customer Service* (CS) to *Attitude Toward Using* (AT)
- **H8** : There is a significant effect between *Security / Privacy* (SP) to *Attitude Toward Using* (AT)
- **H9** : There is a significant effect between *Attitude Toward Using* (AT) to *Intention to use* (IU)

3.5 Variable Measurement

Operationalization of variables is research containing all activities to be carried out to obtain quantitative empirical data regarding variations in the characteristics of these variables; is a specification of what is measured and how to measure it

Table 2 Operasionalisasi Variabel

FACTORS	KODE	QUESTION ITEMS
Perceive Usefulness (X1)	**PU01**	Using this app to shop online will make shopping easier
	PU02	Using this app for online shopping will be useful for my shopping
	PU03	Using this app to shop online will help me shop faster
	PU04	Using this app to shop online will help me shop more efficiently
Perceive ease of use (X2)	**PE01**	Using this app to shop online will be easy for me to learn
	PE02	Using this app for online shopping will not require much mental effort
	PE03	Using this application to shop online will be easy to do.
	PE04	Using this app to shop online will be easy to follow the instructions from the app
Attitude towards mobile app use (Y)	**AT01**	I am happy to download and use this application
	AT02	Using this App is helpful; allow me to improve seller company support
	AT03	Using this App is invaluable; let me confirm the service of the seller company
	AT04	I feel a good positive effect to understand the product from participating in the service of this App
	AT05	Overall, my attitude towards the seller's application service is favorable
Intention to Purchase (Z)	**IP01**	It is very likely that I will buy the product
	IP02	I will buy the product next time I need the product
	IP03	I will definitely try the product
Social Influence (X3)	**SI01**	I think the number of members of this application is very large.
	SI02	I think there are many people who use this app

	SI03	Many people around me use this app
	SI04	People with the same interests as me have a positive attitude towards this app
	SI05	People who are important to me have a positive attitude towards this app
Peer Influence (X4)	**PI01**	I have learned a lot about this app from my friends
	PI02	My friends often discuss this application with me
	PI03	My friends often recommend this app to me
	PI04	I often shop with this app
	PI05	My friends often share their experiences and knowledge about this application with me
Web Design (X5)	**WD01**	I feel the mobile application design is good, interesting and creative.
	WD02	I feel that the menu in the mobile application looks simple and clear
Reliability (X6)	**RL01**	I feel the mobile application service is right
	RL02	I feel the mobile application service is accurate
Customer Service (X7)	**CS01**	I feel that the mobile application service is fast and responsive in responding to customer requests
	CS02	I feel that the mobile application service is patient and remains friendly in answering customer questions and complaints.
Security/ Privacy (X8)	**SP01**	I feel safe about my privacy data in the mobile app
	SP02	I'm sure the mobile app will not abuse my data.

4. ANALYSIS AND DISCUSSION

This study aims to analyze the interest in the use of e-commerce during the Covid 19 pandemic. The data for this study were obtained from questionnaires distributed online via google form to research subjects totaling 400 respondents. Of the 400 respondents divided by gender, namely male and female, 56% were male and the remaining 44% were female.

4.1 Convergent Validity

According to Ghozali (2014), the rule of thumb commonly used to assess Convergent Validity is that the loading factor value must be more than 0.5 for confirmatory research or indicators can be said to be good and the loading factor value between 0.5-0.7 for research. which are explanatory are still acceptable (considered sufficient) and the average variance extracted (AVE) value must be greater than 0.5. The output results of the correlation between indicators and their constructs can be seen in the following figure:

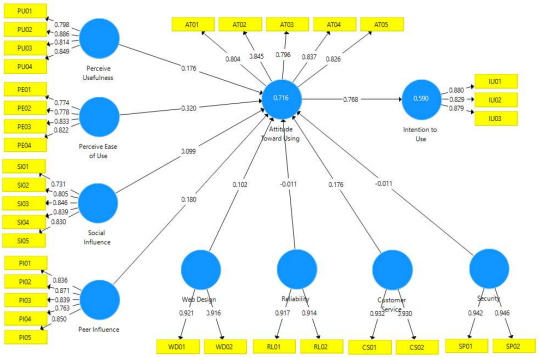

Figure 6 Convergent Validity Results

Figure 6 is a structural model of the results of data processing using SmartPLS 3.3.3 It can be seen in the figure where there is an outer model value or correlation between constructs and variables that have met convergent validity, namely there are indicators that have a loading factor value of more than 0.50.

Table 3 Convergent Validity Results

Dimension / Factors	Indicator Code	Outer Loading	Result
Perceive Usefulness (X1)	**PU01**	0,798	**Valid**
	PU02	0,886	**Valid**
	PU03	0,814	**Valid**
	PU04	0,849	**Valid**
	PE01	0,774	**Valid**
	PE02	0,778	**Valid**

Perceive ease of use (X2)	**PE03**	0,833	**Valid**
	PE04	0,822	**Valid**
Attitude towards mobile app use (Y)	**AT01**	0,804	**Valid**
	AT02	0,845	**Valid**
	AT03	0,796	**Valid**
	AT04	0,837	**Valid**
	AT05	0,826	**Valid**
Intention to Purchase (Z)	**IP01**	0,880	**Valid**
	IP02	0,829	**Valid**
	IP03	0,879	**Valid**
Social Influence (X3)	**SI01**	0,731	**Valid**
	SI02	0,805	**Valid**
	SI03	0,846	**Valid**
	SI04	0,839	**Valid**
	SI05	0,830	**Valid**
Peer Influence (X4)	**PI01**	0,836	**Valid**
	PI02	0,871	**Valid**
	PI03	0,839	**Valid**
	PI04	0,763	**Valid**
	PI05	0,850	**Valid**
Web Design (X5)	**WD01**	0,921	**Valid**
	WD02	0,916	**Valid**
Reliability (X6)	**RL01**	0,917	**Valid**
	RL02	0,914	**Valid**
Customer Service (X7)	**CS01**	0,932	**Valid**
	CS02	0,930	**Valid**
Security/ Privacy (X8)	**SP01**	0,942	**Valid**
	SP02	0,946	**Valid**

Based on Figure 6 and Table 3, it can be seen that all statements are valid. Based on these results, it can be seen that all statements have met the outer loadings criteria, namely > 0.5.

4.2 Average Variances Exctracted (AVE)

In the partial least square test, the standardization for the assessment of Average Variances Extracted is 0.5, so that every latent variable that has a value of Average Variances Extracted > 0.5 means that it has been able to meet the requirements of Average Variances Extracted. From the results of the convergent validity test, the following is a table of AVE (Average Variance Extracted) values which can be seen in the following table.

Table 4 Average Variance Extracted Result

Factor	Average Variance Extracted (AVE)
Attitude Toward Using	0,676
Customer Service	0,866
Intention to Use	0,745
Peer Influence	0,693
Perceive Ease of Use	0,643
Perceive Usefulness	0,702
Reliability	0,838
Security	0,890
Social Influence	0,658
Web Design	0,844

The results of the convergent validity construct testing in Table 4 above can be seen that each construct has met the criteria with an AVE (Average Variance Extracted) value > 0.50.

4.3 Discriminant Validity

Discriminant Validity testing, reflexive indicators can be seen in the cross-loading between indicators and their constructs. An indicator is declared valid if it has the highest loading factor for the intended construct compared to the loading factor for other constructs.

In this test, it can be seen that the loading factor value of each indicator is greater than the cross loading value, meaning that there is no problem with Discriminant Validity and is considered reliable. Thus, latent contracts predict indicators in their block better than indicators in other blocks. Therefore, these indicators can be used for further testing. Another method to see Discriminant Validity is to look at the square root of average variance extracted (AVE) of each construct with the correlation between the construct and other constructs in the model.

Table 5 Discriminant Validity

Factor	Attitude Toward Using	Customer Service	Intention to Use	Peer Influence	Perceive Ease of Use	Perceive Usefulness	Reliability	Security	Social Influence	Web Design
Attitude Toward Using	0,822									
Customer Service	0,642	0,931								
Intention to Use	0,768	0,568	0,863							
Peer Influence	0,688	0,640	0,634	0,832						
Perceive Ease of Use	0,758	0,536	0,661	0,588	0,802					
Perceive Usefulness	0,704	0,457	0,691	0,567	0,761	0,838				
Reliability	0,673	0,693	0,660	0,666	0,658	0,614	0,916			
Security	0,522	0,664	0,460	0,552	0,484	0,381	0,565	0,944		
Social Influence	0,658	0,523	0,668	0,690	0,592	0,648	0,606	0,392	0,811	
Web Design	0,609	0,611	0,516	0,523	0,576	0,488	0,691	0,614	0,504	0,919

Based on Table 5, it can be seen that the value of the square root of average variance extracted (AVE) for each construct is greater between one construct and the other constructs in the model. Therefore, it can be said to have a very good discriminant validity value.

4.3 Composite Reliability

Composite reliability testing aims to test the reliability of the instrument in a research model. If all latent variable values have good reliability or the questionnaire used has met the requirements, namely having a value > 0.7, it means that the construct has good reliability or the questionnaire used as a research tool is reliable and consistent. [16]

Table 6 Composite Reliability

Factor	Composite Reliability
Attitude Toward Using	0,912
Customer Service	0,928
Intention to Use	0,897
Peer Influence	0,918
Perceive Ease of Use	0,878
Perceive Usefulness	0,904
Reliability	0,912
Security	0,942
Social Influence	0,906
Web Design	0,915

Table 6 explains that in the partial least square test, the standardization for the Composite Reliability assessment is 0.7, so that each latent variable that has a Composite Reliability value > 0.7 means that it has been able to meet the Composite Reliability requirements. Based on the results of composite reliability in table 4, the values of all variables > 0.70, so it can be concluded that the 10 factors in this study are reliable.

4.4 Uji *Cronbach's Alfa*

Cronbach's Alpha is used to determine the reliability of each variable studied by the researcher. In the partial least square test, the standardization for Cronbach's Alpha assessment is 0.6, so that every latent variable that has a Cronbach's Alpha value > 0.6 means that it has been able to meet Cronbach's Alpha requirements.

Table 7 Cronbach's Alpha Result

Factor	Cronbach's Alpha	Result
Attitude Toward Using	0,880	Reliable
Customer Service	0,846	Reliable
Intention to Use	0,828	Reliable
Peer Influence	0,889	Reliable
Perceive Ease of Use	0,815	Reliable
Perceive Usefulness	0,858	Reliable
Reliability	0,807	Reliable
Security	0,877	Reliable
Social Influence	0,871	Reliable
Web Design	0,815	Reliable

Based on the results of Cronbach's Alpha in table 7 , the values of all variables are > 0.6, so it can be concluded that the four variables of this study are reliable.

4.5 Inner Model Analysis

The inner model test is the development of a concept and theory-based model in order to analyze the relationship between exogenous and endogenous variables, a conceptual framework has been described. The analysis of the inner model is carried out with the aim of ensuring that the structural model that is built is robust and accurate. Testing of the structural model is carried out by looking at the R-Square value which is the goodness-fit test of the model.

R-Square (R^2) is a goodness-fit test model for endogenous latent variables of 0.67, 0.33, and 0.19 in the structural model indicating that the model is "good", "moderate" and "weak". [16]. Seeing the value of R-Square (R^2) which is the goodness-fit test of the model, in assessing the model with PLS, it starts with R-Square (R^2) for each dependent latent

variable. The coefficient of determination R-Square (R^2) shows how much the independent variable explains the dependent variable. The value of R-Square (R^2) is zero to one. If the value of R-Square (R^2) is getting closer to one, then the independent variables provide all the information needed to predict the variation of the dependent variable. On the other hand, the smaller the R-Square (R^2) value, the more limited the ability of the independent variables to explain the dependent variation. The value of R-Square (R^2) has a weakness, namely the value of R-Square (R^2) will increase every time there is an addition of one independent variable even though the independent variable has no significant effect on the dependent variable.

Table 8 R – Square Result

Factor	R Square	R Square Adjusted
Attitude Toward Using	0,716	0,711
Intention to Use	0,590	0,589

Based on Table 8, it can be seen that the R-Square (R^2) value of the Attitude Toward Using variable is 0.716, which means that the variables Perceived usefulness (X1), Perceived ease of use (X2), Social Influence (X3), Peer Influence (X4), Web Design (X5), Reliability (X6), Customer Service (X7), Security (X8), affect Attitude Toward Using (Y), by 71.6% while 28.4% is influenced by other variables not examined in this study, and Attitude Toward Using (Y) affects Intention to Use (Z) by 59% while 41% is another factor not examined in this study.

4.6 Hypothesis Analysis

This hypothesis testing stage is carried out after the structural model evaluation stage is carried out. This stage is carried out to determine whether the research hypothesis proposed in the research model is accepted or rejected. To test the proposed hypothesis, it can be seen from the value of T Statistics and P Values. This hypothesis can be said to be accepted if the P value < 0.05. Test results can be seen through the bootstrapping test table as follows:

Table 9 Hipotesis Result

Hipotesis	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Value	Result
H1: PU → AT	0,176	0,051	3,456	0,001	Accepted
H2: PE → AT	0,320	0,055	5,785	0,000	Accepted
H3: SI → AT	0,099	0,052	1,914	0,056	Rejected
H4: PI → AT	0,180	0,055	3,286	0,001	Accepted
H5: WD → AT	0,102	0,055	1,858	0,064	Rejected
H6: RL→ AT	-0,011	0,065	0,174	0,862	Rejected
H7: CS → AT	0,176	0,059	2,991	0,003	Accepted
H8: SP→ AT	-0,011	0,049	0,218	0,828	Rejected
H9: AT → IU	0,768	0,035	21,866	0,000	Accepted

Based on Table 9, it can be seen that H1 Perceived usefulness has an effect on attitude toward using because it has a t-statistic value > 1.96 using a value of 0.05 or 5%, which is 3.456 which shows the direction of the effect of Perceived usefulness on attitude toward significantly, which can be seen from the value of significance at p value of 0.001 where p value <0.005. From the explanation above, hypothesis H1 in this study can be concluded that Perceived usefulness has an effect on attitude toward using and this hypothesis is accepted.

Furthermore, it can be seen that H2 Perceived ease of use has an effect on attitude toward using because it has a t-statistic value > 1.96 using a value of 0.05 or 5%, which is 5.785 which indicates the direction of the effect of Perceived ease of use on attitude toward using significantly. seen from the significance value at the p value of 0.000 where the p value <0.005. From the explanation above, hypothesis H2 in this study can be concluded that Perceived ease of use has an effect on attitude toward using and this hypothesis is accepted.

Furthermore, it can be seen that H3 Social Influence has no effect on attitude toward using because it has a t-statistic value < 1.96 using a value of 0.05 or 5%, which is 1.914 which indicates the

direction of the effect of Perceived ease of use on attitude toward using is not significant. seen from the significance value at p value of 0,056 where p value < 0.005. From the explanation above, hypothesis H3 in this study can be concluded that Social Influence has no effect on attitude toward using and this hypothesis is rejected.

Furthermore, it can be seen that H4 Peer Influence has an effect on attitude toward using because it has a t-statistic value > 1.96 using a value of 0.05 or 5%, which is 3,286 which shows the direction of the effect of Perceived ease of use on attitude toward using significantly. the significance value at p value is 0.001 which is p value <0.005. From the explanation above, hypothesis H4 in this study can be concluded that Peer Influence has an effect on attitude toward using and this hypothesis is accepted.

Furthermore, it can be seen that H5 Web Design has no effect on attitude toward using because it has a t-statistic value < 1.96 using a value of 0.05 or 5%, which is 1.858 which indicates the direction of the effect of Perceived ease of use on attitude toward using is not significant. seen from the significance value at the p value of 0.064 which is the p value > 0.005. From the explanation above, hypothesis H5 in this study can be concluded that Web Design has an effect on attitude toward using and this hypothesis is rejected.

Furthermore, it can be seen that H6 Reliability has no effect on attitude toward using because it has a t-statistic value < 1.96 using a value of 0.05 or 5%, which is 0.174 which shows the direction of the effect of Perceived ease of use on attitude toward using which can not be seen significantly. from the significance value at p value of 0.862 where p value > 0.005. From the explanation above, hypothesis H6 in this study can be concluded that reliability has no effect on attitude toward using and this hypothesis is rejected.

Furthermore, it can be seen that H7 Customer Service has an influence on attitude toward using because it has a t-statistic value > 1.96 using a value of 0.05 or 5%, which is 2,991 which shows the direction of the effect of Perceived ease of use on attitude toward using significantly, which can be seen from the significance value at the p value is 0.003 which is the p value <0.005. From the explanation above, hypothesis H7 in this study can be concluded that Customer Service has an effect on attitude toward using and this hypothesis is accepted.

Furthermore, it can be seen that H8 Security has no effect on attitude toward using because it has a t-statistic value < 1.96 by using a value of 0.05 or 5%, which is 0.218 which indicates the direction of the effect of Perceived ease of use on attitude toward using is not significant. from the significance value at p value of 0.828, where p value > 0.005. From the explanation above, hypothesis H8 in this study can be concluded that Security has no effect on attitude toward using and this hypothesis is rejected.

Furthermore, it can be seen that H9 attitude toward using has an effect on Intention to use because it has a t-statistic value > 1.96 using a value of 0.05 or 5%, which is 21.866 which shows the direction of the effect of Perceived ease of use on attitude toward using significantly. from the significance value at the p value of 0.000 where the p value <0.005. From the explanation above, hypothesis H7 in this study can be concluded that attitude toward using has an effect on Intention to use and this hypothesis is accepted.

4.7 Managerial Implications

There are several proposed implications for managerial in developing shopee applications on Perceive Usefulness, Perceive Ease of Use, Peer Influence, Customer Service on Attitude Toward Using.

1. In the Perceive Useful variable code PU04 "Using this application to shop online will help me shop more efficiently", this needs to be increased because the number of respondents is still low in accepting this statement, so it is necessary to increase shopping efficiency as in the application it is necessary to make the process of purchasing products based on the area is still difficult to find the right one so it needs to be improved again by geolocation in the purchase

2. In the Perceive Ease of Use variable, code PE02 "Using this application for online shopping will not require a lot of mental effort", this is because the promos on the platform are very frequent so consumers cannot use the promo if the promo has a duration, this causes consumers to feel annoyed because many of these promos were missed and also did not get promos, moreover there were many auto click applications to get the promo which was felt as cheating in purchasing the desired item, so feature enhancements were needed to prevent this

3. In the Peer Influence variable, code PI05 "My friends often discuss this application with me", M2M or mouth to mouth discussions are common in promoting a product, it's just that the influence is only from friends, it is better to have features for socializing with other buyers as well as chatting online with fellow buyers, so that it can increase trust in purchasing the desired product

4. In the Customer Service variable, code CS01 "I feel that mobile application services are fast and responsive in responding to customer requests", this is because customer service services still use humans as their service, it is better if the features in the chatbot are made to support services to consumers

5. In the Attitude toward using code AT 03 "Using this application is very valuable; let me emphasize the service of the selling company", there is a need for a customer loyalty program which is expected to increase customer opportunities to be adapted to their buying behavior

6. In the Intention to use variable, IP code 03 "I will definitely try the product", this is still a lot of respondents who will not try the product, because there is a need for conformity with the product, such as tidying up a good process and gaining consumer confidence in the COD feature in try the product ordered

7. This research is still not perfect, because it is hoped that further researchers are expected to take into account other factors that can analyze the usability of mobile applications. In addition, it is hoped that further researchers can add variables in research, especially on the attitude toward using variable because in this study there was still a lack of a stronger factor in determining the attitudes of users of mobile e-commerce applications, and adding respondents as a measuring tool for the questionnaire so that it could provide many conclusions as a basis. for input in increasing the desire to use the mobile application.

5. CONCLUSION

From the results of this study, the following conclusions can be drawn:

1. Factors that influence attitudes towards the use of e-commerce by customers during the pandemic are factors; Perceived usefulness, perceived ease of use, Peer Influences Customer Service on attitudes towards usage in the use of mobile e-commerce applications during the covid 19 pandemic, Hypothetical factors that are accepted and have a positive and significant influence in influencing attitudes towards use.

2. Attitude towards usage has a significant influence on intentions to use mobile e-commerce applications during the covid 19 pandemic, it can be seen from the t-statistic value > 1.96 and p value > 0.005, as well as the cross loading assessment on the code statement AT01 – 05, and IU01-03 have good scores and are supported by the Goodness of Fit value, namely the performance between the measurement model and the structural model in the large category.

REFERENCES

[1] S. Makki, "Transaksi e-Commerce Naik Nyaris Dua Kali Lipat saat Pandemi," *CNN Indonesia*, 2020. https://www.cnnindonesia.com/ekonomi/20201021193353-92-561232/transaksi-e-commerce-naik-nyaris-dua-kali-lipat-saat-pandemi.

[2] V. M. Putri, "45% UMKM Beralih ke E-commerce Selama Pandemi COVID-19," *Detikcom*, 2020. https://inet.detik.com/business/d-5077118/45-umkm-beralih-ke-e-commerce-selama-pandemi-covid-19.

[3] V. Venkatesh and F. D. Davis, "Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies," *Manage. Sci.*, vol. 46, no. 2, pp. 186–204, 2000.

[4] R. V. Kozinets, K. De Valck, A. C. Wojnicki, and S. J. S. Wilner, "Networked narratives: Understanding word-of-mouth marketing in online communities," *J. Mark.*, vol. 74, no. 2, pp. 71–89, 2010, doi: 10.1509/jmkg.74.2.71.

[5] T. S. Peter Fingar, Harsha Kumar, *Enterprise E-Commerce 1st Edition*. Florida, 2000.

[6] M. Beverland, A. Lindgreen, J. Napoli, P. Kotler, and W. Pfoertsch, "Being known or being one of many: The need for brand management for business-to-business (B2B) companies," *J. Bus. Ind. Mark.*, vol. 22, no. 6, pp. 357–362, 2007, doi: 10.1108/08858620710780118.

[7] K. C. Laudon and J. P. Laudon, *Essentials of management information system : transforming business and management*. New Jersey, 1999.

[8] C. E. Porter and N. Donthu, "Using the technology acceptance model to explain how attitudes determine Internet usage: The role of perceived access barriers and demographics," *J. Bus. Res.*, vol. 59, no. 9, pp. 999–1007, 2006, doi: 10.1016/j.jbusres.2006.06.003.

[9] F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Manage. Sci.*, vol. 35, no. 8, pp. 982–1003, 1989, doi: 10.1287/mnsc.35.8.982.

[10] C. Hsu and J. C. Lin, "Technological Forecasting & Social Change Effect of perceived value and social in fl uences on mobile app stickiness and in-app purchase intention," *Technol. Forecast. Soc. Chang.*, 2016, doi: 10.1016/j.techfore.2016.04.012.

[11] A. Vahdat, A. Alizadeh, S. Quach, and N. Hamelin, "acceptance model , social factors and purchase intention," *Australas. Mark. J.*, no. xxxx, pp. 1–10, 2020, doi: 10.1016/j.ausmj.2020.01.002.

[12] L. G. K. Buhtz and A. König, "Social influence in technology adoption : taking stock and moving forward," *Manag. Rev. Q.*, 2018, doi: 10.1007/s11301-017-0133-3.

[13] I. Alnawas and F. Aburub, "The effect of benefits generated from interacting with branded mobile apps on consumer satisfaction and purchase intentions," *J. Retail. Consum. Serv.*, vol. 31, pp. 313–322, 2016, doi: 10.1016/j.jretconser.2016.04.004.

[14] N. K. Malhotra, D. K. Birks, and P. Wills, *Marketing research: An applied orientation*. England: Pearson Education Limited, 2010.

[15] I. Ghozali, *Analisis Multivariate dengan Program SPSS*. Semarang: Badan Penerbit Fakultas Ekonomi Universitas Diponegoro., 2013.

[16] I. Ghozali, *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square (PLS)*, 4th ed. Semarang : Badan Penerbit Universitas Diponegoro, 2014.