

Enhancing Consumers' Online Purchase Intention of Clothing Products through Technological Improvement during COVID-19 Pandemic

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Abstract. The COVID-19 pandemic has led to changes in consumer consumption behavior to be conservative. Consumers' consumption trends changed due to the limitation of outdoor activities by the government. However, the data found shows an increasing sales of clothing products near the end of 2020. Therefore, this study aims to understand the mindset of consumers regarding the intention to buy clothing products online during the pandemic based on the combination of theory of planned behavior, technology acceptance model, and perceived risk. Quantitative approach is used in this research, by collecting questionnaires from 115 respondents. The result of this study shows that attitude, subjective norms, and perceived usefulness have positive and significant influence on online purchase intention of clothing products. This research model is extended from the previous research and recommends online retailers to create clean and efficient codes to increase loading speed and website and application performance as its managerial implication.

Keywords: COVID-19, consumer behavior, theory of planned behavior, theory acceptance model, perceived risk, online purchase intention, clothing products

1 Introduction

Fashion is one of the most important industries in the development of the creative industry in Indonesia. In 2013, the second largest contributor to national gross domestic product (GDP) was the fashion industry [1]. The demand for clothing products continues to increase every year, making clothing orders also increase. This happens because consumers are consumptive and fashionable. Consumptive shopping behavior cannot be separated from the development of current trends [2].

In 2020, consumer purchasing power weakened due to a decrease in consumption caused by a decrease in income as a result of the COVID-19 pandemic. In addition to disrupting public health conditions, COVID19 has made the world economy and Indonesia very unstable [3]. The clothing product business during the pandemic experienced demand depression. This is caused by consumers who are reluctant to spend money on secondary or tertiary products such as clothing or handicraft products in the midst of economic uncertainty [4]. This finding is different from [5] which states that many fashion entrepreneurs have actually experienced an increase in income. The shoe company Jaya Shoes Group, for example, recorded a sales increase of 400% from April to August 2020. MarkPlus conducted research on product purchases in Indonesian e-commerce during the third quarter of 2020 and concluded that clothing products were the most purchased products online.

Consumer consumption trends have changed and people are encouraged to shop online to avoid the spread of COVID19 disease. However, the data found shows that sales of clothing products near the end of 2020 have increased. To be able to take full advantage of the online clothing market, companies must clearly understand the mindset of consumers, plus government policies due to COVID-19 pandemic, industry dynamics, and others. Therefore, The purpose of this study is to conduct an investigation using theory of planned behavior (TPB), technology acceptance model (TAM) and perceived risk because they are considered to have an effect on online purchase intention of clothing products during COVID-19 pandemic.

2 Literature Review and Research Hypotheses

2.1 Theory of Planned Behavior (TPB)

TPB is a development or continuation of its predecessor theory, namely the theory of reasoned action (TRA), in which behavior is determined by behavioral intention. A person's behavior intention is influenced by three variables, attitude, subjective norms, and perceived behavioral control, where each variable affects a person's actual behavior [6]. In making decisions in conditions of disasters and outbreaks, there are many studies that use TPB to understand consumer purchase intention when the economy is unstable, as in [7]. In this study, the variable perceived behavioral control on TPB is not used because it has a similar meaning to the variable perceived ease of use in TAM which is easiness.

2.2 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was firstly introduced as a development of Fishbein & Ajzen's Theory of Reasoned Action (TRA) [6][8]. The intention or intention to use the system is directly influenced by two factors, perceived usefulness and perceived ease of use. The TAM model itself has been successfully applied in theoretical research models to predict online purchase intentions and behavior [8]. The application of TPB and TAM in various models has been implemented by many researchers to understand the factors that influence online purchase intention [9], [10].

2.3 Online Purchase Intention

Online purchase intention can be defined as a construct that gives strength to consumers' intention to buy online [11]. Online purchase intention is an appropriate measure of intention when assessing consumer online behavior. Because there is an involvement of information sharing and purchase actions in online transactions, purchase intention will depend on many factors [12]. To find out the consumer mindset regarding online shopping behavior, digital marketers are always encouraged to find out the factors that influence consumers' online purchase intentions [13].

2.4 Attitude

According to Hashim & Musa, attitude is a complete evaluation that indicates whether or not he/she likes to take an action. Attitude towards a product leads to consumer interest and preference [14]. Research conducted by [15] and [16] show that there is a positive and significant influence on the attitude variable towards online purchase intention because of the benefits that can be obtained when shopping online makes consumers have the intention to buy. In addition, Lin through his research [17] also shows that attitude has a positive and significant effect because consumers like to shop online and feel that shopping online is a good idea. Therefore, the first hypotheses is proposed:

H1: Attitude has a positive and significant effect on online purchase intention

2.6 Subjective Norm

Social norms as subjective norms influence people's perceptions in making decisions: agree or disagree based on perceptions of what other people do. This perception is most influenced by specific people, especially those with a common identity. The examples are friends, family members, co-workers, religious organizations, and others [18][19].

Research conducted by [19] and [20] shows that there is a positive and significant influence of the subjective norm variable on online purchase intention because consumers follow the shopping trends of significant people around them, such as family and friends who like to share their online shopping experiences can influence consumers to shop online. Therefore, the second hypotheses is proposed:

H2: Subjective norm has a positive and significant effect on online purchase intention

2.3 Perceived Ease of Use

In the context of online shopping, perceived ease of use is the consumer's perception that shopping via the internet does not require a lot of effort [8]. Research conducted by [15][21] show that there is a positive and significant impact on the variable perceived ease of use on online purchase intention because a user-friendly website greatly facilitates the search, purchase, and payment process. Research by Investigation by [22] also show the influence of perceived ease of use on online purchase intention because consumers can get the information they need about their purchases. Therefore, the third hypotheses is proposed:

H3: Perceived ease of use has a positive and significant effect on online purchase intention

2.2 Perceived Usefulness

In the context of online shopping, perceived usefulness is the consumer's perception that their shopping performance will increase when products are purchased online [22]. Meanwhile, Monsuwé et al. defined perceived usefulness as the level of consumer confidence that shopping via the internet can increase productivity and performance, so it will increase the results of the consumer's shopping experience [23]. Thus, it can be said that the higher the perceived usefulness, the higher the online purchase intention of consumers [24]. Therefore, the fourth hypotheses is proposed:

H4: Perceived usefulness has a positive and significant effect on online purchase intention

2.7 Perceived Risk

Zhu et al. defined perceived risk as a mental cost in the form of future uncertainty that arises from consumer purchasing behavior. This uncertainty will have a direct impact on consumers' online purchase intention [25]. This research study includes 2 types of risk in the questionnaire questions: financial risk and security risk. Financial risk is the feeling of losing money that can occur due to high prices, online fraud, and additional fees. Security and privacy risk is the perception of losing personal data or information that will be misused without the permission of the owner. Research conducted by [26] shows that the variable perceived risk (financial and security risk) has a negative effect on purchase intention in social commerce. Therefore, the fifth hypotheses is proposed:

H5: Perceived risk has a positive and significant effect on online purchase intention

3. Methodology and Data Analysis

Quantitative approach is used in this research, where respondents were selected using judgment sampling technique based on two criterias; Indonesian millenials and generation Z between 18 and 40 years old and have purchased clothing products during COVID-19 pandemic (March 2020 – January 2021). An online questionnaire survey was conducted based on the hypothetical model. After a month of collaboration and endeavors, 189 questionnaires were collected, where 152 valid questionnaires were obtained. But, only 115 questionnaires were used for data analysis. A five-point Likert scale anchored by 1 (strongly disagree) and 5 (strongly agree) was used to evaluate measurement items for each variable. Validity test, reliability test, classic assumptions test, and hypothesis test were carried out using IBM SPSS 26.

4. Research Result and Discussion

4.1 Demographic of Respondents

The majority of respondents are single (91%) women (57%) who work as employees (51%), have a bachelor degree (79%), have an income of IDR 5,000,000 - IDR 9,999,999 (38%), have an age range of 22-25 years (64%), have experience shopping for clothing products online for 1 - 3 years (32%), and shopped for clothing products during the COVID-19 pandemic for 1 - 3 times (63%) between March 2020 and January 2021.

4.3 Hypotheses Test

The validity test and reliability test were carried out and the result show that all latent variables and valid and reliable. Before proceeding to the hypotheses test, classic assumption test is done to ensure the multiple regression model is the best linear unbiased estimators. This research tests for normality, heteroscedasticity and multicollinearity. From the test, it can be concluded this research model is normally distributed and free from heteroscedasticity and multicollinearity symptoms. Then, five hypotheses of this research are analyzed. The hypotheses result can be seen in Table 1.

Table 1. Hypotheses Test Result

Hypotheses	Coefficient	t-value	Sig.	Result
ATT → PI	0.263	2.824	0.006	Accepted
SN → PI	0.178	2.471	0.015	Accepted
PEOU → PI	-0.212	-1.917	0.058	Rejected
PU → PI	0.351	5.237	0.000	Accepted
PR → PI	-0.036	-0.773	0.441	Rejected

4.4 Discussion

Based on Table 1, the first hypotheses "Attitude has a positive and significant effect on online purchase intention" is accepted. The result is in line with the results of research done by [15] and [16]. This proves that consumers have a positive evaluation of online shopping which affects consumers' intention to buy clothing products online during a pandemic. Consumers, especially young women, feel that buying clothing products online during a pandemic can provide benefits and satisfaction such as promos and cashback. The second hypotheses "Subjective norms have a positive and significant effect on online purchase intention" is accepted. The result is in line with the results of research conducted by [15], [16], [20], [27]. The closest people such as family will encourage consumers to limit activities outside the home

including shopping, and suggest shopping activities to be carried out online to avoid the spread of the COVID-19 virus. Thus, consumers are encouraged to shop for clothing products through websites and / or mobile applications.

The third hypotheses "Perceived ease of use has a positive and significant effect on online purchase intention" is rejected. This result is not in line with the results of research by [15], [16], [22]. This happens because e-commerce platforms such as websites and mobile applications have long been around the world, including Indonesia, and play an important role in human life. Websites and mobile apps are currently very user-friendly in terms of user interface (UI), easy to use and navigate, and require minimal internet knowledge or mental effort, especially for users who come from the millennial and generation Z because they grew up with digital technology. Thus, ease of use of websites and applications is no longer an option for consumers, but a necessity.

The fourth hypotheses "Perceived usefulness has a positive and significant effect on online purchase intention" is accepted. The result of this study is in line with the results of research by [15], [24]. This research proves that the use of websites and applications can improve consumer performance in shopping for clothing products online during the COVID-19 pandemic. This can be seen from the emergence of the COVID-19 pandemic which limits consumer activity outside the home, making consumers feel that the existence of websites and applications is very useful for shopping at home, keep consumers productive in finding, comparing, and buying clothing products effectively and quickly.

The fifth hypotheses "Perceived risk has a negative and significant effect on online purchase intention" is rejected. The result of this study is not in line with the research results conducted by [15] and [26]. Consumers are sure and not afraid that the product to be purchased is not worth the money especially during pandemic. In addition, the government regulations ensures that consumers are safe from security and privacy risks. Millennial and generation Z consumers are also young people who dare to take risks to get the best possible profit. Thus, consumers' risk perceptions are not significant for online purchase intentions.

5. Implication and Suggestion for Future Research

5.1 Theoretical Implications

In terms of theory testing and novelty, this study attempts to test the combination of theory of planned behavior, technology acceptance model, and perceived risk. It is important to note that this research model is extended from the previous literature by adding security risk into perceived risk. The measured items for questionnaires were adopted and modified from several research. This combination theory enriches understanding of consumers' intention to buy clothing products online during the pandemic, to provide insight for academicians as well as clothing entrepreneurs.

5.2 Managerial Implications

In terms of perceived usefulness, The software engineering team of clothing product companies and marketplace platforms can make regular improvements to the website and mobile application so that they can be used and attract the attention of potential new consumers during the COVID-19 pandemic. Algorithms on the frontend and backend are made clean (clean code) and as efficient as possible to speed up the process on the website and application.

In terms of attitude, digital marketers should create a new pricing strategy that is feasible with a lower price to be affordable according to their target market. This can be used by including an online survey that is inserted into products delivered to consumers in the form of discount vouchers that can be used after filling out the survey.

In terms of subjective norms, digital marketers can initially focus on creating digital campaigns that can increase consumer interest in clothing products through the company's website and mobile application. Content in the digital campaigns can include discounts and promotions for clothing products if purchased online, especially for young women who can later be forwarded by one person to another via social media.

5.3 Limitations and Suggestions for Future Research

There are always limitations to research, including this study. The COVID-19 pandemic in this study only covers the period between March 2020 until January 2021. The sample size is still considered small due to the limited research time. The future research is encouraged to explore other industries which are heavily affected by COVID-19 pandemic and add more respondents. The clothing products can also be segmented specifically e.g. casual, formal. The research model can be extended by adding COVID-19 pandemic as the moderating variable and/or other new latent variables. For example, privacy risk in this study is only limited to financial and security risk. Therefore, it is expected to add other risks.

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