Application of Valance Framework and D&M IS Success Model to Analyze Determinant Factors of Intention to Use E-Commerce Services for Sellers

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Abstract

Finding out what influences' MSMEs' (small and medium-sized enterprises) desire to use e-commerce is the goal of this research. This study employed a quantitative methodology. A survey and the indirect distribution of questionnaires served as the data collection methods. MSMEs who currently use e-commerce as a sales channel received questionnaire data. The MSMEs in large cities that have used e-commerce as a sales channel make up the population of this study. Purposive sampling is a non-probability sampling technique that was employed by the researcher. The investigator made the decision to employ a 200-sample maximum. In this study, the PLS-SEM program SmartPLS was used for data analysis. An outer model analysis and an inner model analysis were performed. Several conclusions can be drawn from this research, including the fact that perceived benefit is the factor that influences MSMEs' intentions the most. As a result, sellers who have experienced the benefits will be more inclined to use e-commerce. Two of the hypotheses are not accepted. This is due to the fact that MSME actors must engage in e-commerce, meaning that quality and service have no bearing on their goals. The theory that has the biggest impact is that trust is influenced by system quality. Thus, it can be said that MSME participants have more faith in the system the higher its quality.

Keywords: Sellers, E-Commerce, D&M IS Success Model, Valance Framework.

1. Introduction

Technological advancements demonstrate that people can support their business activities, including MSMEs, by using the internet. One common way that MSMEs use the Internet is for e-commerce. The process of buying, selling, transferring, or exchanging goods, services, and information online is known as e-commerce. One of the e-commerce areas whose scope is quite influential in Indonesia is Shopee. This e-commerce is based on consumer-to-consumer (C2C), where consumers are people who sell and buy their products directly to other consumers. The advantage itself is that buying and selling activities involve cashless transactions or a non-cash payment system. E-commerce offers online stores for sellers who want to open a store to market and sell products [1]. To open an online shop, sellers can access it via the website or application. Sellers who want to open a shop must have a user account first; if so, they can register on the "Start Selling" menu on the user's profile page. After registering for an online shop, sellers can start managing products, processing orders, and monitoring the growth and development of the shop [2] [3].

Sellers act as online shop owners who can sell the products they have to be marketed widely through e-commerce. Sellers can develop their business or enterprise quickly and reach more buyers by using e-commerce as a sales medium. Sellers can sell the products they have for wider marketing via e-commerce [4]. E-commerce also provides a lot of educational material on how to sell for new sellers who have no experience at all and how to maximize product sales and marketing [5]. By using e-commerce, sellers can sell products by adding products, updating product details, setting shop details, managing product management so that buyers are more interested, disbursing seller funds, and monitoring ongoing transactions [6]. It also offers many programs for sellers, such as the non-star program, star seller, star+ seller, and e-commerce mall. These programs are offered so that sales and marketing targets for sellers' products can be further developed [7]. So the seller's shop is more trustworthy. The product categories sold are also varied [8]. Starting from electronics, food and drinks, care and beauty, cellphones
and accessories, men's and women's clothing, sports, women's shoes and bags, and so on. With the various categories it has, it can make it easier for sellers to market the products they sell [9].

E-commerce also does not limit the places where products can be sold, so it can free up sellers to sell products. The presence of e-commerce is also an opportunity for MSME players to develop their sales without having to put in more effort to create their own website or application. E-commerce always ranks first with the highest number of visitors every month [10]. However, the number of visitors experienced a decrease, namely, it took second place. One of the number of visitors referred to is users who make sales on e-commerce. The decrease in user visits affects the desire of sellers (MSMEs) to use e-commerce [11]. When the quality of an e-commerce system is good, users will tend to revisit the system. Users that frequently visit a system are more likely to feel compelled to use it (intention to use). Thus, a user's motivation to use a system will be impacted when fewer people visit it. Aside from that, the rising expense of administration is the reason for the drop in visitors when viewed through the seller's perspective [12]. The seller was notified that there has been an increase in administrative costs [13]. This is consistent with the decline in e-commerce visitors, which was brought on by an increase in administrative expenses. Numerous potential financial costs, product costs, and information costs in e-commerce have been studied [14]. As a result, sellers are more aware of perceived expenses like those associated with shipping and administration [15]. Thus, the desire to use the system is influenced by the perceived cost effect. Many sellers feel that their sales funds are being withdrawn. Funds will be released no later than 1x24 hours after the goods are confirmed to be received by the buyer [16]. However, the funds from sales are often held for more than 3 days, so they cannot be disbursed [17]. The e-commerce party said that when carrying out system maintenance, damage occurred to the system, making it difficult for sellers to disburse their sales funds, and they are still not sure whether an incident like this will happen again in the future or not [18].

The DeLone & McLean Model, created in mobile commerce with users in the Arabic Gulf Cooperation Council (GCC) community, was used in earlier research [19]. This study demonstrates that the GCC community's inclination to use mobile commerce is significantly influenced by system quality, information, service, and user satisfaction. Subsequent studies examine the relative significance of the DeLone & McLean Model in fostering consumer interest in mobile commerce [20]. The components of this research model demonstrate how customers' inclination to use mobile commerce in the travel and tourism sector can be positively impacted by system quality. Subsequently, a second study was carried out to find out if micro, small, and medium-sized businesses (SMEs) accepted online shopping [21]. According to this study, behavioral intention to use is significantly influenced by the cost variable. This indicates that a major factor influencing sellers' desire to use e-commerce is how much they perceive the costs to be [22]. The DeLone & McLean Model is a success model for information systems that was developed in 1992 by DeLone and McLean [23]. Since the relationships between the variables are now complex and multidimensional, early attempts to characterize the success of information systems have been difficult. In order to solve this issue, a model that was appropriate for the demands and difficulties of the time was created [24]. These six dimensions require extensive testing for verification in multiple scientific fields, as they are not independent measures of success but rather interrelated variables. In 2003, the model was revised to better suit the needs of researchers. The DeLone & McLean Model was the name given to the revised model [25]. The individual and organizational impact constructs should be combined to form the net benefit construct, as suggested by the second DeLone and McLean model, which also added the service quality construct [26]. As factors that positively influence the intention to use or use satisfaction—both of which can lead to actual use and positively influence net benefit this model can be defined as reflecting the quality of the system, information, and services. Understanding which system attributes are important to users and how these attributes affect usage behavior is made easier with the help of this model [27]. DeLone & McLean also define intention to use as perhaps a useful alternative measure in some contexts. “Desire to use” is an attitude, while “use” is a behavior [28].

There are several differences among users on the same platform. In this case, the user in question is someone who owns a business or is usually called a seller. Apart from that, other users who use e-commerce as a medium to support sellers' businesses are specifically sellers who sell via ShopeeFood or sellers who use QRIS e-wallets as a sales payment medium. There is also the Traveloka platform, which has more than one seller. The first are sellers who sell through Traveloka Eats [29]. Traveloka Eats is a restaurant directory service that is bundled with menus and includes a review feature for each restaurant, as well as photos of the restaurant atmosphere and dining menu. Traveloka Eats sellers are sellers who have businesses in the food and beverage sector. Apart from that, there is also Tera Traveloka, which is used as a marketing medium for sellers operating in the property sector, such as hotels, villas, apartments, and so on [30]. Another platform that has several users as sellers is Gojek. On Gojek, there is a go-food service, which is a delivery order service for food and drinks. Through go-food services, sellers or merchants can sell food and drinks. Apart from that, other users who also use Gojek as a medium to support their businesses are QRIS GoPay, which sellers use to make payments through offline stores. So, based on several literature studies above, it can be concluded that one application platform can have more than one seller user. So this can make these platforms expand into a wider realm, not just relying on one seller [31].
2. Research Methods

In this research, a quantitative approach was used. To finish this study, a quantitative strategy utilizing data collection and analysis techniques was used. Questionnaires are indirectly distributed and surveys are used as part of a quantitative data collection strategy. The Google Form was used to fill out the questionnaire, which was distributed indirectly through social media, direct messages, Instagram, WhatsApp, Line, etc. MSMEs who currently use e-commerce as a sales channel received questionnaire data. Based on the suggested research model, statistical data analysis was done. After the data gathered from the distribution of questionnaires is analyzed using statistical data processing software (SmartPLS), recommendations and conclusions are drawn in accordance with the hypothesis that has been put forth. Next, utilize Microsoft Word for creating reports, Excel for handling demographic data, draw.io for processing images for research, Mendeley for writing references. The participants in this study are MSME actors residing in large cities. Purposive sampling is a non-probability sampling technique that was employed by the researcher. The investigator made the decision to employ a 200-sample maximum. Inferential statistical analysis utilizing the PLS-SEM approach and demographic data analysis were performed in this study utilizing SmartPLS software version 3.3.6. Data analysis using this software involves two analyses, namely outer model analysis and inner model analysis.

3. Results and Discussion

The interpretation of the demographic analysis shows that of the 181 respondents produced in this study, the majority were female. This happened because, when distributing questionnaires online, the majority of respondents who filled out the questionnaires were women. The age of the respondents was dominated by respondents aged 25–35 years. Researchers believe that this age range is the most productive for earning income, one of which is by selling. So the number of respondents obtained was dominated by respondents whose productive age ranged from 25 to 35 years. The type of business managed is dominated by the type of business in the food and beverage sector (50%). Based on this data, it can be concluded that the type of business that is mostly run by respondents is food and drink, because currently there are many sellers who are creative with unique food or drinks that are in great demand by buyers. Most respondents were in the Jakarta area. This happened because, when distributing the questionnaire online, the majority of respondents who filled it out were in the Jakarta area. Respondents who use e-commerce the most through applications. These results show that respondents use applications more because they feel they are more practical and easier to access than using e-commerce via websites.

According to four testing processes for the outer model, the final results of the research model's analysis meet good requirements. This is because the value of the outer loading test is above 0.7 and the value is between 0.5 and 0.6. This value can still be kept because the composite reliability value is still within safe limits. So, there is no deletion of indicators at the outer loading testing stage. Next, to test the internal consistency reliability by looking at the composite reliability value, the value obtained is above the acceptable threshold, namely 0.7, and for the average variance extracted value, all values for each variable are above 0.5. In order for the measurement model analysis (outer model) results to be good and feasible so that the structural model analysis (inner model), the next step, can be started. It can be concluded that H1 is accepted, indicating that system quality influences trust, based on the findings of the structural model analysis that was conducted. The t-test yields a value that is above the threshold, 9.5. Next, considering the path coefficient value, it has a noteworthy and favorable impact, as the hypothesis pertaining to the relationship between trust and system quality has a value of 0.6. As can be observed, the f² value indicates a large influence, while the q² value indicates a medium influence, at 0.5. It has been demonstrated to influence and have a positive and significant relationship with the trust variable based on system quality indicators regarding comfort, ease of use, reliability, response time, and the provision of useful functions for system users. The present study’s findings are consistent with multiple research investigations indicating a positive and noteworthy relationship between the system quality variable and the trust variable. This demonstrates how a system's quality affects system users' trust in this case, sellers. Thus, it follows that user will have greater faith in a system that is of higher quality.

Based on the analysis's findings, the t-test yielded a value of 2.3, which is above the cutoff point and indicates that service quality affects trust that is, H2 is accepted. The path coefficient value's results, which show a significant and positive influence, further support this, as does the hypothesis that links trust and service quality, with a value of 0.19. Nonetheless, this hypothesis's f² and q² values are 0.04 and 0.02 respectively, indicating a negligible effect. The hypothesis's findings are consistent with multiple studies' findings that service quality significantly and favorably affects trust. This is consistent with other claims that the quality of the services will affect the trust that MSME sellers have in e-commerce, meaning that when the quality of the services offered is excellent, MSME sellers' trust will grow. H3 is deemed acceptable based on the analysis's resultant value of 9.8, indicating that perceived benefit is influenced by trust. Then, looking at the path coefficient value, it has a significant and positive influence because the hypothesis linking trust to perceived benefit has a value of 0.6. The f² value is 0.5, which means it has a large influence, and the q² value is 0.3, which means it has a medium influence. Several studies have also obtained the same results, namely that the trust variable significantly and positively influences the perceived benefit variable. This trust can strengthen the perceived benefits. Because when a user has a sense of
trust in e-commerce, it directly means that the user has benefited from the system. In this case, it means that the MSME seller who sells already has a sense of trust, which can strengthen the benefits obtained by the seller. One of the benefits that can be felt by sellers is flexible business hours and a wider purchasing range; it does not require more costs to open an offline shop.

Trust has an effect on perceived cost, or H4 is accepted, according to the structural model analysis results, which showed a value of 7.8 in the t-test, where the value was above the threshold. With a value of 0.5, the path coefficient connecting perceived cost and trust indicates a positive and significant influence. In this hypothesis, the f2 and q2 values are 0.3 and 0.18, respectively, indicating medium influence. Researchers believe that sellers who already have confidence in e-commerce will be more inclined to believe that their expenses are reasonable or consistent with their budget or capital estimates. Given that the variable relating System Quality to Intention to Use had a value of 0.14 and had no effect on the former, the t-test value in H5 was rejected. The path coefficient value of -0.01 indicates that the system quality with respect to intention to use is not significant and has a negative value. Examining the slightly influencing values of f2 and q2, which are 0.000 for f2 and -0.002 for q2, further supports this. The findings show that a system's quality has no bearing on a seller's decision to stick with e-commerce as their primary sales channel. Researchers contend that a seller's desire to use a system is independent of whether they believe its quality to be good or not. These findings contradict the findings of earlier studies. Nonetheless, certain research also yields identical findings as other studies.

H6 is rejected, indicating that service quality has no bearing on intention to use, based on the findings of the structural model analysis that was conducted. The t-test yielded a value of 0.503. The path coefficient value, on the other hand, comes out to be 0.04; this indicates that there is a small but positive correlation between service quality and intention to use. There is a slight influence from the values of f2 and q2, which are 0.002 for f2 and -0.002 for q2. It is not able to influence or have a significant relationship with the seller's desire to continue using e-commerce, according to the indicators of service quality, specifically regarding the services provided by customer service. This implies that the seller's desire to use the service will not be impacted by whether they think it is good or bad. This outcome is consistent with earlier research that also had a negligible impact. With a t-test result of 6.3, it can be concluded that H7 is accepted and that intention to use is influenced by perceived benefit. This is also supported by the path coefficient value, which is 0.42 and shows that it has a positive and significant influence. The f2 value is 0.22, indicating a medium influence, and the q2 value is 0.1, indicating a small influence, as can be observed. This hypothesis's findings are consistent with earlier studies. Users' motivation to use e-commerce will rise as they begin to realize its advantages. So, when sellers have felt the benefits of e-commerce, this will increase the seller's desire to continue using it.

With a t-test result of 3.07, it can be concluded that H8 was accepted, indicating that trust influences intention to use. The hypothesis that links intention to use with trust has a value of 0.314, so when we look at the path coefficient value, we can see that it has a significant and positive influence. Nonetheless, this hypothesis's f2 and q2 values are 0.09 and 0.04 respectively, indicating a negligible effect. The desire to use e-commerce increases with the seller's level of trust in it. Researchers contend that sellers' willingness to use the system will rise when they feel confident in it. These findings are consistent with earlier studies showing that trust significantly and favorably influences users' desire to use the system. H9 is accepted since perceived cost influences intention to use, as demonstrated by the t-test result of 2.3, which was above the threshold and derived from the structural model analysis results. With a value of 0.2, the path coefficient connecting perceived cost to intention to use indicates a positive and significant influence. Nonetheless, this hypothesis's f2 and q2 values are 0.04 and 0.01 respectively, indicating a negligible effect. The hypothesis's results are consistent with other research, but they do not support earlier findings that the perceived cost variable significantly influences the intention to use the variable. This is consistent with the background information gathered by researchers, who discovered that MSME actors who engage in online sales believe that the expenses they incur continue to be a burden. This means that the cost factor is a factor that influences the desire of MSME players to use e-commerce. When the perceived cost is less expensive, it can increase the desire to use e-commerce because the cost or budget perceived by the user is appropriate. The results of this hypothesis also support the cause of the decline in the number of e-commerce visits, namely, increasing administration costs causing a decrease in users' desire to use e-commerce.

It is evident that there is little correlation between the system quality and service quality variables and intention to use, indicating that the hypothesis is not supported. However, the proposed hypothesis is accepted if we examine the effects of the system quality and service quality variables on trust as well as the trust variable on intention to use. Both have a significant influence. According to researchers, MSMEs' desire to use e-commerce is mediated by the trust variable rather than directly by the quality and services offered by the system. The intention to use it is directly impacted by the trust variable. Additionally, this study demonstrates that the intention to use variable is indirectly impacted by the trust variable, which is mediated by the perceived benefit and perceived cost variables. Similarly, the intention to use them is directly influenced by the perceived cost and benefit variables. Researchers believe that the main factor felt by users is their trust in a system. So, when they believe they will get the benefits of using e-commerce, the costs they receive are in accordance with their budget or funds. It can be concluded that e-commerce needs to maintain and also increase user trust in e-commerce because this directly affects the benefits.
and costs they receive from using e-commerce, which can increase their desire to use it. And e-commerce also needs to reconsider the cost factors felt by MSME players because this influences their desire to use e-commerce.

4. Conclusion

Several conclusions are drawn from this research based on the discussion's outcomes, specifically: Perceived benefit is the factor that impacts MSMEs' intentions the most, so sellers who have experienced the benefits will be more inclined to use e-commerce. Two of the hypotheses are not accepted. This is due to the fact that MSME actors must engage in e-commerce, meaning that quality and service have no bearing on their goals. The theory that has the biggest impact is that trust is influenced by system quality. Thus, it can be said that MSME participants have more faith in the system the higher its quality. Based on the background regarding system problems, e-commerce needs to repair and improve the quality of its system so that the errors experienced by users do not occur again. Apart from that, it is also necessary to improve the services provided by customer service to users so that they can be comfortable and helped. Because when the quality and service provided by the system are good, it will grow a sense of trust in the system, and when that trust grows, it will influence the desire of MSME players to continue using e-commerce.

Based on the research that has been carried out, it has the potential for further development, so researchers need to provide several suggestions so that it can be properly considered for further research. Some suggestions from researchers are as follows add other variables, one of which is information quality, user satisfaction, and perceived risk, and link them to intention to use. It is better if the data collection process is carried out more directly so that researchers can make direct observations. It would be better if the number of samples collected were more relevant, such as using a formula to determine the sample size from Slovin. Expanding the population coverage area. This research can be a reference for further research in the field of e-commerce. The results of this research can be an alternative model for measuring factors of intention to use e-commerce using the D&M IS Success Model and Valance Framework. The factors of trust, perceived benefits, and costs received are proven to influence the intention of MSMEs to use e-commerce. So, the hypothesis proposed in this research can be a reference for further research. To increase the intention of players to use e-commerce, it is necessary to improve the system both in terms of performance and system functionality so that errors do not occur in the system, such as incorrectly detecting location points and fund balances that are often held up. E-commerce needs to pay more attention to the quality of service, in this case, customer service, so that MSME players can feel satisfied and helped by the services provided. E-commerce needs to maintain and increase the trust of sellers by continuing to maintain the quality and performance of sellers. The results of this research can be used as input and suggestions for e-commerce so that it can be even better in the future.

References


