

The Influence of E-Commerce and Digital Payment on Consumer Behavior of Students of the Faculty of Economics and Business Muhammadiyah University of Surakarta

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Abstract—The objectives of this research is to analyze the influence of E-Commerce and Digital Payment on Consumptive Behavior in students of the Faculty of Economics and Business, Muhammadiyah University of Surakarta. A quantitative method is utilized in this research with an online survey via Google Form involving 100 respondents. This study's sample strategy was the Non-Probability sample technique, named purposive sampling. The data analysis used is Smart PLS 3.0. The findings of this research state that the consumptive behavior of students in Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly affected by E-commerce, also the consumptive behavior of students in Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly affected by Digital Payment.

Keywords— E-Commerce, Digital Payment, Consumptive Behavior, Students

I. INTRODUCTION

This Consumer behavior in students is a major concern in terms of social and economic development. It is noted that students are the largest group in using e-commerce compared to others (Saputra, 2019). Students, as a major subgroup within the youth population, hold a vital role in consumption behavior, which is frequently impacted by outside variables. The growth of e-commerce and digital payments is one of the elements that is influencing student-purchasing behavior more and more. Because it is easier for students to purchase goods because to easy access to e-commerce platforms, students are typically more sensitive to consumptive consumption behaviors.

In recent years, the use of digital payment methods has increased dramatically. Digital payments are a type of payment that is made via technology. Through the use of smartphones, consumers can transfer money more quickly between payers and recipients without requiring physical contact (Kar, 2021). Students' consumption patterns are changing more and more as a result of technical advancements like e-commerce and digital payments, which make their needs more complicated. A consumptive lifestyle is frequently more accessible on campus.

II. LITERATURE REVIEW

1) E-Commerce

E-Commerce is a purchasing and selling online marketplace that links companies and customers via electronic media, enabling vendors to advertise their goods (Susandi & Sukisno, 2017). A website that provides online business over the internet is based on observations and facts in the e-commerce area.

E-commerce is a form of electronic marketing that entails the sale of goods or services online, claim Ayu and Lahmi (2020). In Indonesia, e-commerce usage is expanding quickly and continues to rise annually. The purchasing and selling process can now be completed online using an internet network rather than in person. The rise in internet and smartphone users is one of the factors that can impact e-commerce growth.

2) Digital Payment

The term "digital payment" refers to the practice of fund transfers carried out electronically in the form of non-cash or digital transactions. Houston (2020). Before they can utilize the money, users must deposit it and save it in electronic medium. Depending on how many transactions are made, the value of the money that is kept will decline.

Digital payments are made online through software, internet networks, and virtual accounts, Musthofa et al. (2020).

The following are a few widely used digital payment methods:

a. Credit Card

Making payments with a credit or debit card in-person or online.

b. E-Wallet

Go pay, Dana, OVO, and Shopee Pay are examples of mobile applications that let users store payment details and conduct transactions with ease.

c. Bank Transfer Online

Electronic transfer of funds directly from the user's bank account to the recipient's account.

d. Online Banking

Utilizing online banking services to conduct financial transactions, including bill payment and money transfers.

e. QR Code Payment

This method allows users to send money by just scanning the QR code of the recipient.

3) Consumptive Behavior

Consumer behavior, as stated by Giswandhani and Hilmi (2020), refers to the propensity of people to purchase excessively and frequently put wants ahead of requirements. When discussing consumer behavior in daily life, the term "consumer" is typically employed. Consumer behavior, according to Rasyid (2019), is any individual's action that directly influences the search for and use of affordable goods and services, in addition to decision-making process that precedes and influences these activities.

(Haryani & Herwanto, 2015) stated that there are aspects of consumer behavior, including:

a. Impulsive Buying

This feature demonstrates that a person is frequently emotional and only buys things to satisfy immediate demands without taking future events into account.

b. Wasteful Buying

The practice of spending large sums of money on unnecessary items.

c. Non Rational Buying

In which purchases are done solely for enjoyment.

III. RESEARCH METHODS

A quantitative approach is adopted in this study. Sugiyono (2017) states that quantitative research is a method employing a scientific approach to understand realities that are classifiable, tangible, measurable, also observable. This study's sample strategy was the Non-Probability sample technique, which does not give every member of the population the same possibilities or chances (Sugiyono, 2018). The method used is purposive sampling, a type of method that determines samples by taking certain considerations.

The sample size in this study is calculated by employing Ferdinand's sampling formula (2014:173), which calls for at least five times as many indicators. Upon evaluating each estimated parameter based on observed data, a minimum sample size of 100 is required (Ferdinand, 2014:109). Since there are ten indicators in this study, five times ten is fifty samples. The researcher included 50 respondents in order to reach the lowest requirements also to assess the validity and computations in the partial Least Square (PLS) analysis, making a total sample size of 100 respondents.

IV. RESULTS AND DISCUSSION

Outer Model Evaluation

Outer model is an analysis performed to examine the validity also reliability values of a model. Displayed below is a visual representation of the evaluation of the outer model Model generated through Smart PLS 3.0:

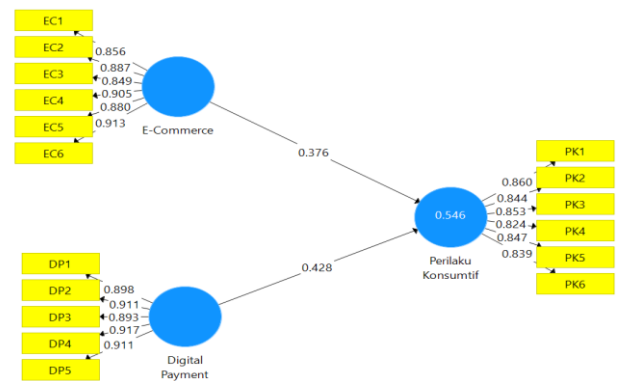


Figure 1. Outer model

Composite reliability and Cronbach's alpha for reliability discriminant and convergent for validity tests were employed to evaluate the model.

Convergent Validity

The validity of an indicator indicated utilizing this test in terms of convergent validity if the outer loading value exceeds 0.7. The obtained result in this study are presented below:

TABLE 1. Outer Loading

Variable	Indicator	Outer loading
E-Commerce (X1)	EC.1	0.856
	EC.2	0.887
	EC.3	0.849
	EC.4	0.905
	EC.5	0.880
	EC.6	0.913
Digital Payment (X2)	DP.1	0.898
	DP.2	0.911
	DP.3	0.893
	DP.4	0.917
	DP.5	0.911
Consumer Behavior (Y)	CB.1	0.860
	CB.2	0.844
	CB.3	0.853
	CB.4	0.824
	CB.5	0.847
	CB.6	0.839

Source: processed primary data (2025)

Discriminant Validity

This test is to reveal the feasibility or validity of each indicator by having to correlate highly to its construct in terms of convergent validity with an AVE (Average Variance Extracted) value greater 0.5. Below are the AVE values of this research's variables:

TABLE 2. Average Variance Extracted (AVE)

Variable	AVE	Information
E-Commerce (X1)	0.778	Valid
Digital Payment (X2)	0.821	Valid
Consumer Behavior (Y)	0.713	Valid

Source: processed primary data (2025)

As presented in Table 4.5, all variables exhibit AVE value for each variable is >0.5. E-Commerce with a value of 0.778, Digital Payment 0.821, and Consumer Behavior with a value

of 0.713. These findings indicate that all variables used in this study are valid.

Reliability

Reliability is considered to be met if a variable has a Cronbach's alpha or composite reliability value exceeds 0.7. The following table displays the reliability's outcomes through those method for all variables examined in this research.

TABLE 3. Cronbach's Alpha Dan Composite Reliability

Variable	Cronbach's Alpha	Composite Reliability
E-Commerce (X1)	0.943	0.954
Digital Payment (X2)	0.945	0.958
Consumer Behavior (Y)	0.920	0.937

Source: processed primary data (2025)

Referring to Table 3, each variable exhibits a Cronbach's alpha and composite reliability > 0.7 , meaning the cronbach's alpha value of the E-Commerce variable is 0.943, Digital Payment is 0.945, and Consumer Behavior is 0.920. The E-Commerce variable demonstrates a composite reliability value of 0.954, Digital Payment is 0.958, and Consumer Behavior is 0.937. Thus, each variable examined in this study meets the criteria for reliability.

Inner Model Evaluation

A structural model for predicting causal links between variables is the inner model. The figure below shows the examination of the inner model conducted utilizing the SmartPLS 3.0 software.

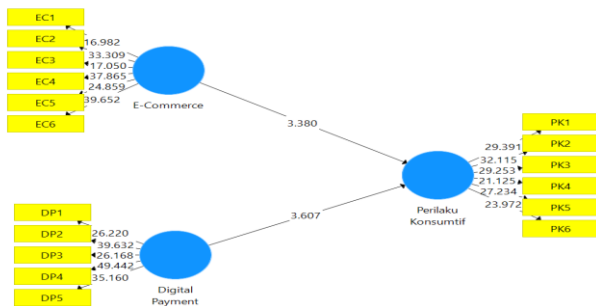


Figure 2. Inner model

Determination Coefficient (R^2)

The Q-Square number provides information on the goodness of fit evaluation. The coefficient of determination (R^2) and the Q-Square value are equivalent. A probability value exceeds 0.05 suggests that the model is considered valid, as it signifies a good fit between the observed data and the model. The following is the R^2 value derived from the data processing that was done with SmartPLS 3.0:

TABEL 4. R^2

Variable	R^2
Consumer Behavior	0.546

Source: processed primary data (2025)

Referring to table 4, the R^2 value > 0.05 is 0.546. So the research model reveals a good level of goodness of fit.

The effect size (F^2) test is employed to evaluate whether the influence of an exogenous latent variable is small, moderate, or large. According to the recommended thresholds, the magnitude of influence within a structural model can be interpreted based on effect size values, with a large effect represented by 0.35, a moderate by 0.15, and a lower by 0.02.

TABLE 5. F^2

Variable	Consumer Behavior (Y)
E-Commerce	0.165
Digital Payment	0.213

Source: processed primary data (2025)

Referring to the outcomes in Table 5, the F^2 value of 0.165 suggests that E-Commerce exerts a minor effect, while Digital Payment has a moderate influence with an F^2 value of 0.213.

Hypothesis Testing

To test the hypothesis, utilize the path coefficient table, which presents both direct effects and specific indirect effects.

Path Coefficient

P-Value is used as a coefficient test to evaluate how strongly the independent variables affect the dependent variables. If < 0.05 then it is accepted. A t-statistic value of 1.96 is used as the significance threshold at the 5% level. If the t-statistic surpasses 1.96, the impact is considered statistically significant.

TABLE 6. Path Coefficient (Direct Effect)

Variable	Original Sampel (O)	T Statistic (O/STDEV)	P Values	information
X1-> Y	0.376	3.506	0.000	Accepted
X2-> Y	0.428	3.713	0.000	Accepted

Source: processed primary data (2025)

Information: E-Commerce (X1), Digital Payment (X2), Consumer Behavior (Y).

a. The first hypothesis aims to determine how E-Commerce effects Consumptive Behavior in students of Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business. Shown in the Table 6, the p-value = 0.000, with t-statistic value of 3.506, and a substantial impact size of 0.376. These outcomes confirm the acceptance of the first hypothesis, confirming that the Consumptive Behavior in students of Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly influenced by E-Commerce.

b. The second hypothesis aims to determine how Digital Payment effects Consumptive Behavior in students of Muhammadiyah University of Surakarta, particularly those in the Faculty of Economics and Business. Shown in the Table 6, the p-value = 0.000, with t-statistic value of 3.713, also a substantial impact size of 0.428. The p-value is below 0.05, when t-statistic surpasses 1.96. These outcomes confirm the acceptance of the second hypothesis, indicating that the consumptive behavior students of Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly influenced by E-Commerce.

V. DISCUSSION

1. The Influence of E-Commerce on Consumer Behavior of Students of the Faculty of Economics and Business, Muhammadiyah University of Surakarta. Drawing from the overall analysis results, the consumptive behavior students of Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business, is significantly and positively affected by E-commerce. This is demonstrated by how simple it is to use e-commerce to buy products online.

The findings of this study are reinforced by test results indicating a p-value of 0.000 and a t-statistic value of 3.506, a strong effect size of 0.376. These values satisfy the significance criteria of $t > 1.96$ and $p < 0.05$. The output validates the first hypothesis, indicating that the consumptive behavior of students in Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly influenced by E-Commerce.

This study supports the idea that students' purchasing habits will rise as a result of the simplicity and convenience that e-commerce can offer. Previous study in the journal (Damayanti & Canggih, 1905) supports this idea by explaining how the features and simplicity of e-commerce affect consumer behavior. Based on these findings, it can be said that e-commerce will make people more likely to make impulsive purchases.

2. The Effect of Digital Payment on Consumer Behavior of Students of the Faculty of Economics and Business, Muhammadiyah University of Surakarta. Drawing from the overall analysis results, the consumptive behavior students of Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly influenced by Digital Payment.

The research findings are reinforced by test results indicating a p-value of 0.000, and a t-statistic value of 3.713 with a substantial effect of 0.428. These values satisfy the significance criteria of $t > 1.96$ and a p value < 0.05 . These results validate the second hypothesis, indicating that the consumptive behavior of students Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly influenced by Digital Payment.

According to the findings of a study by Prasetya and Putra (2020), people believe that using digital payments is simple and even facilitates decision-making when it comes to transactions. In this regard, it may be said that digital payments have an impact on consumer behavior, particularly among students. This outcome supports the results reported by Naufalia (2022), which found that when transactions are simple, customers are more likely to make frequent purchases, which eventually results in consumptive behavior.

VI. CONCLUSION

Drawing from the research presented, this research's objective is to evaluate how E-Commerce and Digital Payment effects Consumptive Behavior within students in Muhammadiyah University of Surakarta, particularly those

from the Faculty of Economics and Business. The conclusions of this study are derived from the preceding analysis and discussion as follows:

1. The consumer behavior of students in Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly influenced by E-Commerce. A t-value of 3.506, surpasses the t-table threshold of 1.96, confirms the result. Thus, the first hypothesis, which posits an influence of E-Commerce and Consumer Behavior is confirmed.

2. The consumer behavior of students in Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business is positively and significantly influenced by Digital Payment. A t-value of 3.713, that surpass the t-table threshold of 1.96, as revealed by the t-test result, proves this. So the second hypothesis, which posits an influence of Digital Payment and Consumer Behavior is confirmed.

VII. RESEARCH LIMITATIONS

The limitations of the problems in this research are:

1. This study's sample consisted solely on students in Muhammadiyah University of Surakarta, particularly those from the Faculty of Economics and Business, the study's conclusions cannot be broadly applied to a wider population.
2. Literature Review related to e-commerce on student consumer behavior is still not too much.

VIII. SUGGESTIONS

The following suggestions are provided for subsequent research efforts from the outcomes of this study:

1. The inclusion of other elements, such as social, cultural, psychological, and economic ones, that could affect customer behavior.
2. To improve the generalizability of the study findings, the research sample may be expanded to include students from other universities or a larger community.
3. Financial impact analysis by examining how consumer behavior affects student finances, including how it affects saves for pocket money.

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