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Research Article

The Role of Technology Acceptance Model on Impulsive Buying

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Abstract.

The use of e-commerce and PayLater features has grown rapidly in Indonesia, particularly in Malang, a student-centered city where many young consumers rely on these platforms for daily transactions. However, this convenience comes with risks, most notably impulsive buying behavior that may negatively impact financial well-being. This research examines the influence of Perceived Usefulness, Perceived Ease of Use, Attitude Toward Using, Behavioral Intention to Use, and Actual Use of the System on impulsive buying behavior among PayLater users in Malang. Employing a quantitative approach with an associative causal design, data were collected through surveys and analyzed using multiple linear regression. The F-test results indicate that the independent variables significantly influence impulsive buying behavior, while the T-test illustrates the individual effects of each variable. This study enhances our understanding of how the Technology Acceptance Model (TAM) relates to impulsive buying behavior and provides insights for developing strategies to mitigate impulsivity and support the sustainable growth of e-commerce.

Keywords: e-commerce, impulsive buying, TAM theory

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1. Introduction

Various aspects of human life have undergone significant changes during the digital era. Working, studying, reading, even shopping now can be done digitally. Shopping habits now can be supported by E-commerce's presence. E-commerce users in Indonesia are projected to continue increase. The number of users is projected to reach its highest at 189.6 million by 2024, representing two-thirds of the country's population [1]. This rapid growth in e-commerce is driven by technological advancements, particularly the internet and smartphones, facilitating access to various sellers without the need to visit physical stores [2].

One notable innovation attracting customers is the PayLater feature, allowing customers to purchase items upfront and pay later through interest-free installments [3]. PayLater is a payment facility that allows users to make purchases on credit without a

credit card. Its rapid registration and practical use have made it popular across various platforms [4]. Key advantages of PayLater include: (1) fast and practical processing for urgent needs, (2) flexible repayment terms from 1 to 12 months at low interest rates, and (3) attractive promotions that encourage usage (Aristanti in Prastiwi & Fitria, 2021). However, risks accompany PayLater, including (1) interest and additional fees that require user discretion, (2) potential for increased consumerism due to ease of transaction, (3) uncontrolled financial expenditures, especially without corresponding income increases, (4) the accumulation of multiple PayLater bills, (5) penalties for late payments, and (6) a tendency to overlook repayment capabilities in emergencies [5].

PayLater appeals particularly to the younger generation accustomed to instant lifestyles, offering them flexibility in managing finances [6]. Shopee PayLater is the most popular service among users, with high usage rates and brand awareness reaching 89% [3]. However, PayLater poses risks of impulsive buying, defined as purchasing driven by momentary emotions without careful consideration [7]. This impulsive buying behavior can lead to excessive spending, mounting debts, and serious financial issues [6].

Millennials and part of Generation Z are noted as significant contributors to non-performing loans (NPL) in PayLater, with an NPL ratio of 9.7% [8]. The majority of PayLater users in Indonesia are from Java, with East Java contributing 13.36% of total users [3]. The high internet access rate in Java makes it a large market for e-commerce and PayLater features. According to the Financial Services Authority (OJK), the fintech sector, particularly PayLater services, has rapidly grown, reaching 79.92 million financing contracts in 2023, up from 4.67 million in 2019 [9]. This significant usage rate also indicates a good level of financial inclusion in Indonesia. Malang City, for instance, exhibits a financial inclusion rate of 86.53%, surpassing the national average of 85.10%, reflecting the community's openness to financial developments and formal services [10]. Therefore, it is essential to study the outcome of PayLater features on impulsive buying behavior among the residents of Malang City, part of East Java [3].

2. Literature Review

Impulsive buying refers to random purchasing choices made without prior planning [11]. This behavior is impacted by emotional triggers, environmental factors, and appealing promotions, contributing significantly to retail sales and profit [12]. Factors influencing

impulsive buying include the enjoyment of shopping, funds availability, browsing in-store, felt strong desire to buy, and possession of credit card [11]. The results of Umam and Bachtiar (2024) study show that the level of ease of use of Paylater among online shop users in Indonesia is quite high, with an average score of 4.12 out of 5 [13]. The study also shows that the level of impulsive buying behavior among online shoppers in Indonesia is moderate, with an average score of 3.23 out of 5. The moderate level of impulsive buying behavior can be attributed to the fact that PayLater users have higher probability to make planned transactions than the unplanned. The research by Dhanty et al (2022) The convenience of PayLater transactions and product discount promos exert a notable influence on impulsive purchasing behavior among Shopee users in DKI Jakarta with the outcome of the F test analysis with a calculated F score exceeds F table, namely 19.766 > 3.06 [14]. Research by Susilo and Suryani (2021) examined the adoption of PayLater services, emphasizing comfort and trust but not specifically addressing its impact on impulsive buying. Dewi and Darma (2019) studied impulsive buying behavior in online shopping but did not focus on PayLater usage. Siregar and Maruli (2021) utilized TAM to analyze impulsive buying in online shoppers without incorporating PayLater-specific variables. Li and Li (2020) investigated buying patterns and impulsivity in e-commerce but did not comprehensively integrate TAM and PayLater features.

3. Material and Methods

The approach used by the author is quantitative and the form of research is associative which is designed to examine how two or more variables are related [15]. Quantitative research enables researchers to identify if there is an association and impact of X variables on Y variables through numerical data, statistics, and numerical analysis. In this study, the author sets Perceived Usefulness, Perceived Ease of Use, Attitude toward Using, Actual Use of System, and Behavioral Intention to Use as independent variables and Impulsive Buying as the dependent variable. This study is located in Malang City so that the research population is paylater users in Malang City. Due to the total unknown population, researchers used the Unknown Population formula by Maholtra. Maholtra's formula is items x 5. This research used non probability sampling technique. The data were gathered through the distribution of a questionnaire containing 24 question items and literature reviews. The scale that authors used for the questionnaire is likert. Before sharing the questionnaire, authors did some tests such as Validity and reliability test.

The data are examined using multiple regression analysis and descriptive statistics. Descriptive statistics is the process of analyzing data using statistics to describe the data that has been collected as it is. After the questionnaire is distributed and answered by the respondents, the researcher will analyze the data obtained from the questionnaire by describing the data as it is. Multiple **s**imple regression analysis is an analysis that is useful for analyzing the combination of several variables X (independent) against variable Y (dependent). For the analysis, the author utilizes SPSS software. The SPSS worksheet will be updated with the data. Using the data currently in the spreadsheet, the author will do linear regression by designating the X variable as independent and the Y variable as dependent. Data can be said to be significant if the test results are <0.05. For the F test carried out, the researcher set a tolerance of 0.05 so that the number 2.29 was obtained.

4. Results and Discussion

This research seeks to determine how all of the X variables affect the Y variable. To collect the information for this study, the questionnaires were sent 120 respondents. After collection, the research data undergoes associative and quantitative analysis. To analysis the effect, author used SPSS 25 and describe the result to make a conclusion.

4.1. Descriptive Statistic

TABLE 1: Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
X1	120	4	20	14,06	4,104
X2	120	3	15	11,63	2,911
X3	120	3	15	10,62	3,101
X4	120	3	15	9,53	3,719
X5	120	3	15	10,39	3,123
Y	120	12	40	23,59	5,518
Valid N	120				

As shown in Table 1 above, there are 120 Respondents who have completed the questionnaire and provided their answers.

1. The variable X1 (Perceived Usefulness) represent the lowest score is 4 whereas the highest score is 20. The mean of variable X1 (Perceived Usefulness) is 14.06. The mean of 14.06 can be expressed as a representation of the respondents' responses to variable X1 (perceived usefulness).
2. The variable X2 (Perceived Ease of Use) represents the lowest score is 3, whereas the highest score is 15. The mean of variable X2 (Perceived Ease of Use) is 11.63. The mean of 11.63 can represent the respondents' responses to variable X2 (perceived Ease of Use).
3. The variable X3 (Attitude toward using) represents the lowest score is 3 and the highest score is 15. The mean of variable X3 (Attitude toward Using) is 10.62. The mean of 10.61 can be expressed as a representation of the respondents' responses to variable X3 (Attitude toward Using).
4. The variable X4 (Behavioral Intention to Use) represents the lowest score is 3 whereas the highest score is 15. The mean of Variable X4 (Behavioral Intention to Use) is 9.53. The mean of 9.53 can be expressed as a representation of the respondents' responses to variable X4 (Behavioral Intention to Use).
5. The variable X5 (Actual Use of System) represents the lowest score of 3 and the highest score of 15. The mean of Variable X5 (Actual Use of System) is 10.39. The mean of 10.39 can be expressed as a representation of the respondents' responses to variable X5 (Actual Use of System).
6. The variable Y (Impulsive Buying) represents the lowest score is 12 whereas the highest score is 40. The mean of Variable Y (Impulsive Buying) is 23.59. The mean of 23.59 can be expressed as a representation of the respondents' responses to variable Y (Impulsive Buying).

a. Validity Test

Validity testing aims to determine the question items that researchers use are valid. The question items in this research questionnaire consist of 24 question items. While the determined r table score is 0.1793. The validity or otherwise of the item can be known if r count > r table. From the test results, all items of the questions have a higher score than the r of the table which has a score of 0.1793. Therefore, the questionnaire items can be considered valid.

b. Reliability Test

Reliability test shows the consistency of research indicators. An instrument can be said to be reliable if the instrument produces the same results in measuring the same object. This reliability test uses Alpha Cronbach which has a score of 0.6. Based on the reliability testing that has been done. Each questionnaire item yields a Cronbach's Alpha result surpasses 0.6, indicating that the research instrument can be considered reliable when the test result exceeds 0.6 the instrument is considered reliable because the Cronbach Alpha from this test has a score greater than 0.6, which is 0.933.

4.2. Classical Assumption Test

a. Normalty Test

This test is conducted to review the data used in the study is normal. Researchers conducted a normality test on data related to the five question variables. If the data that has been distributed exhibits a normal pattern or not can be identified through the significance score. Data that has a significance score (Sig.) > 0.05 is said to be normally distributed. Conversely, data that has a significance score (Sig.) < 0.05 Is considered to have a non-normal distribution. The conclusion can be made that the residual score in the Kolmogorov-Smirnov column has a significance score > 0.05 of 0.071 which indicates that the data is normal.

b. Heteroskedasticity Test

This test is performed to assess if the variance of variables in a model is unequal. The significance score applied in this research. is = 0.05. If the outcome of significance score below 0.05, then the model is said to have no symptoms of heteroscedasticity. Based on the test results, the significance score for each variable surpasses 0.05, which displays that there are no signs of heteroscedasticity.

c. Multicollinearity Test

This test is performed to assess whether there is a significant correlation between independent variables. This test is implemented by examining the VIF score. If the VIF score below 10 or the tolerance score over 0.10, then the multiple regression model does not experience multicollinearity. According to the table results, it is evident that all Variables X have a VIF score below 10, indicating that there are no signs of multicollinearity in this research model.

4.3. Multiple Regression Analysis

This analysis is used to forecast the impact of more than one independent variable on a single dependent variable, either individually or collectively. The results of the multiple linear regression test are presented in the following table:

TABLE 2: Model Summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.963[a]	0,927	0,924	1,524

[a]Predictors: (Constant), x5, x4, x3, x2, x1

The R above illustrates the connection between the variables X and the variables Y. As shown in Table 2, the correlation coefficient score is 0.963. This projects that the correlation score of all the variables X in this study on variable Y is 96.3%.

The R2 highlights the impact between the variables X and the variables Y. As shown in the table, the determination coefficient score is 0.927. This presents that the influence of all variables X in this study have an influence (contribution) of 92.7% on variable Y. This also shows that there is a 7.3% influence from other variables that the researcher did not examine.

TABLE 3: F score data.

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3358,076	5	671,615	289,013	.000[b]
Residu[a]	264,916	114	2,324		
Total	3622,992	119			

[a]Dependent Variable: y

[b]Predictors: (Constant), x5, x4, x3, x2, x1

The calculated F score shows the number 289.013. The score of the F in Table 3 shows the number 2.29 so the calculated F> F table. In addition, the significance score in the table above shows the number 0.000 which indicates that the significance score is <0.05. The scores produced in the table above show that variables of X have a substanstial impact on variable Y.

As shown in Table 4, the significance score of variable X against Y is less than 0.05. This displays that all of X variables have a substantial impact on Y variable. The Equation shows some negative signs that indicates a negative relationship where when

TABLE 4: The significance score.

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	21.297	0.460		46.286	0.000
	x1	-0.255	0.073	-0.331	-3.507	0.001
	x2	-0.361	0.075	-0.429	-4.797	0.000
	x3	-0.274	0.077	-0.329	-3.573	0.001
	x4	1.022	0.060	0.689	16.959	0.000
	x5	0.313	0.089	0.225	3.522	0.001

[a]Dependent Variable: y

X variables increase, Y variable decreases. It can be concluded that H0, which asserts that the X variables does not affect the Y variable, is rejected, while H1, which claims there is an effect, is accepted.

5. Conclusion

According to the outcome of the multiple linear regression analysis. Additionally, the R2 coefficient shows that 92.7% of the Y variable is contributed by the X factors, indicating that 7.3% of the variables were not tested. The F-calculated score exceeds the F-table score. Thus, it is able to be stated that the X variables have a significant impact on the Y variable. The outcome of t-test further indicate that the variable X notably affects the variable Y. The alternative hypothesis (H1, H2, H3, H4, H5), which claims that the X variables has an influence on the Y variable is accepted, whereas the null hypothesis (H0), which claims that the variable X has no impact on the variable Y, is rejected. This theoretical method has a considerable impact on the number of impulsive purchases in Malang City, as perceived usefulness, perceived ease of use, attitude toward using, behavioral intention to use, and actual use of the system all greatly influence impulsive buying. Based on the research above, there are some suggestions that researchers can provide. First, education on financial management needs to be developed for the general public to make planned purchases. Second, Increasing financial literacy will help users understand the long-term impact of using credit services such as Paylater. Third, Conduct further research to explore other factors that may contribute to impulsive buying, such as psychological factors (eg, mood, self-control) or external factors (eg,

promotions, discounts), and the last one, Paylater users are advised to always evaluate their needs before making a purchase by considering whether the goods or services to be purchased are really needed or are only driven by momentary, impulsive desires.

Conflict of Interest

The authors declare no conflict of interest.

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