

The Influence of Flash Sales and Paylater on Impulsive Buying Behavior Among Students of Universitas Muhammadiyah Purworejo on the Shopee E-Commerce Platform

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This study aims to determine and analyze the impact of flash sales and paylater options on the impulsive purchasing behavior of students at Muhammadiyah University Purworejo who use the Shopee e-commerce platform. The increasing tendency of students to make impulsive purchases underscores the relevance of this study, especially amid the surge in online shopping activities. Adopting a quantitative research design and survey methodology, the study targeted students of Muhammadiyah University of Purworejo who are Shopee users, with a total of 125 individuals serving as the sample. Data were gathered using questionnaires and analyzed through multiple linear regression with the help of SPSS (Statistical Product and Service Solutions). The results indicate that flash sale promotions independently have a positive impact on impulsive buying behavior. Similarly, the utilization of paylater services also contributes positively to students' tendencies to make unplanned purchases. These results suggest that digital marketing strategies, such as flash sales and paylater facilities, effectively encourage spontaneous purchasing decisions among students.

1. Introduction

1.1 Background

The development of technology and the internet in Indonesia has changed the way people interact and shop. In 2024, APJII reported that Indonesia had reached 221 million internet users, reflecting a growth compared to the previous year. This continuous rise in internet access has notably influenced consumer habits, especially in terms of online shopping through e-commerce platforms. Shopee, recognized as one of Indonesia's largest e-commerce platforms, has become the first choice for online transactions. Data from Databoks shows that Shopee consistently ranked first in terms of visitor numbers from 2023 to the first quarter of 2025. This shows Shopee's dominance in e-commerce competition in Indonesia. Shopee attracts the attention of consumers, especially students, through features such as flash sales and paylater. Flash sale is a discount program that is only valid for a very limited period, usually just a few hours, with very low prices [1]. This feature generates a feeling of urgency and a fear of missing out, encouraging consumers to make quick purchasing decisions without extensive consideration. Meanwhile, paylater is a payment system that allows consumers to buy items now and pay for them later or at a later date, either in full or in installments [2]. This feature

provides flexibility in payments, making it appealing to consumers who may not have the funds at that moment

These two features have demonstrated their ability to boost transactions and serve as effective marketing strategies. However, the ease of access and psychological pressure associated with these features may trigger impulsive buying, where consumers make unplanned purchases influenced largely by emotional responses [3]. Students as a digital-native generation tend to be vulnerable to this kind of marketing strategy due to limited financial experience, social pressure, and the desire to follow trends. With the convenience and appeal of flash sale and paylater features, students have the potential to make unplanned purchases (impulse buying) repeatedly. Therefore, this study is important to examine how the flash sale and paylater features influence students' impulsive buying behavior, especially in the Universitas Muhammadiyah Purworejo environment.

1.2 Problem Statement

The formulation of the research problem is as follows:

1. Does flash sale have a positive effect on the impulsive buying behavior of students at Universitas Muhammadiyah Purworejo?
2. Does paylater have a positive effect on the impulsive buying behavior of students at Universitas Muhammadiyah Purworejo?
3. Do flash sales and paylater simultaneously influence the impulsive buying behavior of students at Universitas Muhammadiyah Purworejo?

1.3 Objectives and Scope

The aim of this study is to explore the impact of flash sales and pay-later options on the impulsive buying behaviors of students at Universitas Muhammadiyah Purworejo. Universitas Muhammadiyah Purworejo's campus serves as the exclusive research location, and the study's quantitative methodology focuses on students who actively use the Shopee e-commerce platform.

2. Literature Review

1.1 Related Work

Research on the influence of flash sales and paylater on impulsive buying has been conducted quite a lot by various previous researchers. In general, the findings of these studies show that flash sales and paylater have an effect on impulsive buying.

1. Dude *et al.* (2022) explored this topic in their research entitled "The Impact of Using Paylater and Flash Sale on Shopee Users' Impulsive Purchasing Behavior (Study on Shopee User Students, Management Department, Gorontalo State University)". This study utilized a quantitative method combined with a descriptive approach. The results revealed that the use of paylater services significantly and positively influences impulsive buying behavior. Additionally, the features of flash sales also exert a notable and positive influence. Moreover, when combined, both paylater and flash sales significantly impact impulsive buying.
2. Wiyono *et al.* (2023) explored this topic in their research entitled "The Impact of Viral Marketing, Flash Sale, and Shopee Paylater on Impulse Purchases at Shopee" using a quantitative method. The results indicate that viral marketing, flash sales, and Shopee Paylater collectively have a significant impact on impulsive buying behavior.

Related to previous research by Dude *et al.* (2022) and Wiyono *et al.* (2023) it shows that flash sales and paylater are effective marketing strategies in increasing impulsive purchases. These strategies leverage urgency and transaction ease to encourage quick

purchasing decisions without rational consideration. Other research has also found that easy access to credit through paylater tends to weaken consumer self-control.

2.2 Research Gap

Although numerous studies have explored the effects of flash sales and paylater on impulsive buying, research specifically targeting students in regional higher education institutions remains scarce. This is notable given that students, particularly those from Universitas Muhammadiyah Purworejo, are a major demographic in the e-commerce market. Therefore, this study is important to contribute to filling this gap.

3. Methodology

3.1 Data Collection

The data for this study were obtained by distributing questionnaires through WhatsApp to students of Universitas Muhammadiyah Purworejo who actively use the Shopee platform. A purposive sampling method was applied, targeting active students who had previously participated in flash sales and used the paylater feature. The total number of respondents involved was 125.

3.2 Analysis Techniques

1. Multiple Linear Regression Analysis

The data were analyzed using multiple linear regression with the help of SPSS version 30.0 for Windows. This technique aimed to assess how each independent variable influences the dependent variable and to identify the direction of the relationship, whether positive or negative [4]. Furthermore, the analysis seeks to assess both the individual (partial) and combined (simultaneous) effects of the flash sale and paylater features on impulsive buying behavior. The regression equation model applied in this study is as follows:

$$Y = a + b_1X_1 + b_2X_2 + e$$

2. Significance Test

A significance test is conducted to ascertain whether an independent variable significantly accounts for variations in the dependent variable. [5]. If the resulting P-value is equal to or less than 0,05, the variable is considered to have a significant partial impact. However, if the P-value is above 0,05, the effect is deemed statistically insignificant.

3. F Test

The F test, also known as the joint significance test, assesses whether all independent variables collectively influence the dependent variable. An F significance value less than 0,05 suggests a significant joint influence of the independent variables. Conversely, a value above 0,05 indicates no significant collective impact on the dependent variable.

3.3 Validation

The questionnaire instrument was subjected to validity and reliability testing through a pre-test involving 30 respondents. Validity was assessed using Pearson's correlation, where an r-value of $\geq 0,3$ indicates a valid item, while an r-value of $\leq 0,3$ indicates an invalid one. Reliability was measured using Cronbach's Alpha; a value greater than 0,7 signifies that all items are reliable and appropriate for further use.

4. Results and Discussion

4.1 Key Findings

Validity Test

In this study, validity tests were conducted on the flash sale (X1), paylater (X2), and impulsive buying (Y) variables.

Table 1
Validity Test Results

Variable	Question Items	Pearson Correlation	r-min
<i>Impulsive Buying (Y)</i>	Y.1	0,817	0,3
	Y.2	0,723	
	Y.3	0,716	
	Y.4	0,694	
	Y.5	0,683	
	Y.6	0,726	
	Y.7	0,635	
<i>Flash Sale (X1)</i>	X1.1	0,820	0,3
	X1.2	0,535	
	X1.3	0,806	
	X1.4	0,760	
	X1.5	0,804	
	X1.6	0,791	
<i>Paylater (X2)</i>	X2.1	0,835	0,3
	X2.2	0,839	
	X2.3	0,900	
	X2.4	0,898	
	X2.5	0,873	
	X2.6	0,759	

Source: Primary Data Processed (2025)

Based on the validity test results presented in Table 1, all statement items related to the variables of impulsive buying (Y), flash sale (X1), and paylater (X2) have Pearson correlation values greater than the minimum threshold of 0,3 and are positively correlated. This indicates that each item is valid in assessing the corresponding research variables. Consequently, all statement items are deemed appropriate for continued data collection.

Reliability Test

The reliability test aims to assess the consistency of responses provided by participants. In this research, reliability testing was conducted for three variables: flash sale (X1), paylater (X2), and impulsive buying (Y).

Table 2
Reliability Test Result

Variable	Cronbach's Alpha	Reliability Value Limit	Information
<i>Impulsive Buying (Y)</i>	0,833	0,7	Reliable
<i>Flash Sale (X1)</i>	0,838	0,7	Reliable
<i>Paylater (X2)</i>	0,916	0,7	Reliable

Source: Primary Data Processed (2025)

According to Table 2, all variables exhibit Cronbach's Alpha values greater than 0.7, signifying that the questionnaire items demonstrate a high level of reliability. This implies that the questions used in the study can produce consistent results over time, and the responses from participants are similar, showing a consistent pattern.

Multiple Linear Regression Analysis

Multiple linear regression is a statistical technique used to analyze relationships involving two or more independent variables. The results of this analysis, derived from the responses of 125 participants, are displayed in the following table.

Table 3
Coefficients

Model		Unstandardized B	Standardized Coefficienst Beta	t	Sig.
1	(Constanta)	6,276		3,484	<,001
	Flash Sale (X1)	0,488	0,432	6,437	<,001
	Paylater (X2)	0,403	0,448	6,662	<,001

Source: Primary Data Processed

Table 4
ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2406,760	2	1203,380	56,909	<,001 ^b
	Residual	2579,752	122	21,146		
	Total	4986,512	124			

Source: Primary Data Processed (2025)

Based on table 3, the multiple linear equation model can be written as follows:

$$Y = 0,432X_1 + 0,448X_2$$

The equation for multiple linear regression is represented as:

- The coefficient $b_1 = 0,432$ signifies that the flash sale variable has a positive influence. This suggests that flash sale promotions on Shopee stimulate students to make unplanned purchases. Therefore, an increase in flash sale events on Shopee correlates with a higher tendency for students to engage in impulsive buying.
- The coefficient $b_2 = 0,448$ reflects a positive effect of the paylater variable. This indicates that the presence of the paylater feature on Shopee contributes to impulsive buying among students. The more accessible and convenient the paylater option becomes, the greater the likelihood of students making spontaneous purchases on the platform.

Significance Test

According to Table 3, the independent variables, flash sales and paylater, exhibit a statistically significant influence on impulsive buying, given that their P-values are under 0,05.

Further explanation can be seen in table 3 as follows:

- a. Impact of flash sales (X1) on impulse purchases (Y)

The analysis presented in Table 3 reveals that the P-value for flash sales (X1) is 0,001, which is less than 0,05. This indicates that the flash sale variable significantly affects students' impulsive buying behavior.

- b. The impact of paylater (X2) on impulse purchases (Y)

According to the analysis in Table 3, the P-value for paylater (X2) is 0,001, which is also below 0,05. This suggests that the paylater variable significantly influences students' impulsive buying behavior as well.

F Test

As shown in Table 4, the significance value is 0,001 and the F-value is 56,909. Since 0,001 is less than the 0,05 threshold, it can be concluded that the effect is statistically significant. This indicates that, collectively, flash sales and paylater features significantly and positively influence students' impulsive buying behavior.

4.2 Interpretation of Results

- a. The Effect of Flash Sale on Impulsive Buying

According to Table 3, the regression coefficient is $b = 0,432$, with a P-value of 0,001, which is below the 0,05 threshold. Therefore, the proposed assumption regarding the positive and significant influence of flash sales on impulsive buying can be accepted. This indicates that the more flash sale programs available on Shopee, the higher the impulsive purchasing behavior of students at Universitas Muhammadiyah Purworejo when shopping on Shopee.

- b. The Effect of Paylater on Impulsive Buying

According to Table 3, the regression coefficient is $b = 0,448$ and the P-value is 0,001, which is below the 0,05 significance level. Therefore, it can be concluded that Paylater significantly and positively influences impulsive buying behavior. This indicates that the easier it is to use the paylater payment feature, the more impulsive purchasing behavior among students at Universitas Muhammadiyah Purworejo increases.

- c. The Effect of Flash Sale and Paylater on Impulsive Buying

Based on Table 4, $sig = 0,001$ and the calculated F-value = 56,909. Since $sig = 0,001$ is less than 0,05, it can be stated that there is a significant influence, meaning there is a significant influence between flash sales and paylater simultaneously on impulsive purchasing. This suggests that an increase in flash sales and the ease of using paylater services are associated with higher impulsive buying tendencies among students at Universitas Muhammadiyah Purworejo.

5. Discussion

5.1 Comparison with Prior Research

This finding is consistent with research by Sari (2021), Dude *et al.* (2022), Wiyono *et al.* (2023) and which concluded that flash sales and paylater are marketing strategies that can significantly increase impulsive purchases.

5.2 Limitations

This study has several limitations that need to be considered, one of which is the scope of respondents who are only students of one university, namely Universitas Muhammadiyah Purworejo and the Shopee e-commerce platform. So the findings cannot be generalized widely to all university students. The second limitation is that the data was collected using an online questionnaire, which may cause response bias, such as respondents' inaccuracy in filling in or

answering based on expected social perceptions. The research only focused on two independent variables (flash sale and paylater), without considering other factors such as emotions, social media promotions, or other factors that can also trigger impulsive buying. All data comes from the subjective perceptions and personal answers of respondents. This can affect the accuracy of the data due to the possibility of overestimating or underestimating their shopping experience.

5.3 Future Research

Considering the findings and constraints of this study, it is suggested that future studies expand the sample to include more universities, explore other demographic aspects such as income levels, and analyze differences among various e-commerce platforms. Additionally, future research could incorporate qualitative methods to dig deeper into the psychological or emotional motivations behind impulsive purchasing decisions and use experimental designs or longitudinal studies to see how impulsive behavior changes over time or in response to specific e-commerce campaigns.

6. Conclusion

This study concludes that flash sales and paylater, either separately or together, have a positive and significant impact on the impulsive purchasing behavior of students at Muhammadiyah University Purworejo.

1. Flash sales individually have a positive impact on impulsive buying behavior. The regression analysis yielded a coefficient of $b = 0,432$ with a P-value of 0,001, which is below the 0,05 significance level. This supports the acceptance of the initial hypothesis, confirming that flash sales significantly and positively influence impulsive buying.
2. Paylater also demonstrates a positive influence on impulsive buying behavior when examined independently. The analysis produced a regression coefficient of $b = 0,448$ and a P-value of 0,001, indicating statistical significance. Therefore, the proposed statement suggesting that paylater has a significant positive impact on impulsive buying is supported.
3. When analyzed together, flash sales and paylater features collectively contribute to impulsive buying behavior. The results show a significance value of 0,001 and an F-statistic of 56,909. Because the significance value is lower than 0,05, it can be concluded that there is a statistically significant joint effect, suggesting that both flash sales and paylater services substantially influence impulsive buying when combined.

From the results above, it can be concluded that flash sales encourage students to make purchases due to time pressure and big discounts, while paylater provides convenience in payments that can overcome financial constraints when purchasing goods. The combination of flash sales and paylater features significantly increases the likelihood of impulsive buying behavior. Therefore, it is necessary to increase financial literacy among students so that they are able to consider shopping decisions wisely.

7. Recommendation

According to the study's findings, e-commerce companies like Shopee should keep social responsibility in mind when putting marketing plans into action, particularly when aiming to attract students. Flash sale and paylater features should be accompanied by education about wise use and long-term financial impacts. For institutions, it is important to organize financial literacy training as part of the curriculum or student coaching activities in order to build healthy and rational consumption behavior.

Appendix

The statements given by respondents regarding impulsive buying, flash sales and paylater are attached as follows:

No	Statement	Weight				
		1	2	3	4	5
Impulsive Buying (Y)						
1.	I often feel the urge to buy a product immediately when I see the best deals on Shopee					
2.	I sometimes buy something spontaneously on Shopee without thinking twice because I feel like I want to have the product immediately					
3.	I tend to ignore the negative impacts of my spontaneous purchases on Shopee					
4.	I feel happy or satisfied after buying a product on impulse on Shopee					
5.	I often find it difficult to resist the urge to buy a product that suddenly appears when using the Shopee application					
6.	I am interested in buying an item on Shopee because there is an advertisement or promotion that attracts my attention					
7.	I often feel influenced to buy a product on Shopee when I see a friend or someone else buying the same item					

No	Statement	Weight				
		1	2	3	4	5
Flash Sale (X1)						
1.	I feel like I have to buy the product immediately because the discount offer on Shopee only lasts for a short time					
2.	The number of products available on Shopee during a short-term discount offer is very limited					
3.	I rush to buy because the discount offer deadline on Shopee is very tight					
4.	Product information during a short-term discount offer on Shopee really helps me make a purchasing decision					
5.	I feel like I get a more economical price when buying a product on a short-term discount offer on Shopee					
6.	Economic benefits are the main reason I join the short-term discount offer program on Shopee					

No	Statement	Weight				
		1	2	3	4	5
Paylater (X2)						
1.	have been using the Shopee paylater feature for more than 1 year					

2.	I understand how the paylater feature works and its benefits compared to other payment methods on Shopee					
3.	I usually spend less than 5 minutes to complete a paylater transaction					
4.	The process of activating and using paylater on Shopee is not difficult for me					
5.	I am satisfied using the paylater feature because it can help me shop when funds are limited					
6.	The appearance or design of the paylater feature interface on the Shopee application looks attractive and easy to understand					

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