

The Effect of Flash Sales and Free Shipping on Impulse Buying Among Tiktok Shop Users on Students in Mataram City

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Abstract

This study aims to examine and analyze the influence of Flash Sale and Free Shipping on Impulse Buying among TikTok Shop users, specifically university students in Mataram City. This research uses a quantitative approach. The sample size in this study consists of 100 respondents. The sampling technique used is non-probability sampling. The data analysis in this study employs multiple linear regression analysis, validity and reliability tests, and classical assumption tests, including normality test, multicollinearity test, and heteroscedasticity test, as well as hypothesis testing. All data were processed using SPSS Statistics 21. The results of the study indicate that the independent variable Flash Sale has a positive and significant effect on the dependent variable Impulse Buying, while the independent variable Free Shipping does not have a positive and significant effect on Impulse Buying.

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1. INTRODUCTION

In the current era of globalization, the development of information technology is experiencing rapid development. So that directly or indirectly requires people to be able to keep up with technological developments [1]. Consumers today are faced with various choices before deciding to buy something. Consumer purchasing behavior can be classified into several main categories based on the intensity of decision-making and the process they go through before making a purchase. First, there is routine or habitual purchasing behavior, where consumers buy products based on habit without much consideration [2]. This type of behavior often occurs for items with high purchase frequency, which are generally everyday products. Second, purchases made with careful consideration involve a more in-depth analysis of various factors, such as price, product quality, and previous satisfaction. Research by [3]. shows that these factors significantly influence consumer purchasing decisions in various product categories. One trading platform that utilizes the internet is social commerce. Social commerce is known as "one-to-one marketing," where business processes can adapt more flexibly when companies or individuals have the ability to collect information about individual customers or business partners, such as retailers, distributors, or suppliers. Kotler & Keller in [4]. This can encourage consumers to make impulsive purchases.

With the rise in online purchases by internet users, the development of commerce media in Indonesia is growing rapidly [5]. TikTok is a social media platform that focuses on video content and also offers shopping opportunities. TikTok first appeared in Indonesia in 2021 after receiving official permission from the government to operate its business on social media and e-commerce [4]. One innovation that is currently in the

spotlight is TikTok Shop, a feature within the TikTok application that integrates short video entertainment with direct buying and selling activities. This phenomenon provides a unique shopping experience because it combines creative content with real-time product offerings, creating an interactive and entertaining shopping space.

In the world of digital marketing, promotional strategies play an important role in shaping consumer behavior [6]. Among various forms of promotion, flash sales and free shipping have proven to be two of the most powerful strategies in encouraging impulse buying[7]. Flash sales are a strategy in online businesses to sell goods exclusively at prices much cheaper than the original, and of course for a very limited time[8]. Flash sales are usually offered for a limited time with a limited number of products, creating a sense of urgency and Fear Of Missing Out (FOMO) among consumers. This situation encourages individuals to make quick and impulsive purchasing decisions without in-depth rational analysis[9].

Free shipping is the seller's withdrawal of shipping costs for goods or services, which were previously charged to the buyer during the purchase process [10]. The free shipping feature removes the barrier of additional costs that are usually a major consideration in online transactions, making products feel more affordable and increasing the likelihood of spontaneous purchases [11]. Unlike promotions such as cashback or endorsements by brand ambassadors, which have a more indirect effect, flash sales and free shipping provide benefits that can be felt immediately by users.

Besides flash sales and free shipping, emotional factors are also a key driver of impulse buying. According to research [12], positive emotions felt when viewing a product at a significant discount can increase the likelihood of an impulse purchase. TikTok Shop, with its algorithmic system that adapts content to user preferences, increases the likelihood of creating positive emotions, which then trigger unplanned purchasing behavior.

The presence of an active online community on TikTok also reinforces social influences on purchasing decisions. A study by [13] found that peer influence within a digital community can accelerate impulsive purchasing decisions, especially when community members share their shopping experiences with flash sales or free shipping. This social environment reinforces the norm of following popular shopping trends.

The impulse buying trend among TikTok Shop users has also been highlighted in various previous studies. One such study is by [4], which revealed that the majority of Generation Z respondents admitted to having made unplanned purchases due to being influenced by flash sales and free shipping promotions on TikTok Shop. This finding suggests that marketing strategies emphasizing urgency and eliminating cost barriers have a significant influence in encouraging impulse buying. Conversely, a study conducted by [14] in Samarinda City found that only free shipping had a significant influence on impulsive behavior, while flash sales had no significant impact. These differences in findings indicate variations in influence across regions, possibly influenced by geographic conditions, digital literacy levels, and local consumption culture. Therefore, it is important to further examine the influence of these two variables in the context of university students in Mataram City.

2. RESEARCH METHOD

2.1. Types of research

The type of research in this study is associated with a quantitative approach. According to [15] associative research is research that aims to determine the relationship between two or more variables. This study aims to determine the effect of Flash Sale (X1) and Free Shipping (X2) variables on Impulse Buying (Y) on TikTok Shop users towards students in Mataram City. This research is categorized as

development research because it examines variables that have been widely studied before, namely Flash Sale (X1) and Free Shipping (X2), but in a different context and scope. The focus of this research is on the TikTok Shop platform with students in Mataram City as its population.

2.2. Population and Sample

If the population is not known with certainty, then it can be assumed that the minimum number of respondents for quantitative analysis is 30 to 500 samples following a practical approach [15]. In this study, researchers took 100 samples which were active students in Mataram City. The sampling method used in this study was non-probability sampling, namely using purposive sampling. According to [15], non-probability sampling is a sampling technique in which not all members of the population have an equal opportunity to be selected as a sample. This technique is used because researchers have limitations in knowing all members of the population or when they want to focus on certain characteristics of the population. Purposive sampling is one type of non-probability sampling. According to [15], the purposive sampling technique is a technique by determining certain criteria in the sample.

2.3. Method of collecting data

General data collection conducted through questionnaires, structured observations, or structured interviews. In this study, the data collection technique used was a questionnaire. According to [15], a questionnaire is a data collection technique carried out by providing a set of written questions or statements to respondents to be answered. The instrument used in this study was a closed questionnaire using a measuring tool, namely the Likert scale. This scale is a scale used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena [15]. The measurement method is by providing statements to respondents and asking them to provide one of five answer choices, each with a different value.

Table 1. Operational Definition of Variables

No	Variable s	Variable Definition	Indicator	Item
1	<i>Impulse Buying</i>	Impulsive reactions are the tendency of consumers to buy spontaneously, suddenly, immediately and tend to happen suddenly.	1. Spontaneous purchase 2. Purchase without thinking about the consequences 3. Purchasing is influenced by emotional state	1. Unplanned (spontaneous) 2. Buy directly 1. Without thinking twice 2. Buying even though you don't need it 1. Enthusiasm, feeling of joy or enthusiasm 2. Unable to resist the urge of the heart

			4. Purchases are influenced by attractive offers	1. Tend to buy products when there are discounts or special promotions 2. Attractive offers influence purchasing decisions
2	<i>Flash Sale</i>	Short selling or also known as <i>Flash Sale</i> is part of TikTok Shop's sales promotion that gives consumers special offers or discounts on certain products for a limited time.	1. Discount 2. Frequency 3. Duration 4. Availability 5. Promo <i>Flash Sale</i> interesting	1. Giving discounts outside the original price 2. More affordable 1. Huge discount 2. Desire to shop 1. Short time offer 2. The duration of time is so fast 1. Limited number of products 2. Offering a variety of products 1. Attracting attention to buy 2. Offer more attractive discounts
3	Free Shipping	Free Shipping is a free shipping promotion, provided by TikTok Shop in the form of delivery of shopping items without being charged shipping fees.	1. Not permanent 2. Have provisions 3. Occurs at certain events	1. Free shipping is not provided permanently 2. Have a short time 1. Based on the minimum spend and applicable provisions 2. Reduce shipping costs 1. Available at certain events 2. Held on a national holiday

Source: Processed Secondary Data, 2025

2.4. Validity Test

According to [16] Validity Test is used to measure the validity or otherwise of a questionnaire. A questionnaire is said to be valid if the questions in the questionnaire are able to reveal something that will be measured by the questionnaire. In the validity test, a question or indicator is declared valid if the calculated r value $> r$ table at a significance of 0.05/5%. However, if the calculated $r < r$ table at a significance of 0.05 or 5% then the question or indicator is declared invalid.

In this study, the Validity Test was carried out using a correlation technique, namely correlating the item scores with the total variables using the Product Moment correlation technique, with the following formula:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum AND)}{\sqrt{\{n \sum X^2 - (\sum X)^2\} \{n \sum AND^2 - (\sum AND)^2\}}}$$

Information:

r_{xy} = Product Moment Correlation

n = Number of Samples

X = Score on each question item

AND = Total score of all question items

2.5. Reliability Test

According to [16] Reliability Test is a tool to measure a questionnaire which is an indicator of a variable. Reliability Test is used to determine the consistency of the measuring instrument, whether the measuring instrument used is reliable and remains consistent if the measurement is repeated. This means that it can provide accurate results and its truth can be accounted for. In Reliability Test the instrument is declared Reliable if the Cronbach's Alpha value is > 0.60 , but if on the contrary the Cronbach's Alpha value is < 0.60 then the instrument is declared unreliable.

2.6. Classical Assumption Test

Before conducting multiple linear regression testing, it is necessary to test the classical assumptions to ensure the regression model is more representative. In this study, three types of classical assumption tests will be conducted: normality testing, multicollinearity testing, and heteroscedasticity testing. All tests will be analyzed using the Statistical Package for the Social Sciences (SPSS) computer program.

The Classical Assumption Test used in this study is as follows:

a. Normality Test

After the Validity and Reliability Tests are completed, the next step is to conduct a Normality Test, which is one of the requirements in data analysis. The purpose of the Normality Test is to determine whether the distribution of data in a group or variable follows a normal distribution pattern. According to [16], the Normality Test aims to test whether in the regression model, the confounding variables or residuals have a normal distribution.

Normality testing was performed using the Asymp.Sig. (2-tailed) statistic through the One Sample Kolmogorov-Smirnov Test. Normality in the regression model can be determined from the significance value in the Kolmogorov-Smirnov test. If the significance value is < 0.05 , then the regression model does not meet the normality assumption. Conversely, if the significance value is > 0.05 , then the regression model is declared to meet the normality assumption (normally distributed).

b. Multicollinearity Test

The purpose of the Multicollinearity Test in this study is to determine whether there is a high relationship or correlation between independent variables in the regression model. According to [16], a good regression model should not contain correlation between independent variables, because this can affect the accuracy of the regression estimate. To determine whether there is Multicollinearity in a regression model is by looking at the Tolerance (TOL) and Variance Inflating Factor (VIF) values. If the tolerance (TOL) value is < 0.01 and the Variance Inflating Factor (VIF) value is > 10 , then there is a relationship between the independent variables or the study has Multicollinearity interference. And if the tolerance (TOL) value is > 0.01 and the Variance Inflating Factor (VIF) value is < 10 , then there is no relationship between the independent variables or the study does not have Multicollinearity.

c. Heteroscedasticity Test

According to [16], the Heteroscedasticity Test aims to determine whether in the regression model there is inequality in residual variance from one observation to another. If the residual variance between observations is constant, it is called Homoscedasticity, whereas if the variance varies, it is called Heteroscedasticity. A good regression model is a model that does not experience symptoms of Heteroscedasticity, or in other words has the properties of Homoscedasticity.

The basis for decision-making for the Heteroscedasticity Test is the Glejser Test. The Glejser Test can be used by regressing the absolute value of the residual on all independent variables. The criteria for the Heteroscedasticity Test using the Glejser method are: if the Significance value is > 0.05 , then Heteroscedasticity does not occur. Conversely, if the Significance value is < 0.05 , then Heteroscedasticity occurs.

2.7. Multiple Linear Regression Analysis

Multiple linear regression analysis is used to determine the linear relationship between two or more independent variables (X_1 , X_2 , and so on) with the dependent variable (Y). The purpose of this analysis is to see the direction of the relationship between the independent variables and the dependent variable, and to predict whether changes in the independent variables will cause an increase or decrease in the dependent variable. Multiple Regression Analysis in this study aims to test the effect of Flash Sale (X_1) and Free Shipping (X_2) on Impulse Buying (Y). This method is used to see the main effect, namely the influence of the independent variables on the dependent variable. The following is the regression equation:

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

Information:

AND = Impulse Buying

a = constant

b_1 = Regression Coefficient of Variable X_1 (Flash Sale)

b_2 = Regression Coefficient of variable X_2 (Free Shipping)

X_1 = Independent variable Flash sale

X_2 = Independent variable Free Shipping

and = Standard error

2.8. Hypothesis Testing

a. *Uji t*

The t-test is conducted to determine whether there is a partial influence of each independent variable on the dependent variable. The test is conducted based on the regression results with a significance level of $\alpha = 0.05$. If the significance value is <0.05 and the calculated t value is $> t$ table, then it can be concluded that H_0 is rejected and H_a is accepted. Conversely, if the significance value is >0.05 and the calculated t value is $< t$ table, then H_0 is accepted and H_a is rejected.

b. *Uji F*

The F test is used to test independent variables simultaneously against the dependent variable. In the F test, the confidence level generally used is 5% ($\alpha = 0.05$). The decision-making criteria used in the F-Test are as follows:

1. If $f \text{ count} > f \text{ table}$ or $\text{sig} < \alpha$ then H_0 is rejected and H_a is accepted. This means that Flash Sale and Free Shipping have a simultaneous influence on Impulse Buying among TikTok Shop Users.
2. If $f \text{ count} < f \text{ table}$ or $\text{sig} > \alpha$ then H_0 is accepted and H_a is rejected. This means that Flash Sale and Free Shipping do not have a simultaneous influence on Impulse Buying among TikTok Shop users.

c. *Coefficient of Determination Test (R2)*

The multiple determination coefficient (R^2) is used to determine the extent to which all independent variables simultaneously influence the dependent variable. In this study, the Flash Sale and Free Shipping variables were tested to determine whether they were able to explain changes in Impulse Buying on TikTok Shop. According to [15], the coefficient of determination (R^2) plays a role in indicating how well a regression model explains the relationship between variables. If the R^2 value is close to zero, then the model is considered poor because only a small change in purchasing decisions can be explained by the three variables. Conversely, if the value is close to one, then the model is considered strong because almost all variations in Impulse Buying can be explained by Flash Sale and Free Shipping.

3. RESULTS AND DISCUSSION

Respondents in this study were predominantly male, representing 52%, slightly more than female, representing 48%, with a percentage of 48%. This indicates that male students have a high interest in shopping at TikTok Shop. Respondents in this study were predominantly students aged 21-25, representing 68%, with a percentage of 68%. This is because a person's needs increase with age, and to fulfill their needs, those aged 21-25 usually prefer to buy goods online because it saves time and money.

3.1. Research Results

Flash Sale is a promotional strategy that offers products with limited availability and a short purchase time. This feature is implemented on social commerce platforms or marketplaces with the aim of increasing store sales within a very limited time. With the Flash Sale program offered by TikTok Shop, discounts are usually greater than usual. Every month TikTok Shop always holds massive discounts, even though the time given is very short or limited and with a very fast duration. The holding of the Flash Sale program also encourages consumers to want to shop, so that the Flash Sale offered to consumers can be encouraged to make Impulse Buying. The TikTok Shop Flash Sale program is not limited to just the same product but a variety of products are offered so

that consumers will regret if they do not make a purchase during the Flash Sale. This is why Flash Sale has a significant influence on Impulse Buying.

Based on the results of the t-test conducted in this study, it shows that Flash Sale has a t-value of 3.040 with a significance value of 0.003 at the significance level ($\alpha = 0.05$). Because the significance value is smaller than the significance level and the calculated t-value is greater than the t-table, it can be concluded that Flash Sale has a significant effect on Impulse Buying. These results indicate that the Flash Sale program can encourage consumers to make impulsive purchases (Impulse Buying). These results are in line with the findings of [17], which state that Flash Sale has a positive and significant effect on Impulse Buying. And also research conducted by [4], which states that the Flash Sale variable has a significant effect on Impulse Buying.

Free shipping is the withdrawal of shipping costs for goods or services by the seller, which were previously charged to the buyer during the buying and selling process. Although providing free shipping can attract consumer interest in making purchases, the findings in this study indicate that this incentive does not significantly influence Impulse Buying behavior among TikTok Shop student users in Mataram City. This statement can be proven through the results of the t-test in this study, where a significance value of 0.775 was obtained, which is greater than 0.05, and a calculated t value of -0.286 which is smaller than the t-table (1.660). Thus, the hypothesis stating that free shipping has an effect on Impulse Buying is rejected.

These findings indicate that although consumers still appreciate free shipping, its influence on impulse buying behavior is not significant. One reason is that consumers have become accustomed to free shipping promotions that appear periodically or are accompanied by certain conditions, such as minimum spending, so that this incentive is no longer the main driving force in making spontaneous purchasing decisions. In addition, because the free shipping program is not permanent and is only available at certain times, consumers tend to be more rational and selective in utilizing it, so they are not immediately tempted to make impulsive purchases. This finding contradicts the results of previous studies that stated that free shipping can trigger impulse buying, as expressed by [14] and [18], which stated that free shipping has a significant effect on impulse buying.

Thus, the free shipping strategy implemented by TikTok Shop has not been proven effective in significantly increasing impulse buying among students in Mataram City. This contrasts with the flash sale strategy, which has been shown to have a greater impact on spurring spontaneous buying behavior.

The results of this study provide an overview of the logical impacts arising from the previously outlined findings, both in theory and in practice. The study found that flash sales significantly influence impulse buying behavior, while free shipping did not. These results offer several important implications.

3.2. Discussion

a. Theoretical Implications

The findings of this study support our understanding of consumer behavior, particularly in the context of social media-based e-commerce, by demonstrating that urgency and limited-time offers, such as flash sales, can drive impulsive purchases. Conversely, incentives in the form of long-term economic benefits, such as free shipping, are not always the dominant factor in triggering impulsive purchasing decisions, particularly among students.

b. Practical Implications

For TikTok Shop managers and businesses utilizing this platform to market their products, the results of this study can serve as a guideline for designing more targeted promotional strategies. Flash Sales have proven effective in encouraging impulse buying behavior, making them a viable strategy for increasing sales volume in a short period of time. Therefore, businesses are advised to hold regular and engaging Flash Sales programs, with strong visuals to create a sense of urgency among consumers. On the other hand, while the Free Shipping feature remains attractive to consumers, its role in triggering impulse purchases appears to be less significant. Therefore, this strategy is more appropriate as a support to build consumer loyalty or increase repeat purchase frequency, rather than as the primary driver of spontaneous purchases.

c. Policy Implications

For regulators and policymakers, these findings provide insight into the potential for promotional strategies like flash sales to drive increased consumption among college students, many of whom are still in the economic transition phase and lack fully developed financial management skills. Therefore, efforts are needed to improve financial literacy among the younger generation so they can be more discerning and critical of various forms of digital promotions that can trigger impulsive consumer behavior.

4. CONCLUSIONS

Based on the results of data processing and the results of hypothesis testing discussed in the previous chapter, it can be concluded that the variable *Flash Sale* partially has a positive and significant effect on *Impulse Buying* on TikTok Shop user students in Mataram City, with a significance value of 0.003. This means that the more attractive *Flash Sale* carried out by TikTok Shop, the higher the occurrence of *Impulse Buying*. The Free Shipping variable partially does not have a significant effect on *Impulse Buying* on TikTok Shop student users in Mataram City, with a significance value of 0.775. This means that the free shipping strategy implemented by TikTok Shop has not been proven effective in increasing *Impulse Buying*. Variables *Flash Sale* and Free Shipping simultaneously have a significant impact on *Impulse Buying* on student TikTok Shop users in Mataram City with a significance value of 0.01.

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