

## MARKETING | RESEARCH ARTICLE

# Impulse Buying in Shopee E-Commerce: The Role of Live Streaming, Flash Sales, and Customer Reviews among University Students in Semarang

Rahmeinda Kintia<sup>1</sup>, Ali Maskur<sup>2</sup><sup>1,2</sup> Department of Management, Faculty of Economics and Business, Universitas Stikubank, Semarang, Indonesia.Email: [rahmeindakintia6001@mhs.unisbank.ac.id](mailto:rahmeindakintia6001@mhs.unisbank.ac.id)<sup>1</sup>, [maskur@edu.unisbank.ac.id](mailto:maskur@edu.unisbank.ac.id)<sup>2</sup>

## ARTICLE HISTORY

Received: February 05, 2026

Revised: April 14, 2026

Accepted: April 20, 2026

## DOI

<https://doi.org/10.52970/grmapb.v6i2.2094>

## ABSTRACT

This study aims to examine the effects of live streaming, flash sale, and customer review on impulse buying behavior of cosmetic products on the Shopee e-commerce platform among university students in Semarang City. This research employs a quantitative approach with a causal research design. Data were collected through questionnaires distributed to 96 respondents selected using a probability sampling technique. The data were analyzed using multiple linear regression with the assistance of SPSS software. The results show that live streaming has a positive and significant effect on impulse buying ( $t = 2.028$ ;  $p < 0.05$ ), indicating that real-time interaction and product visualization enhance consumers' emotional engagement and stimulate spontaneous purchases. Flash sale has the strongest positive and significant effect ( $t = 3.640$ ;  $p < 0.05$ ), suggesting that time-limited promotions and perceived scarcity create urgency and encourage impulsive buying behavior. In contrast, customer review has a negative and insignificant effect ( $t = -0.279$ ;  $p > 0.05$ ), indicating that reviews tend to function as rational evaluation tools rather than emotional triggers. Simultaneously, all variables significantly influence impulse buying ( $F = 12.922$ ;  $p < 0.05$ ), with a coefficient of determination ( $R^2$ ) of 0.274. These findings suggest that impulse buying in e-commerce is primarily driven by emotional and promotional stimuli rather than informational factors. This study contributes to the understanding of consumer behavior in digital marketing contexts and provides practical implications for optimizing marketing strategies in e-commerce platforms.

**Keywords:** Live Streaming, Flash Sale, Customer Review, Impulsive Buying, Shopee E-Commerce

**JEL Code:** M31, D91, L81, M37

## I. Introduction

The rapid development of digital technology has significantly transformed consumer behavior, particularly in shopping activities that have shifted from physical stores to online platforms. Through digital marketing, consumers can easily access product information, promotional offers, and complete transactions using mobile devices (Wardani & Fachrunnisa, 2026). This condition encourages businesses to continuously innovate and adapt their strategies in order to remain competitive in an increasingly dynamic market



environment (A. A. P. Sari & Habib, 2023). Within the context of digital marketing, promotional activities play a strategic role, as they have been proven to positively influence consumer purchase decisions and effectively expand market reach (Khoirunnisa & Riva'i, 2023; Maulana & Maskur, 2023). Along with these developments, e-commerce has become a primary medium for online buying and selling activities. In Indonesia, e-commerce growth has shown a strong upward trend. According to We Are Social (2023), the number of e-commerce users has reached more than 178.9 million people, or approximately 63% of the total population, positioning Indonesia as one of the largest e-commerce markets in Southeast Asia. This indicates that e-commerce is no longer merely an alternative channel but has become a main platform for fulfilling consumer needs, including cosmetic products. Among various e-commerce platforms, Shopee holds a dominant position, with more than 131 million monthly visits (iPrice, 2022). In addition, Shopee records the highest level of live streaming feature usage, at 83.4%, indicating a strong digital ecosystem that is highly relevant for examining impulse buying behavior, particularly in the cosmetic product category (Annur, 2022). Previous studies also confirm that Shopee has a strong brand image, high consumer trust, and service quality that encourage online purchasing behavior, including impulse buying (Natasiah, 2024). Impulse buying has become increasingly prevalent in the digital era. It is defined as a spontaneous purchase that occurs when consumers encounter certain products and experience a strong urge to buy them immediately due to marketing stimuli (Utami, 2018). In the context of e-commerce, this behavior is intensified by digital marketing features such as live streaming, flash sales, and online customer reviews, which can generate psychological triggers leading to quick and unplanned purchasing decisions (Do Minh & Tran Hoai, 2026).

Live streaming enables real-time interaction between sellers and consumers, allowing buyers to obtain more comprehensive product information, such as quality, benefits, and usage instructions. This interactive feature enhances consumer trust and stimulates immediate purchase decisions (Prajana et al., 2021; Sarah & Sobari, 2022). Similarly, flash sales create urgency through limited-time discounts and scarcity, encouraging consumers to make rapid purchasing decisions (Hertanto et al., 2020; Nighel & Sharif, 2022). In addition, customer reviews serve as an important source of information that helps consumers evaluate product quality and credibility, thereby influencing purchasing decisions (Rinaja et al., 2022). Previous studies have shown that live streaming, flash sales, and customer reviews influence impulse buying behavior, both partially and simultaneously (Putri et al., 2025; Syamsiyah et al., 2024). However, the findings remain inconsistent, particularly regarding the effect of flash sales, and many studies have examined these variables separately. Moreover, empirical research that integrates live streaming, flash sales, and customer reviews into a single model, especially in the context of cosmetic products on the Shopee platform, is still limited. In addition, most previous studies have not specifically focused on the characteristics of young consumers, particularly university students, who represent a highly active segment in digital environments. This group is characterized by high technological adoption, strong interest in lifestyle trends, and intensive use of e-commerce platforms. Based on these gaps, this study aims to analyze the effects of live streaming, flash sales, and customer reviews on impulse buying behavior of cosmetic products on the Shopee e-commerce platform, focusing on university students in Semarang City. This research is expected to provide both theoretical contributions by strengthening the understanding of impulse buying behavior in digital marketing contexts and practical implications for developing more effective marketing strategies targeting young consumers.

## II. Literature Review and Hypothesis Development

### 2.1. Theory of Planned Behaviour

The Theory of Planned Behavior (TPB), developed by Icek Ajzen (1991), is one of the most widely used theoretical frameworks for explaining and predicting human behavior, particularly in decision-making contexts. This theory is an extension of the Theory of Reasoned Action and posits that an individual's behavior is determined by behavioral intention, which is influenced by three key components: attitude toward the behavior, subjective norms, and perceived behavioral control. Attitude refers to an individual's positive or

negative evaluation of a behavior; subjective norms relate to perceived social pressure; and perceived behavioral control reflects the perceived ease or difficulty of performing the behavior (Liu & Jin, 2025). In the context of online consumer behavior, TPB provides a comprehensive framework for understanding how individuals make purchasing decisions. Previous studies have demonstrated that attitude, subjective norms, and perceived behavioral control significantly influence consumers' intentions and actual purchasing behavior in digital environments, including e-commerce and live streaming platforms (L. Li & Kang, 2023). This suggests that even impulse buying behavior, which is often considered spontaneous, can still be explained through structured cognitive and behavioral processes. In the context of impulse buying, attitude plays an important role in shaping consumers' perceptions of spontaneous purchasing. When consumers perceive impulse buying as enjoyable, satisfying, or beneficial, they are more likely to develop a positive attitude toward such behavior, which increases the likelihood of engaging in impulsive purchases. Previous studies have shown that positive attitudes toward impulse buying significantly encourage spontaneous purchasing behavior in online environments. Subjective norms also contribute to impulse buying behavior, particularly in digital environments where social influence is highly prominent.

Consumers are often influenced by peers, social media, and online communities, which can create pressure or encouragement to engage in purchasing behavior. This social influence strengthens behavioral intention and can lead to impulse buying, especially among young consumers who are highly exposed to social interactions and digital content (Yee & Zainal, 2025). Impulse buying refers to spontaneous and unplanned purchasing behavior that occurs without prior intention. It is typically triggered by sudden urges and influenced by both internal and external stimuli. In online environments, impulse buying is increasingly shaped by various digital stimuli such as interactive features, promotional strategies, and social influence (L. Li & Kang, 2023). Moreover, impulse buying behavior is not purely irrational; rather, it involves an interaction between emotional responses and cognitive evaluations. Consumers often experience emotional triggers such as excitement, urgency, or fear of missing out, which can override rational thinking and lead to immediate purchasing decisions. This indicates that impulse buying is a complex behavior that combines both affective and cognitive elements (Istiasih, 2024). In e-commerce contexts, particularly on interactive platforms such as live streaming and online marketplaces, impulse buying is further intensified by real-time communication, easy access to information, and persuasive marketing strategies. These conditions stimulate consumers' emotions and reduce their ability to control purchasing behavior, thereby increasing the likelihood of impulse buying. Based on the TPB framework, consumer behavior is influenced not only by rational considerations but also by psychological and environmental factors. Therefore, impulse buying in e-commerce can be explained as the result of the interaction between behavioral intentions, emotional triggers, and digital marketing stimuli.

## 2.2. Impulse Buying

Impulse buying refers to spontaneous and unplanned purchasing behavior that occurs without prior intention and is often driven by strong emotional impulses (Pratiwi & Krishernawan, 2020). This behavior typically arises when consumers are exposed to certain stimuli that trigger immediate purchasing decisions without extensive evaluation (Aprilia & Mahfudzi, 2020; Elnina, 2022). In the context of e-commerce, impulse buying behavior has become increasingly prevalent due to digital environments that are rich in marketing stimuli. Unlike traditional shopping, online platforms provide interactive features, visual presentations, and promotional strategies that continuously attract consumers' attention and influence their decision-making processes. Impulse buying behavior is not purely irrational; rather, it involves the interaction between emotional and cognitive processes. Consumers often experience strong urges, such as excitement or urgency, which can override rational thinking and lead to immediate purchasing decisions. This behavior is characterized by spontaneity, difficulty in self-control, responsiveness to external stimuli, and a tendency to ignore the potential consequences of purchasing decisions (Utami, 2018). Furthermore, impulse buying in digital contexts is closely related to the role of marketing stimuli embedded in e-commerce platforms.

Features such as live streaming, flash sales, and customer reviews create psychological triggers that influence consumers' perceptions and behavior. For instance, real-time interaction in live streaming enhances emotional engagement and encourages spontaneous purchases (Wongkitrungrueng & Assarut, 2020). Flash sales create a sense of urgency and scarcity that encourages consumers to make quick purchasing decisions (Li et al., 2021), while customer reviews function as social information that builds trust and reduces perceived risk (Nyrhinen et al., 2024).

### 2.3. Live Streaming

Live streaming refers to the real-time broadcasting of audio-visual content over the internet that enables direct interaction between sellers and consumers (Li, Y., García-de-Frutos, & Ortega-Egea, 2025; Qu et al., 2023). In the e-commerce context, live streaming has evolved beyond entertainment into an interactive marketing tool that facilitates real-time communication and enhances consumer engagement (Erwin et al., 2025). Through live streaming, consumers are able to obtain more comprehensive product information, such as texture, color, benefits, and usage instructions, which creates a more realistic and immersive shopping experience. This interactive environment enhances consumers' trust in sellers and reduces uncertainty in online transactions (Rahmawaty et al., 2023; Sarah & Sobari, 2022). More importantly, live streaming plays a significant role in influencing impulse buying behavior. Real-time interaction between sellers and consumers can strengthen emotional engagement, making consumers feel more connected and involved in the shopping process. Factors such as presenter attractiveness, trustworthiness, expertise, perceived product usefulness, and ease of transaction further reinforce this effect (M. Li et al., 2022). These elements not only provide information but also stimulate emotional responses, which can reduce consumers' ability to engage in rational evaluation. As a result, consumers are more likely to experience spontaneous purchase urges when exposed to live streaming content. The combination of real-time interaction, persuasive communication, and emotional stimulation makes live streaming a powerful trigger of impulse buying in e-commerce environments.

### 2.4. Flash Sale

Flash sales are promotional strategies that offer significant price discounts within a limited period and are often accompanied by restricted product availability (Belch & Belch, 2009; Kotler & Keller, 2017). In the context of e-commerce, this strategy is specifically designed to create a sense of urgency and scarcity, which encourages consumers to make rapid purchasing decisions. More importantly, flash sales play a crucial role in stimulating impulse buying behavior. The limited duration and quantity of products create time pressure, which reduces consumers' ability to engage in rational evaluation. As a result, consumers tend to rely more on emotional responses, such as fear of missing out (FOMO), rather than careful consideration before making a purchase. Previous studies have shown that flash sales are effective in increasing transaction volume and triggering impulse buying, as consumers perceive greater financial benefits within a short time frame (Hertanto et al., 2020; Kunda, 2023). In addition, several key characteristics determine the effectiveness of flash sales, including the magnitude of discounts, promotional frequency, duration, and product scarcity (Belch & Belch, 2009; Kotler & Keller, 2012). The combination of these factors intensifies psychological pressure and creates a competitive purchasing environment in which consumers feel compelled to act quickly. Consequently, flash sales not only provide economic incentives but also act as a strong psychological trigger that increases the likelihood of impulse buying in e-commerce settings.

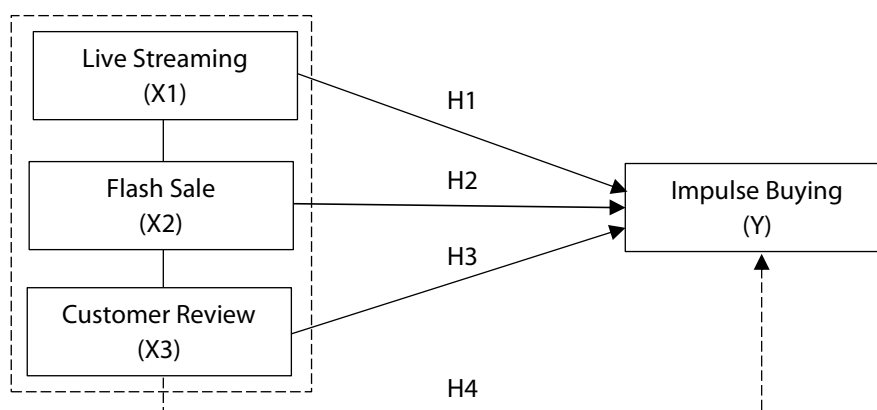
### 2.5. Customer Review

Customer reviews represent a form of online consumer feedback based on post-purchase experiences with products or services and serve as an important source of information in e-commerce

environments (Wibowo et al., 2025). These reviews help potential buyers evaluate product quality and seller credibility, thereby influencing purchase decisions and repurchase intentions (A. G. Sari & Aquinia, 2024). Beyond written reviews, product ratings also play a crucial role as summary indicators of collective consumer evaluations. Consumers tend to prefer products with higher ratings, as they are perceived as more reliable and trustworthy (Macheka et al., 2024). As a result, both reviews and ratings function as signals that reduce information asymmetry in online transactions. More importantly, customer reviews influence impulse buying behavior by reducing uncertainty and perceived risk. When consumers are exposed to positive and credible reviews, they are more likely to develop trust and make faster purchasing decisions without extensive evaluation. The effectiveness of online reviews is determined by several factors, including information usefulness, reviewer expertise, timeliness, review volume, review valence, and content completeness (Alsaraireh et al., 2022). These dimensions shape how consumers interpret and rely on the information provided. However, customer reviews can also have a dual effect. While positive reviews may encourage impulse buying, negative reviews can create hesitation and delay purchasing decisions. This indicates that customer reviews not only act as informational cues but also as psychological triggers that shape consumer perceptions and behavior. Therefore, in e-commerce settings, customer reviews play a significant role in influencing impulse buying by providing social proof, reducing perceived risk, and accelerating consumers' decision-making processes.

## 2.6. Conceptual Framework

Previous studies have demonstrated that digital marketing stimuli such as live streaming, flash sales, and customer reviews significantly influence impulse buying behavior in e-commerce contexts. However, the findings remain inconsistent, particularly regarding the effect of flash sales, where some studies report significant effects while others find limited influence. In addition, most previous studies have examined these variables separately rather than integrating them into a single comprehensive model. Furthermore, limited empirical research has focused specifically on cosmetic products on the Shopee platform, particularly among university students, who represent a highly active digital consumer segment. Therefore, this study aims to fill this gap by examining the combined effects of live streaming, flash sales, and customer reviews on impulse buying behavior within a unified framework. The conceptual framework of this study is developed based on the Theory of Planned Behavior proposed by Icek Ajzen (1991) and supported by empirical findings from previous research. TPB explains that consumer behavior is influenced by attitudes, subjective norms, and perceived behavioral control, which are further shaped by external stimuli in digital environments. In the context of e-commerce, live streaming enhances emotional engagement and trust, flash sales create urgency and scarcity, and customer reviews provide social proof and reduce perceived risk. These factors act as digital marketing stimuli that influence consumers' psychological responses and ultimately lead to impulse buying behavior. Therefore, this study proposes that live streaming (X1), flash sale (X2), and customer review (X3) have direct effects on impulse buying (Y), both individually and simultaneously.



**Figure 1. Conceptual Framework**

## 2.7. Hypothesis Development

### a. The Effect of Live Streaming on Impulse Buying

Live streaming provides real-time interaction between sellers and consumers, which enhances emotional engagement and trust. This interactive environment stimulates consumers' responses and reduces rational evaluation, thereby increasing the likelihood of spontaneous purchasing behavior. Previous studies have shown that live streaming significantly influences impulse buying behavior.

*H1: Live streaming has a positive effect on impulse buying behavior.*

### b. The Effect of Flash Sale on Impulse Buying

Flash sales create time pressure and scarcity through limited-time promotions and restricted product availability. These conditions trigger urgency and fear of missing out (FOMO), which encourages consumers to make quick and unplanned purchasing decisions. Empirical studies indicate that flash sales can significantly stimulate impulse buying behavior.

*H2: Flash sales have a positive effect on impulse buying behavior.*

### c. The Effect of Customer Review on Impulse Buying

Customer reviews serve as social proof that reduces uncertainty and increases trust in online transactions. Positive and credible reviews encourage consumers to make faster purchasing decisions without extensive evaluation. However, the influence of customer reviews may vary depending on their valence and credibility.

*H3: Customer reviews have a positive effect on impulse buying behavior.*

### d. The Simultaneous Effect of Live Streaming, Flash Sale, and Customer Review on Impulse Buying

In e-commerce environments, consumers are exposed to multiple digital marketing stimuli simultaneously. The combination of interactive features, promotional strategies, and social information creates a persuasive environment that enhances both emotional and cognitive responses, thereby increasing the likelihood of impulse buying.

*H4: Live streaming, flash sales, and customer reviews simultaneously have a positive effect on impulse buying behavior.*

## III. Research Method

### 3.1. Research Method

This study employs a quantitative approach with a causal research design to examine the effects of live streaming, flash sales, and customer reviews on impulse buying behavior of cosmetic products on the Shopee e-commerce platform. The quantitative approach is considered appropriate because this study aims to test the relationships between variables and measure the magnitude of their effects using statistical analysis. Compared to qualitative approaches, which focus on exploration and interpretation, the quantitative method enables objective measurement and hypothesis testing, making it more suitable for examining cause-and-effect relationships among variables. The causal research design is used to identify the direct and simultaneous effects of the independent variables on the dependent variable. Multiple linear regression analysis is applied to evaluate these relationships.

### 3.2. Population and Sample

The population of this study consists of university students in Semarang who have purchased cosmetic products through the Shopee platform and have been exposed to features such as live streaming, flash sales, and customer reviews. Since the exact number of individuals in this population cannot be determined, it is categorized as a large or indeterminate population rather than a strictly infinite population. The sampling technique used in this study is simple random sampling, a type of probability sampling that provides each member of the population with an equal chance of being selected. The sample size was determined using the Lemeshow formula with a 95% confidence level and a 10% margin of error.

$$n = \frac{z^2 \times p(1 - p)}{d^2}$$

$$n = \frac{1,96^2 \times 0,5(1 - 0,5)}{0,1}$$

$$n = \frac{3,8416 \times 0,25}{0,01}$$

$$n = 96,04$$

The calculated sample size is 96.04, which was rounded down to 96 respondents for practicality and feasibility in data collection. This rounding does not significantly affect the precision of the results, as the difference is negligible. The selected sample size is considered adequate for multiple linear regression analysis because it meets the minimum requirement for statistical testing involving several independent variables.

### 3.3. Data Sources and Data Collection Methods

The data sources in this study consist of primary and secondary data. Primary data were collected through questionnaires distributed to respondents, while secondary data were obtained from academic literature, scientific journals, and previous research relevant to the study. Data collection was conducted using a structured questionnaire with a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The instrument was developed based on indicators adapted from previous studies to ensure content validity and reliability.

### 3.4. Research Variables and Operational Definitions

The dependent variable in this study is impulse buying (Y), while the independent variables include live streaming (X1), flash sales (X2), and customer reviews (X3). Each variable has a distinct conceptual role in influencing consumer behavior. Impulse buying represents spontaneous and unplanned purchasing behavior driven by emotional impulses. Live streaming reflects interactive marketing features that enhance consumer engagement and trust. Flash sales represent promotional strategies characterized by time limitations and scarcity, while customer reviews reflect social information that influences consumer perceptions and trust. To ensure conceptual distinction, each variable is measured using different indicators. For example, live streaming focuses on interaction, attractiveness, and trust; flash sales emphasize urgency, discount level, and time limitations; and customer reviews focus on information usefulness, credibility, and ratings. Each variable is measured using multiple indicators on a Likert scale. Examples of measurement items include:

- a. Impulse Buying: "I often purchase products spontaneously without prior planning."
- b. Live Streaming: "Live streaming helps me understand product details more clearly."
- c. Flash Sale: "Limited-time promotions encourage me to buy products immediately."
- d. Customer Review: "Customer reviews increase my confidence in purchasing products."

In addition to the main variables, this study considers several demographic factors such as age, gender, and frequency of online shopping as control variables. These factors may influence impulse buying behavior and are included to minimize potential bias in the analysis.

### 3.5. Data Analysis

Data analysis was conducted using statistical software, namely IBM SPSS Statistics. The analysis process included validity and reliability tests to ensure the quality of the research instrument, as well as classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests. Hypothesis testing was performed using multiple linear regression analysis to examine both the partial and simultaneous effects of the independent variables on impulse buying behavior. The t-test was used to analyze the partial effects of each independent variable, while the F-test was used to assess the simultaneous effects of all independent variables on the dependent variable.

## IV. Result and Discussion

### 4.1. Respondent Demographics

The respondents in this study consisted of university students in Semarang who have purchased cosmetic products through the Shopee platform. The demographic characteristics analyzed in this study include gender, age, and frequency of online shopping. The majority of respondents are female students, indicating that cosmetic products are more relevant to female consumers. In addition, most respondents fall within the productive age range and actively engage in online shopping, making them an appropriate group for analyzing impulse buying behavior in e-commerce contexts.

### 4.2. Validity Test

The validity test was conducted to evaluate whether each questionnaire item accurately measures the intended variable. The criteria used in this study include a significance level of 5% ( $\alpha = 0.05$ ) and an r-table value of 0.2017, as suggested by Imam Ghozali (2016, 2018).

**Table 1. Validity Test Results**

Variable	Item Code	r-Calculated	r-Table	Result
Live Streaming	X1_1	0.822	0.2017	Valid
	X1_2	0.853	0.2017	
	X1_3	0.676	0.2017	
	X1_4	0.717	0.2017	
Flash Sale	X2_1	0.745	0.2017	
	X2_2	0.876	0.2017	
	X2_3	0.889	0.2017	
	X2_4	0.849	0.2017	
	X2_5	0.850	0.2017	
Customer Review	X3_1	0.313	0.2017	
	X3_2	0.382	0.2017	
	X3_3	0.388	0.2017	
	X3_4	0.420	0.2017	
Impulse Buying	Y_1	0.642	0.2017	
	Y_2	0.743	0.2017	
	Y_3	0.813	0.2017	
	Y_4	0.854	0.2017	
	Y_5	0.864	0.2017	

Based on Table 1, all calculated r-values are greater than the r-table value and are positive. Therefore, all measurement items are considered valid and suitable for further analysis.

#### 4.3. Reliability Test

Reliability testing was conducted using Cronbach's Alpha to assess the consistency of the measurement instrument. A variable is considered reliable if the Cronbach's Alpha value exceeds 0.60, as suggested by Imam Ghozali (2018).

**Table 2. Reliability Test Results**

Variable	Cronbach's Alpha	Standard	Result
Live Streaming (X1)	0.764	0.60	Reliable
Flash Sale (X2)	0.905	0.60	
Customer Review (X3)	0.878	0.60	
Impulse Buying (Y)	0.895	0.60	

Based on Table 2, all variables have Cronbach's Alpha values greater than 0.60. Therefore, all variables are considered reliable and suitable for further analysis.

#### 4.4. Normality Test

**Table 3. Normality Test (Kolmogorov-Smirnov Test)**

Unstandardized Residual		
N		96
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	2.26351361
Most Extreme Differences	Absolute	.078
	Positive	.046
	Negative	-.078
Test Statistic		.078
Asymp. Sig. (2-tailed)		.179c

Based on Table 3, the Kolmogorov-Smirnov normality test shows a significance value of 0.179, which is greater than 0.05. According to the decision criteria for the normality test, data are considered normally distributed if the significance value is greater than 0.05. Therefore, the data in this study are statistically normally distributed and meet the normality assumption required for regression analysis.

#### 4.5. Multicollinearity Test

The multicollinearity test was conducted to determine whether there is a high correlation among the independent variables in the regression model.

**Table 4. Multicollinearity Test Results**

Variable	Tolerance	VIF	Result
Live Streaming (X1)	0.673	1.486	No multicollinearity detected
Flash Sale (X2)	0.630	1.588	
Customer Review (X3)	0.867	1.153	

Based on Table 4, the tolerance values for the Live Streaming, Flash Sale, and Customer Review variables are 0.673, 0.630, and 0.867, respectively, indicating that all tolerance values are greater than 0.10. In

addition, the Variance Inflation Factor (VIF) values for all variables are less than 10 ( $VIF < 10$ ). Therefore, it can be concluded that there is no multicollinearity among the independent variables in the regression model.

#### 4.6. Heteroscedasticity Test

The heteroscedasticity test was conducted to determine whether the variance of the residuals in the regression model is constant. In this study, the test was performed using the Glejser method to identify whether a specific pattern in the error variance could affect the validity of the model.

**Table 5. Heteroscedasticity Test Results**

Variable	Sig. Value	Result
Live Streaming (X1)	0.563	No heteroscedasticity detected
Flash Sale (X2)	0.067	
Customer Review (X3)	0.169	

Based on Table 5, the significance values for the Live Streaming, Flash Sale, and Customer Review variables are 0.563, 0.067, and 0.169, respectively. Since all significance values are greater than 0.05, it can be concluded that there is no heteroscedasticity in the regression model.

#### 4.7. Coefficient of Determination Test ( $R^2$ )

The coefficient of determination test is conducted to measure the extent to which the independent variables explain the variation in the dependent variable. A higher  $R^2$  value indicates a stronger explanatory power of the independent variables in predicting the dependent variable.

**Table 6. Coefficient of Determination Test ( $R^2$ )**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.544 <sup>a</sup>	0.296	0.274	2.300

Based on Table 6, the coefficient of determination shown in the Adjusted R Square column is 0.274. This indicates that live streaming, flash sales, and customer reviews explain 27.4% of the variation in impulse buying of cosmetic products on the Shopee platform, while the remaining 72.6% is influenced by other variables not examined in this study.

#### 4.8. F-Test (Simultaneous Test)

The F-test is used to determine whether all independent variables in the study simultaneously have a significant effect on the dependent variable. In this study, the sample size ( $n$ ) consisted of 96 respondents, with three independent variables ( $k$ ). Therefore, the degrees of freedom were calculated as  $df_1 = k = 3$  and  $df_2 = n - k - 1 = 92$ . At a significance level of 5%, the F-table value is 4.098.

**Table 7. F-Test Results**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	205.101	3	68.367	12.922	0.000 <sup>b</sup>
Residual	486.732	92	5.291		
Total	691.833	95			

Based on Table 7, the calculated F-value (12.922) is greater than the F-table value (4.098), and the significance value (0.000) is less than 0.05. Therefore, it can be concluded that live streaming, flash sales, and

customer reviews simultaneously have a significant effect on impulse buying of cosmetic products on the Shopee platform.

#### 4.9. Regression Analysis

Multiple linear regression analysis was conducted to examine the effects of live streaming (X1), flash sales (X2), and customer reviews (X3) on impulse buying of cosmetic products on the Shopee platform (Y). The results of the regression analysis are presented in Table 8.

**Table 8. Multiple Linear Regression Results**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance
	B	Std. Error	Beta			
1	(Constant)	8.215	1.691		4.859	.000
	X1_Tot	.195	.096	.216	2.028	.045
	X2_Tot	.352	.097	.401	3.640	.000
	X3_Tot	-.025	.090	-.026	-.279	.781

Based on the results shown in Table 8, the multiple regression equation can be formulated as follows:

$$Y = 8.215 + 0.195X_1 + 0.352X_2 - 0.025X_3 + e$$

The interpretation of the regression coefficients is as follows:

- Live Streaming (X1) has a regression coefficient of 0.195, indicating a positive effect on impulse buying. This means that a one-unit increase in live streaming is associated with an increase of 0.195 units in impulse buying of cosmetic products on the Shopee platform.
- Flash Sale (X2) has a regression coefficient of 0.352, indicating a positive effect on impulse buying. This implies that a one-unit increase in flash sales leads to an increase of 0.352 units in impulse buying of cosmetic products on the Shopee platform.
- Customer Review (X3) has a regression coefficient of -0.025, indicating a negative effect on impulse buying. This suggests that a one-unit increase in customer reviews is associated with a decrease of 0.025 units in impulse buying of cosmetic products on the Shopee platform.

#### 4.10. T-Test (Partial Test)

The t-test was conducted to examine whether each independent variable partially affects the dependent variable. In this study, the sample size (n) consisted of 96 respondents with three independent variables (k). Therefore, the degrees of freedom were calculated as  $df = n - k - 1 = 92$ . At a significance level of 5%, the critical t-value (t-table) is 1.661. Based on the results presented in Table 8, the partial effects of each variable are described as follows:

- Live Streaming (X1) shows a t-value of 2.028, which is greater than the t-table value of 1.661, with a significance value of 0.045 ( $< 0.05$ ). This indicates that live streaming has a positive and significant partial effect on impulse buying of cosmetic products on the Shopee platform.
- Flash Sale (X2) shows a t-value of 3.640, which is greater than the t-table value of 1.661, with a significance value of 0.000 ( $< 0.05$ ). This result indicates that flash sales have a positive and significant partial effect on impulse buying of cosmetic products on the Shopee platform.
- Customer Review (X3) shows a t-value of -0.279, which is lower than the t-table value of 1.661, with a significance value of 0.781 ( $> 0.05$ ). This indicates that customer reviews have a negative but statistically insignificant partial effect on impulse buying of cosmetic products on the Shopee platform.

#### 4.11. Discussion

##### a. Live Streaming on Impulse Buying

The results of this study show that live streaming has a positive and significant effect on impulse buying behavior. This finding indicates that real-time interaction, product demonstrations, and direct communication with sellers enhance consumers' emotional engagement and reduce rational evaluation, which ultimately leads to spontaneous purchasing decisions. This finding is supported by Suhyar and Pratminingsih (2023) and Septiyani and Hadi (2024), who found that live streaming has a significant positive effect on impulse buying behavior. Their studies explain that live streaming enables direct interaction between streamers and consumers, allowing real-time communication, product demonstrations, and immediate responses to consumer inquiries. This interactive environment creates a strong attraction and encourages consumers to make purchases without careful consideration. Furthermore, previous research explains that live streaming creates a sense of "being present," allowing consumers to see products directly while interacting with sellers, which can trigger impulse buying behavior. This finding indicates that the combination of visual stimulation and social interaction plays an important role in shaping consumer purchasing decisions. However, this result contradicts the findings of Putri et al. (2025), who reported that live streaming does not have a significant effect on impulse buying behavior among users of the TikTok shopping feature. The study suggests that although live streaming provides interactive features, some consumers—particularly students—still prioritize rational considerations such as price and financial limitations. As explained in the study, consumers may not be easily influenced by live interaction alone if they are more focused on economic factors. These differences may be caused by variations in consumer characteristics, such as age, financial condition, level of product involvement, and self-control. Consumers with higher rational awareness or stronger budget constraints tend to resist impulsive behavior, even when exposed to live streaming content. From a theoretical perspective, this finding supports the Theory of Planned Behavior developed by Icek Ajzen. Live streaming influences consumer attitudes through engaging and interactive content, while also enhancing perceived behavioral control by providing detailed product information and real-time communication. These factors increase consumers' confidence in their purchasing decisions and reduce cognitive evaluation, ultimately leading to impulse buying behavior.

##### b. Flash Sale on Impulse Buying

The results of this study indicate that flash sales have the strongest positive and significant effect on impulse buying behavior. This finding suggests that time-limited promotions, discounts, and product scarcity effectively create a sense of urgency and fear of missing out (FOMO), which encourages consumers to make quick and unplanned purchasing decisions. This result is consistent with the study conducted by Darwipat et al. (2020), which found that flash sales have a significant influence on impulsive buying behavior among online marketplace consumers. The study explains that limited-time discounts act as a strong stimulus that triggers consumer spontaneity, leading individuals to purchase products without prior planning. Furthermore, this finding is supported by Jonathan (2025), who reported that flash sale strategies effectively create urgency through time-limited offers, thereby increasing impulsive buying behavior and consumer engagement. The study highlights that the combination of attractive promotions, limited duration, and ease of access on digital platforms strengthens emotional responses and accelerates purchasing decisions. In addition, this study is also aligned with the findings of Nighel and Sharif (2022), who found that flash sales influence impulse buying indirectly through psychological mechanisms such as the urge to buy, positive emotions, and value shopping. Their findings indicate that flash sales stimulate consumers psychologically by increasing excitement, perceived value, and emotional satisfaction, which subsequently lead to impulse buying behavior. This suggests that the effect of flash sales is not only direct but also operates through internal consumer responses. From a theoretical perspective, these findings can be explained through consumer behavior theory, where flash sales influence both perceived behavioral control and emotional responses. Time pressure and product scarcity reduce consumers' ability to evaluate information rationally, while emotional triggers such as urgency

and excitement increase the likelihood of spontaneous purchases. This mechanism supports the argument that impulse buying is driven by a combination of cognitive limitations and emotional stimulation.

c. Customer Review on Impulse Buying

The results show that customer reviews have a negative and statistically insignificant effect on impulse buying. This finding suggests that customer reviews do not directly trigger spontaneous purchasing behavior. Instead, reviews tend to function as rational evaluation tools rather than emotional stimuli. Consumers who rely on reviews typically evaluate products more carefully, which reduces impulsive purchasing tendencies. This finding also highlights a contradiction with some previous studies that reported a positive relationship between customer reviews and impulse buying. These differences may be explained by variations in consumer characteristics, product categories, and levels of digital literacy. From a theoretical perspective, customer reviews strengthen consumers' cognitive evaluation processes, which may reduce the influence of emotional triggers associated with impulse buying behavior. The results also indicate that customer reviews do not function as a direct trigger for impulsive purchasing among consumers on the Shopee platform. This outcome can be explained by the characteristics of the respondents. The majority of respondents are female and have a relatively high level of education, which suggests stronger product evaluation behavior and higher digital literacy. As noted by Harjayanti et al. (2020), consumers with higher awareness tend to use reviews as rational evaluation tools rather than emotional stimuli. Consequently, customer reviews serve more as informational references than as impulse triggers. This finding supports the studies conducted by Sombe et al. (2023) and Masitoh et al. (2024), who reported that online customer reviews do not significantly influence online impulse buying behavior. However, this result contradicts the findings of Hafizhoh et al. (2023) and Rahmawaty et al. (2023), who found a significant relationship between customer reviews and impulse buying. These differences may arise from variations in product categories, consumer profiles, purchasing power, and shopping motivations.

d. Simultaneous Effect of Live Streaming, Flash Sale, and Customer Review on Impulse Buying

The results of this study indicate that live streaming, flash sales, and customer reviews simultaneously have a significant effect on impulse buying behavior. This finding suggests that impulse buying in e-commerce environments is influenced by a combination of emotional, promotional, and informational factors. In other words, impulse buying behavior is not driven by a single factor but results from the interaction of multiple digital marketing stimuli. Live streaming enhances consumers' hedonic shopping experiences through real-time interaction and engaging product presentations. Flash sales create urgency and a sense of scarcity, which encourages consumers to make quick purchasing decisions. Meanwhile, customer reviews provide supporting information that increases consumer confidence during the decision-making process. These results are consistent with the findings of Maulana and Maskur (2023), who argue that the simultaneous influence of marketing stimuli and psychological factors is stronger than their individual effects. Therefore, effective digital marketing strategies aimed at stimulating impulse buying should integrate emotional engagement, time-limited promotional strategies, and credible informational support. This is particularly important in the cosmetic product category, where visual experience and consumer trust play a crucial role in purchasing decisions.

e. Limitations

This study has several limitations. First, the sample is limited to university students in Semarang, which may not fully represent the broader consumer population. Second, this study examines only three independent variables, while other factors such as income, lifestyle, and personality traits may also influence impulse buying behavior. Third, the use of self-reported questionnaires may lead to response bias, as respondents may provide answers that do not fully reflect their actual behavior.

## V. Conclusion

This study aims to examine the effects of live streaming, flash sales, and customer reviews on impulse buying behavior of cosmetic products on the Shopee platform among university students in Semarang. Based on the results of the data analysis and discussion, several conclusions can be drawn. First, live streaming has a positive and significant effect on impulse buying behavior, as indicated by a t-value of 2.028 with a significance level of 0.045 ( $< 0.05$ ). This finding suggests that real-time interaction and product visualization enhance consumers' emotional engagement and encourage spontaneous purchases. Second, flash sales have the strongest positive and significant effect on impulse buying behavior, with a t-value of 3.640 and a significance level of 0.000 ( $< 0.05$ ). This indicates that urgency, time limitations, and promotional intensity play an important role in stimulating impulse buying behavior. Third, customer reviews show a negative and statistically insignificant effect on impulse buying behavior, with a t-value of  $-0.279$  and a significance level of 0.781 ( $> 0.05$ ). This suggests that customer reviews function more as rational evaluation tools rather than direct triggers of impulsive purchasing behavior. Furthermore, the simultaneous test results indicate that live streaming, flash sales, and customer reviews collectively have a significant effect on impulse buying behavior, as reflected by an F-value of 12.922 with a significance level of 0.000 ( $< 0.05$ ). The coefficient of determination ( $R^2$ ) shows that 27.4% of the variation in impulse buying behavior can be explained by these three independent variables, while the remaining 72.6% is influenced by other factors not examined in this study. These findings support the Theory of Planned Behavior proposed by Icek Ajzen, indicating that impulse buying behavior in e-commerce is influenced by both emotional and cognitive factors. Live streaming and flash sales strengthen emotional responses and perceived behavioral control, while customer reviews enhance cognitive evaluation, which may reduce impulsive tendencies. From a practical perspective, e-commerce platforms should optimize live streaming features and flash sale strategies to stimulate impulse buying behavior. At the same time, customer reviews should be managed carefully to maintain credibility and trust without diminishing the spontaneity of consumers' purchasing decisions.

## References

- Alsaraireh, J. M., Shamaileh, N. A., Saraireh, S., Al-Azzam, M. K., Kanaan, R. K., Mohammad, A., & Al-Hawary, S. S. (2022). The Impact of Online Reviews on Brand Equity. *International Sciences Letters*, 11(6), 1919–1928. <https://doi.org/10.18576/isl/110608>
- Annur. (2022). Platform Belanja Online Lewat Siaran Langsung Paling Banyak Digunakan. <https://databoks.katadata.co.id/datapublishembed/136203/survei-jakpat-shopee-rajai-penggunaan-live-shopping-di-indonesia>
- Aprilia, E., & Mahfudzi, R. (2020). Gaya Hidup Hedonisme Dan Impulse Buying Pada Mahasiswa. *Jurnal Ecopsy*, 7(2), 71–78. <https://doi.org/10.20527/ecopsy.v7i2.7390>
- Belch, G. E., & Belch, M. A. (2009). *Advertising and promotion: An integrated marketing communication perspective* (8th ed.). Pearson Education.
- Darwipat, D., Syam, A., & Marhawati. (2020). Pengaruh Program Flash Sale terhadap Perilaku Impulsive Buying Konsumen Marketplace. *Journal of Economic Education and Entrepreneurship Studies*, 1(2), 58–64. <https://doi.org/10.26858/je3s.v1i2.87>
- Do Minh, H., & Tran Hoai, N. (2026). Referral Reward Program Influence on Customer Engagement: The Role of Reward Type and Task Complexity. *GOLDEN RATIO OF MARKETING AND APPLIED PSYCHOLOGY OF BUSINESS*, 6(2), 335–352. <https://doi.org/10.52970/grmapb.v6i2.1807>
- Elnina, D. (2022). Kemampuan self control mahasiswa ditinjau dari perilaku impulsive buying terhadap produk fashion. *PSIKODINAMIKA: Jurnal Literasi Psikolog*, 2(1), 1–19. <https://media.neliti.com/media/publications/360040-kemampuan-self-control-mahasiswa-ditinja-5ab2db6d.pdf>
- Erwin, Judijanto, L., Sepriano, & Rukmana, A. Y. (2025). *Live Streaming Marketing Trend* (Eftra (ed.)). Green Pustaka Indonesia Redaksi.

- Ghozali, I. (2016). Aplikasi Analisis Multivariate dengan Program IBM SPSS 25. In *International Journal of Physiology* (9th ed.). Semarang: Universitas Diponegoro.
- Ghozali, I. (2018a). Aplikasi Analisis Multivariate dengan Program IBM SPSS 20. UNDIP Press.
- Ghozali, I. (2018b). Aplikasi Analisis Multivariate dengan Program IBM SPSS 25. Badan Penerbit Universitas Diponegoro.
- Hafizhoh, F. R., Gunaningrat, R., & Akhmad, K. A. (2023). Potongan harga, live streaming, dan online customer review terhadap minat beli konsumen pada aplikasi TikTok Shop. *Jurnal Publikasi Sistem Informasi Dan Manajemen Bisnis (JUPSIM)*, 2(3), 204–219. <https://doi.org/10.55606/jupsim.v2i3.2023>
- Harjayanti, D., Rovita, A., & Yuwono, T. (2020). Pengaruh Tingkat Pendidikan, Tingkat Literasi keuangan, Instrumen Literasi Keuangan pada Keputusan Pembelian pada Media Online (Studi Kasus Masyarakat di Daerah Tangerang Selatan). *Jurnal MANDIRI: Ilmu Pengetahuan, Seni, Dan Teknologi*, 4(2), 199–209. <https://doi.org/10.33753/mandiri.v4i2.127>
- Hertanto, A. ., Sulhaini, & Edi, H. . (2020). Effect of flash sale method, product knowledge and in home shopping tendency toward consumer online purchase decisions. *RJOAS*, 6(102), 97–108. <https://doi.org/10.18551/rjoas.2020-06.12>
- Istiasih, H. (2024). Consumer Emotions Under the Influence of AI: A TPB Based Approach to Impulse Buying Patterns in Personalized. *United International Journal for Research & Technology*, 6(3), 31–40. <https://uijrt.com/paper/consumer-emotions-under-influence-ai>
- Jonathan, J. (2025). Strategi Pemasaran Flash Sale Dalam Meningkatkan Efektivitas Digital Marketing. *MOSAIC (Multidisciplinary Observations, Studies and Integrated Contexts)*, 1(2), 31–42. <https://doi.org/10.1234/mosaic.v1i2.97>
- Khoirunnisa, D., & Riva'i, A. R. (2023). Digital Marketing, Persepsi Harga, Dan Citra Merek Terhadap Kepuasan Konsumen. *Journal Of Management and Bussines (JOMB)*, 5(1), 202–215. <https://doi.org/10.31539/jomb.v5i1.5316>
- Kotler, P & Keller, KL. (2012). *Marketing Management*, 14th Ed. Pearson Education Limited.
- Kotler, P., & Keller, K. (2017). *Manajemen Pemasaran*. Erlangga .
- Kunda, R. (2023). *Pengantar bisnis: Manajemen, pembiayaan, pemasaran dan operasional*. Global Eksekutif Teknologi.
- Li, Y., García-de-Frutos, N., & Ortega-Egea, J. M. (2025). Impulse buying in live streaming e-commerce: A systematic literature review and future research agenda. *Computers in Human Behavior Reports*, 19(2), 1–17. <https://doi.org/10.1016/j.chbr.2025.100676>
- Li, L., & Kang, K. (2023). Discovering online Chinese consumers' impulse buying in live streaming by the theory of planned behavior. *Journal of Economic Analysis*, 3(2), 121–133. <https://opus.lib.uts.edu.au/handle/10453/171807>
- Li, M., Wang, Q., & Cao, Y. (2022). Understanding consumer online impulse buying in live streaming e-commerce: A stimulus-organism-response framework. *International Journal of Environmental Research and Public Health*, 19(7), 1–17. <https://doi.org/10.3390/ijerph19074378>
- Liu, X., & Jin, L. (2025). A study on the factors influencing consumer impulsive buying in live commerce: based on the Theory of Planned Behavior (TPB) model. *Advances in Social Behavior Research*, 16(8), 1–13. <https://doi.org/10.54254/2753-7102/2025.28128>
- Macheka, T., Quaye, E. S., & Ligaraba, N. (2024). The effect of online customer reviews and celebrity endorsement on young female consumers' purchase intentions. *Young Consumers*, 25(4), 462–482. <https://doi.org/10.1108/YC-05-2023-1749>
- Masitoh, M. R., Wibowo, H. A., Prihatma, G. T., & Miharja, D. T. (2024). The influence of interactivity, online customer reviews, and trust on Shopee live streaming users' impulse buying. *Greenomika*, 6(1), 41–53. <https://doi.org/10.55732/unu.gnk.2024.06.1.5>
- Maulana, C. A., & Maskur, A. (2023). Citra merek, kualitas produk, persepsi harga, dan promosi terhadap keputusan pembelian. *Journal of Management and Bussines (JOMB)*, 5(1), 36–50. <https://doi.org/10.31539/jomb.v5i1.5386>

- Natasiah, U. (2024). Brand image, brand trust, and brand ambassador on purchase decisions of shopee E-commerce users in Pekanbaru City. *Jurnal Manajemen Bisnis*, 11(1), 120–134. <https://doi.org/10.33096/jmb.v11i1.702>
- Nighel, S., & Sharif, O. (2022). Pengaruh Flash Sale Terhadap Pembelian Impulsif E-commerce Shopee Di Jawa Barat. *E-Proceeding of Management*, 9(3), 1335–1334. <https://openlibrarypublications.telkomuniversity.ac.id/index.php/management/article/view/18031>
- Nyrhinen, J., Sirola, A., Koskelainen, T., Munnukka, J., & Wilska, T. A. (2024). Online antecedents for young consumers' impulse buying behavior. *Computers in Human Behavior*, 153(10), 1–9. <https://doi.org/10.1016/j.chb.2023.108129>
- Prajana, A. ., Syafikarani, A., & Nastiti, N. . (2021). Pemanfaatan Video Streaming sebagai Media Pemasaran pada Fitur Shopee Live. *TANRA : Jurnal Desain Komunikasi Visual Fakultas Seni Dan Desain Universitas Negeri Makassar*, 8(2), 145–152. <https://doi.org/10.26858/tanra.v8i2.22651>
- Pratiwi, E., & Krishernawan, I. (2020). *Mengelola customer Impulse Buying pada bisnis retail fashion*. Damarwiyata Press.
- Putri, S. J., Yadewani, D., & Rahayu, S. (2025). Pengaruh Live Streaming, Flash Sale dan Promo Gratis Ongkir terhadap Perilaku Impulsive Buying pada Pengguna Aplikasi Tiktok. *Jurnal Pustaka Manajemen (Pusat Akses Kajian Manajemen)*, 5(1), 9–15. <https://mail.pustakagalerimandiri.co.id/jurnalpgm/index.php/pustakamanajemen/article/view/934>
- Qu, Y., Khan, J., Su, Y., Tong, J., & Zhao, S. (2023). Impulse buying tendency in live-stream commerce: The role of viewing frequency and anticipated emotions influencing scarcity-induced purchase decision. *Journal of Retailing and Consumer Services*, 75(8), 1–12. <https://doi.org/10.1016/j.jretconser.2023.103534>
- Rahmawaty, I., Sa'adah, L., & Musyafaah, L. (2023). Pengaruh live streaming selling, review product, dan discount terhadap minat beli konsumen pada e-commerce Shopee. *Urnal Riset Entrepreneurship*, 6(3), 80–93. <https://doi.org/10.30587/jre.v6i2.5956>
- Sarah, S., & Sobari, N. (2022). The effect of live streaming on purchase intention of e-commerce customers. *Proceeding of the International Conference on Family Business and Entrepreneurship*, 3(1), 282–290. <https://e-journal.president.ac.id/index.php/ICFBE/article/view/3781>
- Sari, A. A. P., & Habib, M. A. F. (2023). Strategi pemasaran menggunakan fitur Shopee live streaming sebagai media promosi untuk meningkatkan daya tarik konsumen (Studi kasus thrift shop di Kabupaten Tulungagung). *Jurnal Ilmiah Wahana Pendidikan*, 9(17), 41–58. <https://doi.org/10.5281/zenodo.8280759>
- Sari, A. G., & Aquinia, A. (2024). Pengaruh Influencer Marketing Dan Online Customer Review Terhadap Purchase Intention. *Jesya (Jurnal Ekonomi Dan Ekonomi Syariah)*, 7(2), 1353–1363. <https://doi.org/10.36778/jesya.v7i2.1532>
- Septiyani, S., & Hadi, E. D. (2024). Pengaruh Flash Sale, Live Streaming Dan Hedonic Shopping Motivation Terhadap Impulse Buying (Study Pembelian Produk Berrybenka Pada Pengguna Aplikasi Shopee). *Jesya (Jurnal Ekonomi Dan Ekonomi Syariah)*, 7(1), 970–980. <https://doi.org/10.36778/jesya.v7i1.1505>
- Sombe, R., Pongtuluran, A. K., & Pagiu, C. (2023). Pengaruh Online Customer Review dan Diskon Harga terhadap Online Impulsive Buying Pengguna Shopee: Studi Kasus pada Mahasiswa Fakultas Ekonomi Angkatan 2022. *Sammajiva: Jurnal Penelitian Bisnis Dan Manajemen*, 1(4), 277–287. <https://doi.org/10.47861/sammajiva.v1i4.567>
- Suhyar, S. V., & Pratminingsih, S. A. (2023). Pengaruh live streaming dan trust terhadap impulsive buying dalam pembelian produk skincare skintific. *Management Studies and Entrepreneurship Journal (MSEJ)*, 4(2), 1427–1438.
- Syamsiyah, Dhiyaus, A., & Nirawati, L. (2024). Pengaruh Live Streaming, Flash Sale, dan Cashback Terhadap Perilaku Impulse Buying pada Pengguna E-commerce Shopee di Surabaya. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 6(5), 5024–5036. <https://doi.org/10.47467/alkharaj.v6i5.2119>
- Utami, C. W. (2018). *Manajemen ritel: Strategi dan implementasi operasional*. Salemba Empat.

- Wardani, N. R. ., & Fachrunnisa, O. (2026). Brand Ambassador, Social Media Marketing, and Product Innovation Effects on Purchase Decisions: The Mediating Role of Brand Image in Indonesian Dairy Industry. *Golden Ratio Of Marketing And Applied Psychology Of Business*, 6(2), 421–437. <https://doi.org/10.52970/grmapb.v6i2.1812>
- Wibowo, F. N., Wulansari, N., & Zulfikar Yusya Mubarak, A. R. (2025). Analisis Perilaku Konsumen Digital. UNAI Press.
- Wongkitrungrueng, A., & Assarut, N. (2020). The role of live streaming in building consumer trust and engagement with social commerce sellers. *Journal of Business Research*, 117(10), 543–556. <https://doi.org/10.1016/j.jbusres.2018.08.032>
- Yee, L., & Zainal, N. (2025). Factors Influencing Impulse Buying Behaviour during Online Shopping among Youngsters Consumers, Klang Valley, Malaysia. *International Journal of Academic Research in Business & Social Sciences*, 15(2), 457–477. <https://doi.org/10.6007/IJARBS/v15-i2/24736>