

The Influence of the Shopee Live Feature, Shopee Tanam Gamification, and Personalized Product Recommendation on Impulse Buying among Shopee Consumers in Indonesia.

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Abstract

Purpose – This study aims to analyze the influence of the Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation on Impulse Buying behavior among Shopee consumers in Indonesia. The research focuses on young consumers as the dominant group within the digital e-commerce ecosystem. **Novelty** – The novelty of this study lies in the simultaneous examination of three interactive digital features—Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation—which have rarely been investigated in an integrated manner within the context of Indonesian e-commerce. This study provides empirical insights into how the combination of digital interactivity and personalization influences impulsive purchasing behavior. **Method** – This study employs a quantitative approach using an online survey with 300 Shopee users aged 30 years or younger. All research instruments satisfied reliability tests and classical assumption requirements. **Findings** – The results indicate that the Shopee Live Feature ($\beta = 0.431$; Sig. = 0.000), Gamification (Shopee Tanam) ($\beta = 0.332$; Sig. = 0.000), and Personalized Product Recommendation ($\beta = 0.296$; Sig. = 0.000) have a positive and significant effect on Impulse Buying. Simultaneously, the three independent variables significantly influence Impulse Buying ($F = 51.514$; Sig. = 0.000), with an R^2 of 0.343, indicating that 34.3% of the variation in Impulse Buying behavior is explained by the research model. **Limitations and Implications** – This study is limited to young Shopee users in Indonesia; therefore, the findings cannot yet be generalized to other e-commerce platforms. The results have practical implications for e-commerce industry practitioners, suggesting that they optimize marketing strategies based on interactivity, gamification, and personalization to effectively stimulate consumers' impulsive purchasing behavior.

Keywords: Shopee Live, Gamification (Shopee Tanam), Personalization, Impulse Buying, E-Commerce

1. Introduction

The development of digital technology has brought significant changes to consumer consumption patterns, particularly through the utilization of e-commerce platforms. The presence of e-

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commerce enables consumers to conduct transactions without spatial or temporal constraints, while simultaneously presenting various digital marketing stimuli that can influence consumer decision-making. In Indonesia, this digital transformation is supported by the rapid growth of internet users. [The DataReportal \(2024\)](#) report notes that the number of internet users in Indonesia reached 185.3 million people in early 2024, with online activities including product information searches and online shopping. As internet use grows, the e-commerce industry in Indonesia has become increasingly competitive. According to the Internet Penetration and Internet Usage Behavior Survey 2025 released by the Indonesian Internet Service Providers Association (APJII), Shopee is the e-commerce platform most frequently used by internet users in Indonesia. This high level of usage indicates that Shopee has become one of the primary platforms for online shopping, particularly among young users who exhibit high-intensity internet and social media use.

Shopee not only serves as a platform for buying and selling but also develops a digital ecosystem that emphasizes an interactive, enjoyable shopping experience. This is realized through various feature innovations, such as Shopee Live, which allows direct interaction between sellers and buyers through live streaming; Shopee Tanam as a form of gamification that provides incentives in the form of coins or vouchers; and personalized product recommendation systems that utilize algorithms to display products aligned with users' interests and behavioral patterns. Several studies indicate that these interactive features can increase user engagement in online shopping ([Amallia & Syaefulloh, 2023](#); [Taruli et al., 2020](#)). Impulse buying refers to purchasing behavior that occurs spontaneously, without prior planning, in which emotional impulses play a crucial role in purchase decisions ([Yuniarti et al., 2021](#)). In the e-commerce context, fast, personalized, and interactive systems can strengthen consumers' tendency to engage in impulse buying, as they experience instant gratification and emotional stimulation during the online shopping process.

Young consumers, particularly those under 30, represent a relevant segment for research on impulse buying behavior. This group constitutes the dominant users of the internet and e-commerce in Indonesia and exhibits high levels of exposure to interactive features, digital promotions, and visual content. Such conditions make young consumers more responsive to digital marketing stimuli that can trigger impulsive purchasing behavior. Previous studies have examined impulse buying behavior in the context of Shopee and e-commerce more broadly. Putra and Adam (2020) found that shopping enjoyment and product browsing positively affect impulse buying among Shopee users. [Amallia and Syaefulloh \(2023\)](#) demonstrated that the Shopee Live Feature influences impulse buying through emotional experiences generated during live interactions. Meanwhile, [Taruli et al. \(2020\)](#) revealed that gamification through the Shopee Tanam feature affects user engagement. On the other hand, [Chen et al. \(2019\)](#) stated that relevant personalized product recommendations can increase the likelihood of impulse purchases in digital shopping environments.

Nevertheless, most of these studies have examined the effects of individual features separately and have rarely integrated the simultaneous influence of the Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation on impulse buying behavior. In addition, previous studies generally employed respondents across broad age ranges, thereby failing to provide a specific depiction of young consumers' responses to marketing strategies featuring interactive features. In fact, consumers under 30 represent the most active and strategically important user segment for the sustainability of e-commerce platform growth. The urgency of this

research is further heightened given that impulse buying behavior not only positively impacts company sales performance but also has the potential to generate economic consequences for consumers, such as overspending and poor personal financial management. Therefore, a comprehensive understanding of the factors influencing impulse buying among young consumers is essential, both from academic and practical perspectives. Based on the above discussion, this study aims to empirically examine the influence of the Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation on impulse buying behavior among Shopee consumers in Indonesia aged 30 years or below, as well as to identify the contribution of each variable and its simultaneous effects on impulsive purchasing behavior among young Shopee users.

2. Literature review

2.1 *Impulse Buying in the E-Commerce Context*

Impulse Buying in the e-commerce context is unplanned purchasing behavior that emerges spontaneously after consumers are exposed to certain stimuli and is carried out without careful consideration of the purchase's consequences. This behavior occurs after consumers experience an immediate, strong impulse to buy, often driven more by emotional factors than by rational considerations ([Beatty & Ferrell, 1998](#); [Chan et al., 2017](#)). In the digital environment, Impulse Buying has become increasingly prominent due to the speed of transaction processes, the minimal presence of physical barriers, and the perception of reduced tangible spending when making online payments ([Park et al., 2012](#); [Rook, 1987](#)). With the growth of e-commerce, research indicates that Impulse Buying is no longer confined to offline shopping contexts but has become increasingly prevalent online. [Chan et al. \(2017\)](#) explain that online Impulse Buying encourages consumers to make immediate purchases, whereas impulsive consumers tend to overlook evaluations of the long-term consequences of their purchasing decisions. In this context, digital technology plays a crucial role in accelerating decision-making processes and fostering more spontaneous purchasing behavior ([Li et al., 2022](#)). Impulse buying in e-commerce is also understood as a response to external stimuli arising from the digital shopping environment. [Li et al. \(2024\)](#) emphasize that Impulse Buying is a reactive behavior triggered by external stimuli, such as information displays, social interactions, and technological features designed to enhance consumer engagement. Thus, Impulse Buying is influenced not only by individual characteristics but also by the design and dynamics of the e-commerce platform itself.

2.2 *The Shopee Live Feature and Impulse Buying*

The Shopee Live Feature enables live streaming in e-commerce, allowing sellers or streamers to display products in real time and interact directly with consumers through two-way communication. Live streaming e-commerce combines visual product presentation, product demonstrations, and direct audience interaction, thereby creating a more interactive and authentic shopping experience than static displays on e-commerce platforms ([Li et al., 2022](#); [Li et al., 2024](#)). Previous studies indicate that live-streaming e-commerce has greater potential to stimulate Impulse Buying due to its ability to deliver immersive shopping experiences, enhance social presence, and reduce psychological distance between consumers and products ([Li et al., 2022](#); [Gong & Jiang, 2023](#)). In this context, the Shopee Live Feature functions as an environmental stimulus that influences consumers' emotional and cognitive states during the shopping process. Real-time

interaction within Shopee Live enables consumers to obtain product information instantly, ask questions, and receive immediate responses from streamers, which has been shown to increase engagement and create enjoyable shopping experiences that ultimately encourage Impulse Buying behavior ([Li et al., 2024](#)). The presence of streamers also plays an important role in creating an engaging shopping atmosphere and enhancing consumers' affective states, such as feelings of enjoyment and emotional involvement, which serve as internal mechanisms driving Impulse Buying ([Li et al., 2022](#)). In the Indonesian context, empirical studies demonstrate that streamers' social presence and the intensity of interaction during Shopee Live sessions significantly influence consumers' Impulse Buying by increasing trust and engagement, ultimately encouraging unplanned purchasing behavior ([Salma et al., 2024](#); [Iswan & Roostika, 2025](#)). Thus, the Shopee Live Feature serves as an environmental stimulus that shapes consumers' affective states and promotes Impulse Buying.

2.3 Gamification (Shopee Tanam) and Impulse Buying

In the e-commerce context, gamification is understood as the application of game design elements in non-game contexts to encourage consumer engagement and behavioral change through more gameful experiences ([Taruli et al., 2020](#)). In the Shopee Indonesia application, one form of gamification is the in-app game "Shopee Tanam," which invites users to plant seeds and nurture them until harvest, after which they receive rewards, including recent developments such as discount vouchers and free shipping vouchers. The findings of [Taruli et al. \(2020\)](#) confirm that gamification strategies implemented through Shopee Tanam have a significant positive effect on customer engagement in the Shopee Indonesia mobile application, with implications for consumer behavior, including increased time spent and greater user involvement with the e-commerce platform. The relationship between gamification and Impulse Buying can be explained through psychological mechanisms triggered by gamification stimuli. In the study by [Shao et al. \(2019\)](#), achievement-oriented gamification features such as reward giving and badge upgrading were positively associated with perceived enjoyment and social interaction responses, both of which exert strong influence on online Impulse Buying within the S-O-R framework. Empirical evidence in the Indonesian e-commerce context also demonstrates similar patterns. [Aprilia and Alfansi \(2024\)](#) report that gamification elements—particularly tangible rewards—positively affect immersion, and that immersion mediates the relationship between gamification and consumers' impulsive buying tendencies. Thus, the literature reviewed indicates that gamification elements (e.g., rewards and social interaction aspects) are associated with Impulse Buying through psychological states such as perceived enjoyment, social interaction, and immersion ([Shao et al., 2019](#); [Aprilia & Alfansi, 2024](#)).

2.4 Personalized Product Recommendation and Impulse Buying

In the e-commerce context, Personalized Product Recommendation systems are developed to address the problem of information overload faced by consumers due to the abundance of product choices on digital platforms. Algorithm-based product recommendations operate by analyzing users' historical behavior, personal preferences, and other interaction data to present relevant products, thereby helping consumers locate products more efficiently and enhancing the overall online shopping experience ([Song, 2023](#)). [Song \(2023\)](#) also demonstrates that the characteristics of algorithmic recommendations, particularly perceived accuracy and diversity, have a positive effect on online impulse purchase intention. Recommendations perceived as accurate increase

Impulse-Buying tendencies because the system is perceived as capable of understanding users' needs, whereas recommendation diversity encourages product exploration beyond initial purchase plans. Furthermore, the influence of algorithmic recommendations on Impulse Buying is explained through the mechanism of perceived practical value. When consumers perceive high utilitarian value in product recommendations—such as search convenience and time efficiency—the tendency to engage in impulse buying increases (Song, 2023). These findings are reinforced by a systematic literature review conducted by Fadilah et al. (2025), which concludes that Personalized Product Recommendation can increase Impulse Buying by reducing cognitive load and enhancing consumer engagement and emotional experience during the online shopping process. Thus, the existing literature indicates that Personalized Product Recommendation plays a role in stimulating Impulse Buying through perceived recommendation characteristics and the accompanying psychological mechanisms (Song, 2023; Fadilah et al., 2025).

2.5 Research Hypotheses

- H1: The Shopee Live Feature has a positive and significant effect on Impulse Buying among Shopee consumers in Indonesia.
- H2: Gamification (Shopee Tanam) has a positive and significant effect on Impulse Buying among Shopee consumers in Indonesia.
- H3: Personalized Product Recommendation has a positive and significant effect on Impulse Buying among Shopee consumers in Indonesia.
- H4: The Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation simultaneously have a positive and significant effect on Impulse Buying among Shopee consumers in Indonesia.

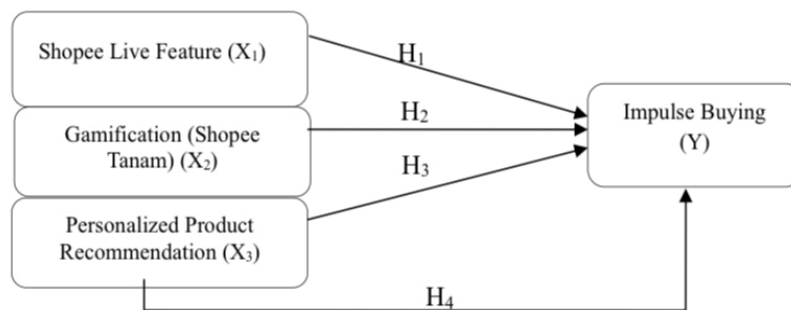


Figure 1. Conceptual Framework

3. Research Methodology

3.1 Type and Research Approach

This study employs a quantitative, associative research design to statistically examine relationships and effects among several variables. The independent variables in this study consist of the Shopee Live Feature (X₁), Gamification (Shopee Tanam) (X₂), and Personalized Product Recommendation (X₃), while the dependent variable is Impulse Buying (Y) among Shopee consumers in Indonesia.

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Data analysis was conducted to assess the effects of the independent variables on the dependent variable, both in partial and in simultaneous models.

3.2 Research Location and Time

This study was conducted online because the Shopee user population is geographically dispersed across Indonesia. Data were collected using a Google Forms–based questionnaire distributed via social media platforms, including Instagram, WhatsApp, and Telegram. The research was conducted from May to December 2025, encompassing the stages of instrument development, data collection, and data analysis.

3.3 Population and Sample

The population of this study comprises all active Shopee users in Indonesia aged 30 years or below. This age group was selected because it represents the most active user segment in using interactive e-commerce features, such as Shopee Live, Shopee Tanam, and product recommendation systems, and exhibits a higher tendency toward impulse buying. Given that the total number of Shopee users in Indonesia is very large and cannot be precisely determined, this study employs purposive sampling. The respondent criteria include: (1) active Shopee users in Indonesia, (2) aged 30 years or below, and (3) having used the Shopee Live Feature, Shopee Tanam, or received product recommendations from Shopee.

The determination of sample size is guided by recommendations from [Hair et al. \(2019\)](#), [Sekaran and Bougie \(2016\)](#), and [Roscoe \(1975\)](#), which suggest that a sample size of 100-500 respondents is sufficient for quantitative research and multiple linear regression analysis. Based on the number of variables and the objectives of the analysis, this study established a sample size of 300 respondents, which is considered adequate to meet sample sufficiency requirements and to yield stable, reliable statistical estimates.

3.4 Types and Sources of Data

Primary data are collected directly from respondents via an online questionnaire that includes statements pertaining to the research variables.

Secondary data consist of supporting information obtained from literature sources, including scientific journals, academic articles, and relevant online sources related to consumer behavior, Shopee features, and Impulse Buying.

3.5 Research Variables

This study examines three independent variables and one dependent variable. The independent variables include the Shopee Live Feature (X_1), Gamification (Shopee Tanam) (X_2), and Personalized Product Recommendation (X_3), while the dependent variable is Impulse Buying (Y). The indicators for each variable were developed based on relevant theories and prior empirical studies, as presented below:

Table 1. Operational Definitions and Research Variables Indicators

Variable		Operational definition	Indicators	Sources
Shopee Features (X ₁)	Live	The live streaming feature on Shopee enables real-time product presentations with direct interaction between sellers and consumers.	1. Interactivity between the host and viewers. 2. Attractiveness of the presenter (host). 3. Clarity of product information. 4. Sense of urgency during live streaming.	(Steuer 1992 ; Wongkitrungrueng et al., 2020)
Gamification (Shopee Tanam) (X ₂)		The application of game elements in the Shopee Tanam feature to enhance user engagement and motivation through a reward system and repetitive activities.	1. Enjoyment while playing. 2. Motivation to earn rewards. 3. Repetitive engagement. 4. Clarity of goals and rules.	(Deterding et al., 2011 ; & Hamari et al., 2014)
Personalized Product Recommendation (X ₃)		Shopee's system capability to display product recommendations tailored to users' preferences and behavior.	1. Relevance to preferences. 2. Accuracy based on data. 3. Usefulness of information. 4. Reduction of evaluation effort.	(Tam & Ho, 2006 ; Bleier & Eisenbeiss, 2015)
Impulse Buying (Y)		The consumer's unplanned purchasing behavior on Shopee, occurring spontaneously without prior planning and triggered by sudden urges during shopping.	1. Unplanned purchases. 2. Sudden urge to buy. 3. Minimal rational consideration. 4. Positive emotions during purchase.	(Rook 1987 ; Beatty & Ferrell, 1998)

3.6 Data Analysis Techniques

The research data were analyzed quantitatively. The analysis began with instrument quality tests, including validity and reliability tests to ensure the suitability and consistency of the statement items. Subsequently, classical assumption tests, including tests for normality, multicollinearity, and heteroscedasticity, were conducted to ensure that the regression model met the statistical requirements. Hypothesis testing was performed using multiple linear regression analysis to

examine the effects of the Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation on Impulse Buying. The partial effect of each independent variable was tested using the t-test, while the simultaneous effect was tested using the F-test. Additionally, the coefficient of determination (R^2) was used to assess the independent variables' contribution to explaining variation in impulse buying behavior.

4. Research Results and Discussion

4.1 Research Results

4.1.1 Descriptive Statistics

Table 2. Descriptive Statistics Test Results

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
Shopee Live Features	300	1,00	5,00	3,0042	,90543
Gamification (Shopee Tanam)	300	1,00	4,88	3,0171	,87787
Personalized Product Recommendation	300	1,00	4,88	3,0204	,88704
Impulse buying	300	1,00	4,88	2,9675	,90092
Valid N (listwise)	300				

Based on the descriptive statistics, the study included 300 respondents. The Shopee Live Feature had an average value of 3.0042, Gamification (Shopee Tanam) 3.0171, and Personalized Product Recommendation 3.0204. Meanwhile, the Impulse Buying variable had a mean of 2.9675. The mean values of all variables are approximately 3, indicating that respondents tend to perceive Shopee's features and impulse buying behavior as relatively high. The relatively small standard deviations (<1) suggest that the respondents' answers were homogeneous.

4.1.2 Validity Test

The validity test results showed that all indicators of the Shopee Live Feature (X_1) had Corrected Item-Total Correlation values ranging from 0.516 to 0.776, whereas the indicators of Gamification (Shopee Tanam) (X_2) ranged from 0.483 to 0.750. The Personalized Product Recommendation (X_3) had Corrected Item-Total Correlation values between 0.351 and 0.777, and Impulse Buying (Y) ranged from 0.550 to 0.734. All these values exceed the minimum threshold of 0.30, indicating that all items are valid and can represent the measured constructs. Moreover, the Cronbach's Alpha if Item Deleted for each indicator did not show significant improvement when any item was deleted, confirming that all items are suitable to be retained as research instruments.

4.1.3 Reliability Test

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Description
Shopee Live Feature (X_1)	0,882	Reliable
Gamification (Shopee Tanam) (X_2)	0,876	Reliable
Personalized Product Recommendation (X_3)	0,887	Reliable
Impulse buying (Y)	0,873	Reliable

The reliability test results indicate that all variables have Cronbach's Alpha values above 0.80, indicating that all research instruments are reliable and consistent, and thus suitable for further analysis.

4.1.4 Normality Test

Table 4. Normality Test Results

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,027	300	,200*	,997	300	,834

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

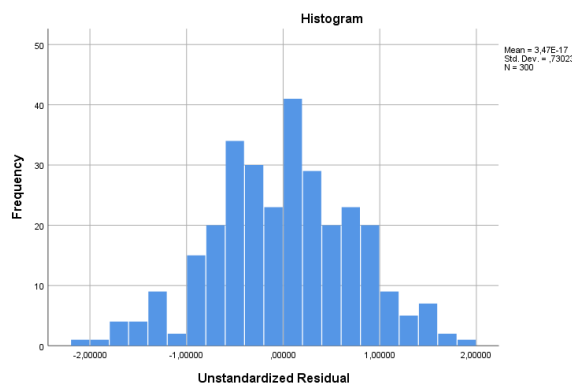


Figure 2. Histogram of Residuals

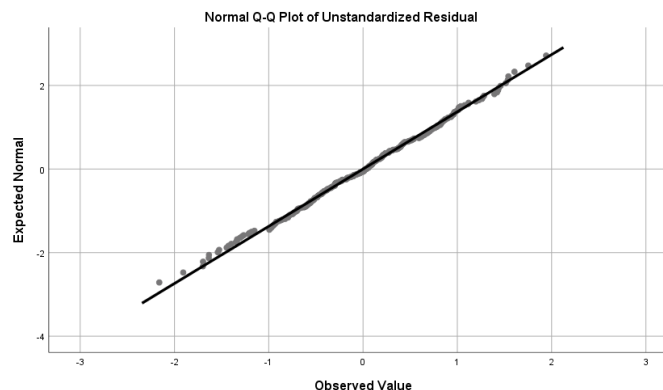


Figure 3. Normal Q-Q plot

The normality test results using the Kolmogorov-Smirnov test showed a p-value of 0.200, while the Shapiro-Wilk test showed a p-value of 0.834. Both values exceed 0.05, indicating that the regression model residuals are normally distributed and thus satisfy the normality assumption. The normality test is also supported by the histogram and Normal Q-Q Plot, which indicate no significant deviation from normal distribution.

4.1.5 Multicollinearity Test

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Based on the results in Table 6, the Shopee Live Feature had a Tolerance value of 0.985 and a VIF of 1.015, the Gamification (Shopee Tanam) had a Tolerance value of 0.996 and a VIF of 1.004, and the Personalized Product Recommendation had a Tolerance value of 0.989 and a VIF of 1.011. All independent variables have Tolerance values above 0.10 and a VIF below 10, indicating that the regression model is not subject to multicollinearity and is suitable for further analysis.

4.1.6 Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

	B	Std. Error	t	sig
1 (Constant)	,455	,159	2,856	,005
Shopee Live Features	,037	,028	1,302	,194
Gamification (Shopee Tanam)	-,003	,029	-,095	,924
Personalized Product Recommendation	,008	,029	,283	,778

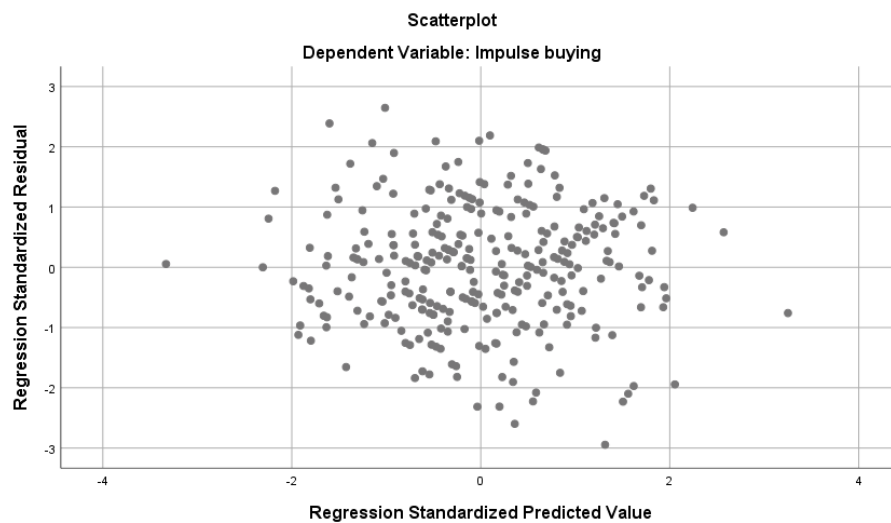


Figure 4. Scatterplot

Based on the Glejser test, the p-values for the independent variables (Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation) were 0.194, 0.924, and 0.778, respectively, all of which exceeded 0.05. This indicates that the independent variables have no significant effect on the absolute residuals, suggesting that the regression model is not heteroscedastic. This is further supported by the scatterplot analysis, which shows a random dispersion of points without discernible patterns, indicating constant variance.

4.1.7 Multiple Linear Regression Analysis

Table 6. Multiple Linear Regression Analysis Results

	B	Std. Error	t	sig	Tolerance	VIF
1 (Constant)	-,257	,266	-,968	,334		
Shopee Live Feature	,429	,047	9,081	,000	,985	1,015
Gamification (Shopee Tanam)	,341	,048	7,043	,000	,996	1,004

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Personalized Product Recommendation	,300	,048	6,241	,000	,989	1,011
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The multiple linear regression equation is as follows:

$$\text{Impulse Buying} = -0,257 + 0,429X_1 + 0,341X_2 + 0,300X_3$$

The Shopee Live Feature has a regression coefficient of 0.429, a t-value of 9.081, and a significance level of 0.000 (< 0.05). This indicates that the Shopee Live Feature has a positive and significant effect on impulse buying.

Gamification (Shopee Tanam) has a regression coefficient of 0.341, with a t-value of 7.043 and a significance level of 0.000 (< 0.05). This shows that Gamification (Shopee Tanam) has a positive and significant effect on impulse buying.

Personalized Product Recommendation has a regression coefficient of 0.300, with a t-value of 6.241 and a significance level of 0.000 (< 0.05), indicating a positive and significant effect on impulse buying.

Based on the Standardized Beta values, Shopee Live Feature has the most dominant influence on impulse buying ($\beta = 0.431$), followed by Gamification (Shopee Tanam) ($\beta = 0.332$) and Personalized Product Recommendation ($\beta = 0.296$).

4.1.8 Simultaneous F Test

Table 7. F Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83,244	3	27,748	51,514	,000 ^b
	Residual	159,439	296	,539		
	Total	242,683	299			

a. Dependent Variable: Impulse buying

b. Predictors: (Constant), Personalization Recommendation Product, Gammifikation Shopee Tanam, Fitur Shopee Live

The simultaneous F-test yields an F-value of 51.514, with a significance level of 0.000 (< 0.05). This indicates that Shopee Live Feature, Gamification (Shopee Tanam), and Personalized Product Recommendation collectively have a significant effect on impulse buying.

4.1.9 Coefficient of Determination (R^2) Test

Table 9. Coefficient of Determination (R^2) Results

Model Summary				
Model	R	R Square	Adjusted Square	R-Std. Error of the Estimate
1	,586 ^a	,343	,336	,73393
a. Predictors: (Constant), Personalization Recommendation Product, Gammifikation Shopee Tanam, Fitur Shopee Live				
b. Dependent Variable: Impulse buying				

The Adjusted R^2 value of 0.336 indicates that 33.6% of the variance in impulse buying behavior among Shopee consumers is explained by the Shopee Live Feature, Gamification (Shopee Tanam),

and Personalized Product Recommendation. The remaining 66.4% of the variation is influenced by factors outside the scope of this model, such as promotional pricing, brand trust, situational needs, and other psychological factors. Moreover, an R value of 0.586 indicates a fairly strong relationship between the independent variables and impulse buying, suggesting that the regression model has good predictive ability in explaining the impulsive buying behavior of Shopee consumers

4.2. Discussion

4.2.1 The Impact of the Shopee Live Feature on Impulse Buying

The results of the multiple linear regression test show that the Shopee Live feature has a positive and significant effect on impulse buying, with a regression coefficient of 0.429, a t-value of 9.081, and a significance level of 0.000 (< 0.05). This finding indicates that the higher the consumer's perception of the quality and interactivity of the Shopee Live feature, the greater the likelihood of impulsive buying behavior. Conceptually, Shopee Live provides a real-time shopping experience in which consumers can interact directly with sellers, view product demonstrations, and receive time-limited promotional information. This creates social presence, a sense of urgency, and emotional stimulation, thereby weakening rational decision-making and promoting impulse buying. These results align with [Aulia et al. \(2024\)](#), who stated that live shopping features enhance impulsive buying behavior through interactive and emotional shopping experiences. Similarly, [Devina et al. \(2025\)](#) found that live-streaming commerce contributes to increased consumer trust and accelerates spontaneous purchase decisions. Therefore, Shopee Live is the most influential factor in impulse buying, as evidenced by the highest standardized beta coefficient ($\beta = 0.431$) in this model.

4.2.2 The Impact of Gamification (Shopee Tanam) on Impulse Buying

Based on the partial test results, the Gamification (Shopee Tanam) variable was found to have a positive and significant effect on impulse buying, with a regression coefficient of 0.341, a t-value of 7.043, and a significance level of 0.000 (< 0.05). This result shows that the higher the consumer's engagement with the Shopee Tanam gamification feature, the greater the tendency to make impulsive purchases. Gamification features such as point accumulation, rewards, and daily challenges can create psychological pleasure (hedonic motivation) and increase the duration and frequency of user interactions with the application. This high level of engagement potentially reduces the consumer's self-control in shopping, thereby triggering unplanned purchases. These findings are consistent with [Taruli et al. \(2020\)](#), who demonstrated that implementing Shopee Tanam gamification enhances user engagement and extends application usage time, indicating changes in consumer behavior in response to digital game stimuli. Furthermore, [Aprilia and Alfansi \(2024\)](#) emphasized that gamification elements, particularly tangible rewards, influence impulse buying by increasing immersion, thereby reinforcing this research's finding that gamification indirectly drives impulse buying through the psychological conditions it fosters.

4.2.3 The Impact of Personalized Product Recommendations on Impulse Buying

Regression analysis results show that Personalized Product Recommendations have a positive and significant effect on impulse buying, with a regression coefficient of 0.300, a t-value of 6.241, and a significance level of 0.000 (< 0.05). This finding indicates that product recommendations

relevant to user preferences and needs increase the likelihood of spontaneous purchases. Personalized product recommendations implemented by Shopee leverage consumer behavior data, such as search history, clicks, and transactions, making the displayed products appear more appropriate and appealing to the users. This condition reduces the effort required for information search and accelerates decision-making, ultimately promoting impulse buying. These results are consistent with [Chen et al. \(2019\)](#), who found that data-based personalization enhances consumers' emotional engagement with products and triggers unplanned purchases. Additionally, Fuadi et al. (2024) also stated that well-targeted product recommendations enhance perceptions of ease and satisfaction in shopping, which are key drivers of impulse buying. Therefore, personalized product recommendations have proven to be a significant factor in data-driven digital marketing strategies.

4.2.4 The Simultaneous Effect of Shopee Live, Gamification (Shopee Tanam), and Personalized Product Recommendations on Impulse Buying

The results of the simultaneous test (F-test) show that Shopee Live, Gamification (Shopee Tanam), and Personalized Product Recommendations together significantly influence impulse buying, with an F-value of 51.514 and a significance level of 0.000 (< 0.05). This finding indicates that the combination of interactive features, digital entertainment, and data-driven personalization plays a crucial role in shaping impulse-buying behavior among Shopee consumers in Indonesia. Additionally, the Adjusted R-Square value of 0.336 indicates that 33.6% of the variance in impulse buying is explained by the three independent variables in this model, with the remaining variance attributable to factors outside the model. These results reinforce the view that impulse buying behavior in the e-commerce context is multidimensional but strongly influenced by immersive digital shopping experiences. The simultaneous test results align with prior research indicating that high-interactivity live-streaming commerce encourages impulsive buying ([Xia et al., 2024](#)). Furthermore, [Hamari et al. \(2014\)](#) explained that the implementation of gamification enhances engagement, enjoyment, and immersive experiences, which, in the e-commerce context, is often associated with increased impulsive buying tendencies. Meanwhile, [Chen et al. \(2019\)](#) demonstrated that personalized product recommendations trigger emotional responses from consumers, leading to impulse buying. Thus, the combination of these three variables simultaneously enhances the immersive digital shopping experience and encourages impulse buying among consumers.

5. Conclusion

Based on the results of the multiple linear regression analysis, this study concludes that the Shopee Live feature, Gamification (Shopee Tanam), and Personalized Product Recommendations have a positive and significant effect on impulse-buying behavior among Shopee consumers in Indonesia. The Shopee Live feature has the greatest influence, indicating that real-time interaction, product visualization, and direct communication between sellers and buyers enhance spontaneous purchase intentions. Furthermore, the gamification element in Shopee Tanam effectively increases users' emotional engagement through rewards and challenges, thereby increasing the likelihood of impulse buying. Personalized product recommendations also play a significant role in triggering impulsive purchases by presenting products aligned with user preferences, thereby accelerating decision-making. Simultaneously, these three variables explain a portion of the variation in impulse buying, indicating that interactive, enjoyable, and personalized digital shopping

experiences are important factors in shaping consumer purchasing behavior in Indonesia's e-commerce market.

Based on the findings, Shopee is advised to continue optimizing the Shopee Live feature by improving content quality, strengthening real-time interactions, and leveraging collaborations with relevant influencers to create a more immersive shopping experience and stimulate spontaneous purchases. Additionally, the development of the Shopee Tanam gamification feature should be sustained by varying challenges, rewards, and seasonal programs to maintain user engagement. Furthermore, the product recommendation personalization system should be continuously improved by utilizing user behavior data more accurately, ensuring that the recommendations displayed are truly relevant to consumer needs and preferences, thereby enhancing the effectiveness of data-driven marketing strategies.

This study has limitations regarding the number of variables and respondent characteristics; therefore, future research should consider including additional factors that may influence impulse buying, such as price promotions, consumer trust, and psychological factors, including mood and shopping motivation. Additionally, future studies could adopt qualitative or mixed methods approaches to gain a deeper understanding of the psychological mechanisms and consumer behavior in the context of e-commerce in Indonesia.

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