

# Examining the Impact of Scarcity Perception, Visual Appeal, and Fear of Missing Out on Impulse Buying: A Case Study of Blindbox-Popmart Consumers at Beachwalk Bali

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**Abstract:** Blind boxes have become a rapidly growing trend among teenagers due to their primary appeal, which lies in the excitement of “unboxing,” the chance of obtaining rare items, and the emotional experience offered through attractive packaging. This study aims to examine the influence of scarcity perception, visual appeal, and fear of missing out (FOMO) on impulse buying. The research employs a quantitative approach using a survey method with a questionnaire distributed to 200 respondents who buy Blindbox PopMart in Beachwalk Bali. The sampling technique used is purposive sampling with specific criteria. Data analysis was conducted using the Multiple Linear Regression Model with SPSS to test the relationship between the independent variables and the dependent variable. The results indicate that scarcity perception has a positive and significant effect on impulse buying, visual appeal has a positive and significant effect on impulse buying, and fear of missing out also has a positive and significant effect on impulse buying. The findings are expected to be applied by companies in the marketing field to create a sense of scarcity, enhance the visual design appeal of products, and leverage existing trends to boost sales and contribute to the enrichment of the academic literature on consumer behavior.

**Keywords:** Fear of missing out; Impulse buying; Scarcity perception; Social influence; Visual appeal.

Naskah Masuk: 18 September 2025;

Revisi: 21 Oktober 2025;

Diterima: 14 November 2025;

Tersedia: 19 November 2025.



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## 1. Introduction

Blind boxes have recently emerged as a rapidly growing trend among young consumers. A blind box is a collectible product containing a surprise item, the contents of which are unknown to consumers until the box is opened. The main attraction of blind boxes lies in the “unboxing” experience, the chance of obtaining rare items, and the emotional satisfaction derived from their visually appealing packaging. Consumers purchase blind boxes to obtain uncertain rewards with a high degree of diversity (Zhang et al., 2022). This phenomenon extends beyond mere entertainment, as it also carries addictive characteristics that can trigger repetitive purchases, even when consumers do not necessarily need the product (Chen et al., 2022). Blind boxes are particularly popular in China, where sales reached 9.7 billion yuan (approximately IDR 22 trillion) in 2021 and are projected to rise to IDR 250 trillion by 2026 (thinkchina.sg). The blind box phenomenon has also spread to Indonesia, where the market has experienced rapid growth, accounting for 6–7% of China’s market (fortuneidn.com). In Indonesia, blind boxes can be found in both online and offline stores, primarily at Miniso, Top Toy, Toy Kingdom, and Pop Mart. The enthusiasm for blind box collecting has also reached consumers in Bali, as evidenced by the strong market response to the opening of the Pop Mart outlet at Beachwalk Bali. According to detik.com, approximately 1,500 yellow wristbands were distributed during the grand opening, indicating that 1,500 visitors were allowed to shop at the event. Such consumer purchasing behavior reflects a broader consumer

behavior pattern individuals follow the blind box trend driven by a perceived sense of scarcity, which often leads to unplanned purchases made impulsively, beyond their primary consumption needs (impulse buying).

Recent studies have shown that blind boxes are often associated with impulsive consumption patterns resembling mild gambling behavior, due to the elements of uncertainty and reward anticipation (Jiang et al., 2023). In consumer behavior studies, impulse buying is defined as a spontaneous purchase that occurs suddenly without prior planning, and is often influenced by emotional states (Verhagen & van Dolen, 2022). The Stimulus–Organism–Response (S–O–R) Theory explains that external stimuli (such as scarcity, visual design, or marketing messages) can influence an individual's internal state (including emotions, arousal, or social anxiety), which in turn triggers a behavioral response, namely impulsive buying behavior (Liu et al., 2021). The blind box phenomenon provides an ideal context for examining how specific marketing stimuli evoke emotional responses that lead to impulse buying. Impulse buying is a spontaneous purchasing behavior that occurs without prior planning, often driven by emotional, situational, or external stimuli. It is a psychological phenomenon characterized by unplanned purchases motivated by emotional impulses rather than rational consideration (Nagadeepa et al., 2021). Such behavior can be triggered by internal factors, such as emotions and personality traits, as well as external factors, including store layout, sales promotions, and visually appealing elements (Mattia et al., 2021). Marketers often leverage consumers' emotional aspects, increasing the likelihood of impulsive purchases through emotional contagion (Herdiana & Supriyono, 2023). Moreover, consumers are visually influenced by product images displayed across e-commerce platforms, which are strategically designed to stimulate purchase intentions (Mohapatra et al., 2024). Impulsive purchases frequently occur when individuals experience sudden and intense urges to buy, making such situations highly appealing to consumers (Ibrahim et al., 2025).

An external factor influencing impulse buying is scarcity perception. Perceived scarcity, whether in the form of limited quantity or time scarcity, can increase purchase urgency and reduce consumers' rational evaluation processes. Recent studies emphasize that time-limited or quantity-limited messages significantly enhance the likelihood of consumers making quick and impulsive purchase decisions (Wu et al., 2022). Scarcity perception is strategically created by marketers through promotional messages such as "limited stock" to encourage immediate action and prevent consumers from missing out on opportunities (Cai & Chi, 2023). Furthermore, scarcity perception interacts with social proof cues, thereby strengthening its influence on individual social behavior (Mayasari & Salsabila, 2025).

Another external factor that can increase unplanned purchase activity is visual appeal, which also plays a crucial role in triggering impulse buying. Visual appeal encompasses the aesthetic attractiveness of a product, including its packaging design, color scheme, and display presentation. Recent research indicates that visually appealing displays can evoke pleasure and positive emotional stimulation, which in turn enhance the likelihood of impulsive purchases (Anastasiei & Dospinescu, 2021). In the context of blind boxes, unique and colorful packaging serves as a key marketing strategy to attract the attention of young consumers. Similar findings have been reported in the fashion and e-commerce sectors, where attractive visual appeal often leads to spontaneous purchasing behavior (Huang & Li, 2023).

Another increasingly relevant psychological factor influencing impulse buying is the Fear of Missing Out (FoMO). FoMO refers to the anxiety of missing valuable experiences or opportunities that others are currently enjoying. Studies have shown that FoMO-based marketing strategies, such as the use of countdown timers or messages emphasizing exclusivity, can heighten consumers' emotional urgency and trigger impulsive purchasing decisions (Islam et al., 2023). The increasing use of social media has further strengthened the influence of FoMO on youth consumption behavior. Consumers who perceive scarcity tend to experience a higher level of FoMO, which in turn motivates them to make immediate purchases to avoid missing out on potential opportunities (Zhang et al., 2022). Although numerous studies have investigated impulse buying behavior, research that specifically examines blind boxes while incorporating FoMO as a mediating variable remains limited. The blind box phenomenon represents a unique context that combines product uncertainty, the scarcity of rare items, visually appealing packaging, and strong online community engagement all of which amplify FoMO. This makes blind boxes an important research context for expanding the understanding of impulsive consumption behavior among young consumers

(Jiang et al., 2023). Previous studies have found that scarcity perception can significantly increase impulsive purchasing behavior (Wu et al., 2022; Mayasari & Salsabila, 2025), visual appeal has a positive and significant influence on impulse buying (Anastasiei & Dospinescu, 2021; Huang & Li, 2023), and fear of missing out can also shape impulsive buying tendencies (Zhang et al., 2022; Jiang et al., 2023). However, a study conducted by Sabani and Fikriah (2025) revealed that visual appeal did not have a significant effect on impulse buying. Based on these phenomena and previous research findings, this study aims to analyze the influence of scarcity perception, visual appeal, and fear of missing out on impulse buying, particularly among blind box consumers of Pop Mart.

## 2. Literature Review

### Scarcity Perception

Scarcity can be considered a crucial factor in consumer behavior. Scarcity perception refers to consumers' perception of the availability of a product or service. The perception of limited availability tends to increase consumers' attraction to and evaluation of the product (Aggarwal et al., 2021). Marketers often highlight scarcity to reinforce a sense of urgency regarding time-limited or quantity-limited offers (Mayasari & Salsabila, 2025). In consumer behavior-based marketing strategies, there are two fundamental forms of scarcity: quantity-based scarcity and time-based scarcity. Quantity scarcity, also referred to as supply scarcity, occurs when sellers offer only a limited number of product units, thereby creating a perception of exclusivity and rarity (Shi et al., 2020). In contrast, time-based scarcity involves restricting the period during which a product can be purchased. The perceived scarcity of a product can induce unplanned or impulsive purchasing behavior among consumers.

H<sub>1</sub>. Scarcity perception has a positive and significant effect on impulse buying.

### Visual Appeal

Visual appeal is an important factor influencing consumer behavior, as aesthetic elements such as color, imagery, typography, and layout shape consumers' initial perceptions of a product or digital platform. An attractive visual appeal creates a positive first impression, making consumers feel pleased and comfortable, which subsequently enhances their perception of other product attributes (Chopdar & Balakrishnan, 2020). Visual appeal also plays a critical role in stimulating consumer exploration behavior (Chen et al., 2020). The visual attractiveness of e-commerce platforms plays a significant role in shaping consumer behavior and can even trigger impulsive buying (Elysha & Batu, 2024). Appealing visual displays can evoke positive emotions, enhance perceived product quality, and build trust toward the brand. In the context of digital marketing, visual appeal refers to the presentation of product availability on social media platforms. The visual attractiveness of products can create enthusiasm and satisfaction, which often accompany impulsive purchase decisions (Nguyen et al., 2024). Recent studies further suggest that visual appeal is not merely an element of aesthetic enhancement but serves as a key stimulus within the Stimulus–Organism–Response (S–O–R) model, where consumers respond to visual stimuli with specific emotional reactions that ultimately lead to purchasing behavior (Lee et al., 2022). However, other studies have found that visual appeal does not significantly influence impulse buying behavior (Sabani & Fikriah, 2025).

H<sub>2</sub>. Visual appeal has a positive and significant effect on impulse buying.

### FOMO (Fear of Missing Out)

Fear of Missing Out (FoMO) refers to the fear or anxiety that arises when individuals feel they are missing out on exciting experiences or information that others are enjoying (Tanhan et al., 2022). The expansion and intensification of digital connectivity have accelerated the growth of FoMO among individuals, both as private persons and as consumers (Holte, 2023). This fear of losing opportunities or exclusive offers is further amplified by the pervasive use of social media (Amelia & Kilay, 2023). FoMO explores consumer behavior patterns wherein individuals experience anxiety about missing out on exclusive deals, discounts, or promotional events currently available (Rachman et al., 2024).

It represents a form of psychological anxiety that occurs when individuals fear being left behind from experiences, information, or opportunities enjoyed by others. Recent research indicates that FoMO is positively correlated with increased social media usage, decreased life satisfaction, and heightened social anxiety. Within the consumer domain, FoMO serves as a powerful trigger for impulsive purchasing behavior, as consumers experience emotional urgency and a fear of losing potential opportunities.

H<sub>3</sub>. Fear of Missing Out (FoMO) has a positive and significant effect on impulse buying.

### Conceptual Framework

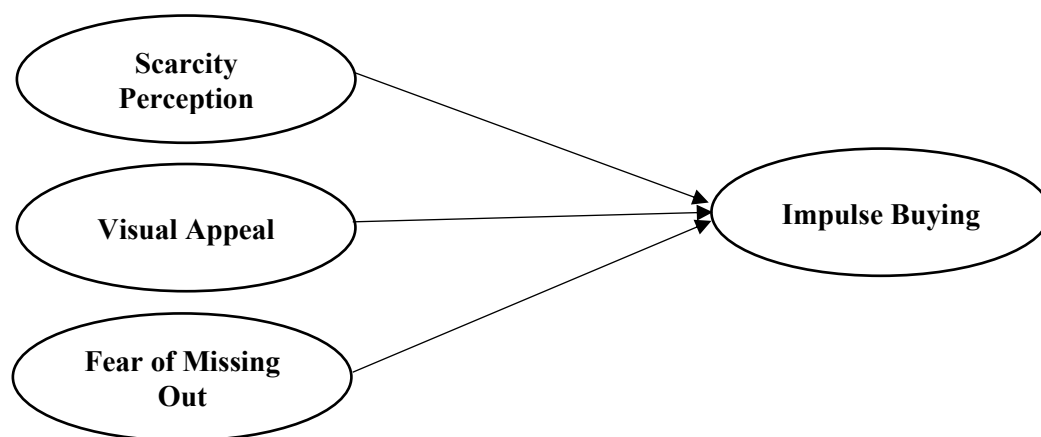


Figure 1. Conceptual Framework

## 3. Method

This study employs an associative research design to examine the relationships among two or more variables through hypothesis testing. The research is causal in nature, aiming to identify the cause-and-effect relationships between independent and dependent variables. The study was conducted in Denpasar City, specifically focusing on consumers of Blind Box Pop Mart products at Beachwalk Bali. The sampling technique used in this study is purposive sampling, with the following criteria: respondents must (1) reside in Denpasar City, (2) have a minimum education level of senior high school (SMA/SMK), and (3) have purchased or visited the Blind Box Pop Mart store at Beachwalk Bali at least once. Data were collected using a questionnaire survey method. Validity and reliability tests were first conducted to assess each questionnaire item before hypothesis testing.

A total of 200 respondents were included in this study. Each questionnaire item was measured using a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. To ensure the robustness of the regression model, several classical assumption tests were conducted, including: Normality test, to determine whether the residuals were normally distributed, Multicollinearity test, to check for correlations among independent variables, and Heteroscedasticity test, to assess the equality of variance among residuals across observations. The data were analyzed using multiple linear regression analysis with the assistance of SPSS software. This analytical technique was employed to determine the influence of independent variables such as scarcity, visual appeal, and fear of missing out on the dependent variable, namely impulse buying behavior.

## 4. Result and Discussion

### Result

Before proceeding with the main data analysis, the questionnaire was pre-tested on 30 respondents to ensure that each item was both valid and reliable. The validity test was conducted to assess the accuracy and consistency of the questionnaire items in measuring the intended constructs. The results of the validity test are presented in Table 1 below.

**Table 1.** Results of the Validity Test

Variable	Indicator	Correlation coefficient	Limit Coefficient	Information
Scarcity Perception	X1.1	0,951	0,3	Valid
	X1.2	0,969	0,3	Valid
	X1.3	0,985	0,3	Valid
	X1.4	0,911	0,3	Valid
Visual Appeal	X2.1	0,657	0,3	Valid
	X2.2	0,724	0,3	Valid
	X2.3	0,587	0,3	Valid
Fear of Missing Out	X3.1	0,813	0,3	Valid
	X3.2	0,45	0,3	Valid
	X3.3	0,512	0,3	Valid
	X3.4	0,401	0,3	Valid
Impulse Buying	Y1	0,888	0,3	Valid
	Y2	0,885	0,3	Valid
	Y3	0,954	0,3	Valid
	Y4	0,946	0,3	Valid

Source: Primary data processed, 2025

Based on Table 1. Results of the Validity Test, the results of the validity test for each indicator show a value greater than 0.3 ( $> 0.3$ ), indicating that the instruments used to measure each indicator in this study are valid.

**Table 2.** Results of the Reliability Test

Variable	Croanbach's Alpha	Information
Scarcity Perception	0,936	Reliable
Visual Appeal	0,655	Reliable
Fear of Missing Out	0,966	Reliable
Impulse Buying	0,634	Reliable

Source: Primary data processed, 2025

Table 2 presents the results of the reliability test for each research indicator. The results show that the Cronbach's Alpha values are greater than 0.6 ( $> 0.6$ ), indicating that the instruments used in this study are reliable.

Since all research instruments have passed the validity and reliability tests, the questionnaire was then distributed to 200 respondents. The collected data were subsequently tested using classical assumption tests, including the normality test, heteroscedasticity test, and multicollinearity test

**Table 3.** Normalitas Test

Unstandardized Residual		
N		200
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	.24023251
Most Extreme Differences	Absolute	.072
	Positive	.060
	Negative	-.072
Test Statistic		.072
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

Source: Primary data processed, 2025

Table 3 presents the results of the normality test. The results of the Kolmogorov–Smirnov test show that the Asymp. Sig. (2-tailed) value is greater than 0.05 ( $0.200 > 0.05$ ). This indicates that the data in the regression model are normally distributed.

**Table 4.** Heterokedastisitas Test

Coefficients <sup>a</sup>		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	0,530	0,117		4,520	0,000
	Scarcity Perception	0.020	0.080	0.005	0,025	0,978
	Visual Appeal	-0,041	0,042	-0,150	-0,935	0,350
	Fear of Missing Out	-0,020	0.045	-0,073	-0,456	0,467

Source: Primary data processed, 2025

Table 4 presents the results of the heteroskedasticity test. Based on the test results, the significance values of all variables are greater than 0.05. The significance level for scarcity perception  $0,978 > 0.05$ , for fear of missing out is  $0,467 > 0.05$ , and for visual appeal  $0,350 > 0.05$ . These findings indicate that no heteroskedasticity problem is detected in the regression model used in this study.

**Table 5.** Multikolinearitas Result Test

		Collinearity Statistics	
Variable		Tolerance	VIF
1	Scarcity Perception	0,986	1,014
2	Visual Appeal	0,958	1,044
3	Fear of Missing Out	0,971	1,030

Source: Primary data processed, 2025

Table 5 presents the results of the multicollinearity test. The test results show that all Variance Inflation Factor (VIF) values are less than 10. The VIF value for scarcity perception is  $1.014 < 10$ , for visual appeal is  $1.044 < 10$ , and for fear of missing out is  $1.030 < 10$ . This indicates that no multicollinearity problem is present in the regression model used in this study.

Based on the results of the classical assumption tests, the regression model used in this study has met the required analytical criteria, namely passing the normality test, heteroskedasticity test, and multicollinearity test. Therefore, it can be concluded that the regression model does not contain any classical assumption violations and is appropriate for further analysis. Consequently, the testing can proceed to the multiple linear regression analysis stage to examine the effect of scarcity perception, visual appeal, and fear of missing out on impulse buying.

**Table 6.** Results of Multiple Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Hypotesis Result
	B	Std. Error	Beta			
(Constant)	-0,721	1,747		-0,413	0,680	
1 Scarcity Perception	0,631	0,062	0,564	10,158	0,000	H <sub>1</sub> Accepted
2 Visual Appeal	0,321	0,102	0,178	3,153	0,002	H <sub>2</sub> Accepted
3 Fear of Missing Out	0,157	0,065	0,136	2,427	0,016	H <sub>3</sub> Accepted
a. Dependent Variable : Impulse Buying						
F Statistik	: 44,213					
Sig. F	: 0,000					
R <sup>2</sup>	: 0,404					
Adjusted R <sup>2</sup>	: 0,394					

Source: Primary data processed, 2025

Based on the results of the multiple linear regression analysis, the relationship between scarcity perception and impulse buying shows a t-significance value of  $0.000 < 0.05$ , with a positive beta coefficient of 0.631. This indicates that Hypothesis 1 is accepted scarcity

perception has a positive and significant effect on impulse buying. The relationship between visual appeal and impulse buying has a t-significance value of  $0.002 < 0.05$ , with a beta coefficient of 0.321. This finding indicates that Hypothesis 2 is also accepted. Visual appeal has a positive and significant influence on impulse buying. Meanwhile, the relationship between fear of missing out (FoMO) and impulse buying shows a t-significance value of  $0.016 < 0.05$ , with a positive beta coefficient of 0.157. This result indicates that Hypothesis 3 is accepted, meaning FoMO positively and significantly affects impulse buying.

## Discussion

### A. The Effect of Scarcity Perception on Impulse Buying

The regression analysis results show that scarcity perception has a positive and significant effect on impulse buying. This suggests that the higher the perception of scarcity created by a company, the greater the likelihood that consumers will engage in unplanned purchases. Consumers perceive PopMart's blind boxes as limited-edition items or products that are difficult to obtain again. Consequently, when visiting PopMart stations, particularly at Beachwalk Bali, they tend to purchase immediately without prior planning. These findings are consistent with Wu et al. (2022), who found that scarcity perception positively and significantly influences impulse buying. Similarly, Zalfa et al. (2025) stated that the stronger consumers' perception that blind boxes are rare or limited in quantity, the stronger their impulse to make immediate purchases.

### B. The Effect of Visual Appeal on Impulse Buying

The findings also confirm that visual appeal has a positive and significant relationship with impulse buying. This means that the more visually appealing a product is, the greater the likelihood that consumers will engage in impulsive buying behavior, and vice versa. These results align with Zheng et al. (2019) and Fatimah & Harahap (2023), who found that visual appeal serves as a stimulus that triggers affective consumer responses, such as pleasure or excitement, which in turn lead to impulse buying. Similarly, Nabela and Prihandono (2025) also confirmed that visual appeal significantly affects impulse buying.

### C. The Effect of Fear of Missing Out (FoMO) on Impulse Buying

The regression results reveal that fear of missing out has a positive and significant impact on impulse buying. This means that the higher the FoMO experienced by consumers, the more likely they are to make impulsive purchases. These findings are consistent with Jiang et al. (2023) and Aziz et al. (2025), who found that FoMO significantly influences impulse buying because individuals tend to make fast, unplanned purchases to avoid missing out on current trends. Similarly, Zalfa et al. (2025) argued that FoMO drives consumers to make rapid purchase decisions to avoid feelings of exclusion or missed opportunities.

## 6. Conclusion

Based on the results of the data analysis, this study concludes that scarcity perception, visual appeal, and fear of missing out all have positive and significant effects on impulse buying. These findings provide valuable insights for marketing practitioners. Marketers can create a perception of scarcity to stimulate urgency, leverage social trends to make products go viral, and use visually attractive designs, such as packaging and product displays to capture consumer attention and trigger unplanned purchases. Furthermore, this research contributes to the academic literature by expanding the understanding of impulsive buying behavior, particularly in the context of blind box products such as PopMart.

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