

## FOMO and Flash Sales Driving Impulsive Skincare Purchases: The Mediating Role of Spontaneity in Gen Z

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### ABSTRACT

*Study examines the influence of Fear of Missing Out (FOMO) and flash sales on impulsive purchases of skincare products by Generation Z in Indonesia, with an emphasis on the mediating role of spontaneity in the decision-making process. Using the Stimulus-Organism-Response (SOR) theoretical framework and the PLS-SEM approach, this study involved 339 respondents from Bogor City who actively shop through social commerce. The results show that FOMO and flash sales significantly influence spontaneity, which then acts as a mediator in driving impulsive buying behaviour. These findings confirm that psychological factors are more influential than direct promotional stimuli and emphasize the importance of digital marketing strategies that can evoke emotions and a sense of urgency. The practical implication is that MSMEs can leverage this phenomenon through content that creates a sense of exclusivity and urgency, to increase sales effectively and sustainably in the digital era.*

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## INTRODUCTION

In recent years, the skincare industry in Indonesia has grown rapidly, driven by increasing public awareness of skincare, the expansion of beauty trends on social media, and easier access to local and international products through e-commerce. According to the Director General of Small, Medium, and Micro Industries at the Ministry of Industry, revenue in the cosmetics sector is projected to increase by 48% from 2021 to 2024, rising from IDR 21.45 trillion to approximately IDR 31.77 trillion (Waluyo, 2024). Data from the Food and Drug Monitoring Agency (BPOM) also reported 1,178 cosmetics industries in Indonesia as of July 2024, with around 90% categorized as Micro, Small, and Medium Enterprises (MSMEs) (Annual Report 2024, 2025).

Generation Z, defined as individuals born between 1997 and 2012, is one of the main contributors to this growth. This generation is highly familiar with digital technology and frequently uses smartphones to access information, shop, and conduct online transactions. They spend considerable time on social media, streaming platforms, and online searches before making purchasing decisions. Consequently, social media plays an important role in shaping their consumption behaviour and functions as a key channel for advertising and information dissemination (Grigoreva et al., 2021).

One digital marketing strategy widely used to attract Gen Z consumers is the flash sale. Flash sales are time-limited promotions designed to create urgency and encourage quick purchasing decisions (Christanto & Aprillia, 2023). Generation Z tends to be price-sensitive, making them responsive to discounts, flash sales, and incentives such as free shipping (Said et al., 2023). In online retail, flash sales usually offer limited quantities of discounted products within a short time, creating urgency through limited stock and time availability (Wu & Huang, 2018). This strategy applies the principles of scarcity and loss aversion to stimulate purchasing behaviour (Cialdini, 2009). As a result, flash sales can trigger emotional responses such as excitement and arousal, which may lead to impulsive buying (Christanto & Aprillia, 2023; Lamis et al., 2022).

Another factor influencing Generation Z consumption behaviour is the Fear of Missing Out (FoMO). FoMO refers to a psychological condition in which individuals feel anxious about missing experiences enjoyed by others, encouraging them to stay connected to social media (Bakioğlu et al., 2022). It arises from the perception that others are experiencing more enjoyable opportunities (Przybylski et al., 2013). In marketing contexts, FoMO can motivate consumers to follow trends or purchase products to avoid feeling excluded. Previous studies have found a positive relationship between FoMO and consumer behaviour (Yaputri et al., 2022). Although often associated with negative psychological conditions, FoMO can generate consumption responses because individuals purchase products to avoid missing experiences (Alfina et al., 2023). FoMO also creates urgency that encourages faster purchasing decisions aligned with social trends (Çelik et al., 2019) and can be utilized by businesses to generate urgency and exclusivity in marketing campaigns (Scholarworks et al., 2018).

Impulse buying refers to consumers' tendency to purchase products spontaneously without

prior planning and is often driven by emotional urges (Rook, 1987). Emotional and cognitive processes influence this behaviour, while external factors such as marketing strategies and product presentation may trigger impulsive purchases (Silvera et al., 2008; Iyer et al., 2020). Online platforms further increase impulse buying tendencies due to easy access, product variety, and persuasive features such as discounts and visual merchandising (Rani & S, 2023).

Another factor closely related to impulse buying is spontaneity, defined as the tendency to make immediate purchases without prior planning. Buying impulses may arise unexpectedly and encourage instant purchasing decisions (Rook, 1987; Rook & Fisher, 1995). Browsing activities, product proximity, positive emotions, and social influences can further stimulate this behaviour (Beatty & Elizabeth Ferrell, 1998). In digital environments, e-commerce features such as product videos, reviews, and countdown timers can accelerate purchasing decisions and encourage spontaneous buying intentions (Huang et al., 2024; Silalahi et al., 2025). However, strong self-control may reduce such behaviour (Pramudyasari & Soetjningsih, 2023).

This study adopts the Stimulus–Organism–Response (SOR) theory developed by Mehrabian and Russell (1974) to explain consumer behaviour. In this framework, stimulus represents external factors, organism refers to internal psychological processes, and response refers to behavioural outcomes (Song et al., 2022). In this research, flash sales and FoMO act as stimuli, spontaneity represents the organism, and impulsive buying represents the behavioural response.

Based on these theoretical arguments, this study develops a digital consumer behaviour model examining the influence of flash sales and FoMO on impulsive buying among Indonesian Generation Z consumers.

The proposed hypotheses are as follows:

H1: Flash sales have a positive and significant effect on spontaneity

H2: FoMO has a positive and significant effect on spontaneity

H3: Flash sales have a positive and significant effect on impulsive buying

H4: FoMO has a positive and significant effect on impulsive buying

H5: Spontaneity has a positive and significant effect on impulsive buying

## **RESEARCH METHODS**

This study employed a quantitative research approach using primary data collected through a structured questionnaire distributed via Google Forms. The questionnaire was developed based on indicators derived from the research variables, namely Flash Sale, Fear of Missing Out (FoMO), Spontaneity, and Impulsive Buying. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The research population consisted of Generation Z consumers who actively use social commerce platforms. The sample included residents of Bogor City aged between 17 and 24

years who have participated in flash sale events for skincare products during live shopping sessions. Using a purposive sampling method, a total of 339 valid responses were collected and analyzed.

This study adopts the Stimulus–Organism–Response (SOR) theoretical framework proposed by Mehrabian and Russell (1974). Within this framework, Flash Sale and FoMO act as external stimuli (S), Spontaneity represents the internal psychological process or organism (O), and Impulsive Buying represents the behavioural response (R). This framework explains how external promotional stimuli and psychological factors influence consumer purchasing behaviour in social commerce environments.

To analyze the relationships among variables, this study applies the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach using SmartPLS 4 software. PLS-SEM was selected because it is suitable for analyzing complex models involving multiple latent variables and indicators and for examining mediating relationships (Hair, 2022). The analysis simultaneously evaluates the measurement model (outer model) to assess validity and reliability, and the structural model (inner model) to test the hypothesized relationships among variables.

The operationalization of research variables was adapted from established and validated prior studies to ensure construct validity and theoretical consistency, as presented in Table 1.

**Table 1. Operationalization of Research Variables**

Variable	Operational Definition	Indicators	Measurement Scale	Source
Fear of Missing Out (FoMO)	Anxiety arising from the perception of missing rewarding experiences or trends possessed by others, leading individuals to stay continuously connected with digital platforms.	<ol style="list-style-type: none"> <li>Concern about missing product trends</li> <li>Urge to monitor others' purchasing activities</li> <li>Need to stay connected with product information</li> <li>Social pressure to follow popular purchases</li> </ol>	Five-point Likert scale (1 = strongly disagree to 5 = strongly agree)	Przybylski et al. (2013); Bakioğlu et al. (2022)
Flash Sale	Consumer perception of limited-time promotional offers characterized by time and stock scarcity that create urgency and stimulate rapid purchase decisions.	<ol style="list-style-type: none"> <li>Perceived time limitation of promotions</li> <li>Perceived product stock scarcity</li> <li>Attractiveness of discounts</li> <li>Sense of urgency during promotions</li> </ol>	Five-point Likert scale	Wu & Huang (2018); Cialdini (2009); Christanto & Aprillia (2023)

Spontaneity	The tendency of consumers to make immediate purchase decisions without prior planning due to sudden emotional urges.	<ol style="list-style-type: none"> <li>1. Sudden urge to purchase</li> <li>2. Lack of prior purchase planning</li> <li>3. Strong emotional buying impulse</li> <li>4. Instant decision-making tendency</li> </ol>	Five-point Likert scale	Rook (1987); Rook & Fisher (1995)
Impulsive Buying	Unplanned purchasing behaviour driven by strong emotional responses where affect dominates cognitive evaluation.	<ol style="list-style-type: none"> <li>1. Unplanned purchasing behaviour</li> <li>2. Emotional dominance during purchase</li> <li>3. Difficulty resisting buying urges</li> <li>4. Immediate purchase without extensive evaluation</li> </ol>	Five-point Likert scale	Beatty & Ferrell (1998); Silvera et al. (2008)

Source: Primary Data, 2025

## RESULTS & DISCUSSION

This study involved 339 respondents from Generation Z in Bogor City, identified as s-commerce users who had previously purchased skincare products through the Flash Sale feature. The demographic and behavioral characteristics of the respondents are presented in the following tables to provide a comprehensive overview of the study sample.

**Table 2. Respondent's Age Range**

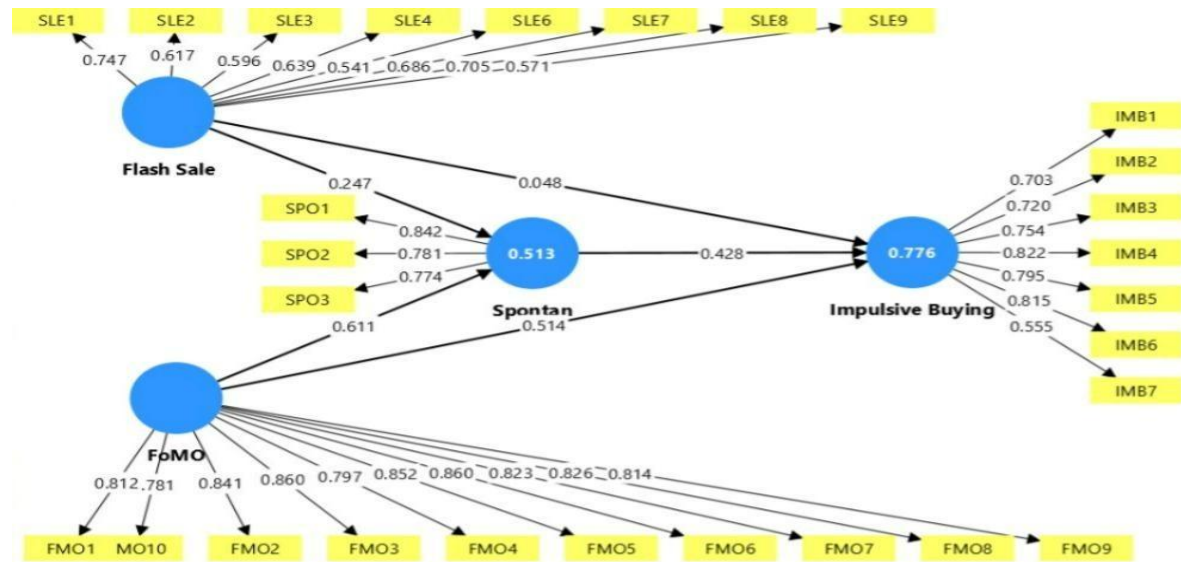
Age Range	Total	Percentage
< 17 years	19	5.60%
17–20 years	152	44.84%
21–24 years	168	49.56%

Source: Primary Data, 2025

Based on the table above, it can be seen that the respondents in this study were dominated by the 21-24 year age range, with 168 respondents (49.56%) and the 17-20 year age range, with 152 respondents (44.84%). Meanwhile, respondents aged <17 years old only numbered 19 people (5.6%) of the total responde

**Evaluation of the Measurement Model (Outer Model).** The measurement model in this study was analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach using SmartPLS software. The purpose of the outer model evaluation was to ensure that each indicator used met the reliability and validity criteria before proceeding to the structural model analysis stage (Hair et al., 2019). The following figure shows a conceptual

model consisting of three latent constructs, namely Flash Sale (SLE), Fear of Missing Out (FMO), Spontaneity (SPO) and Impulsive Buying (IMB), along with the indicators that measure them.



**Figure 1. Structural Model of Flash Sale and FoMo on Spontaneity towards Impulsive Buying**

Source: SmartPLS (author's analysis), 2025

Figure 1 shows the structural models formed from the Flash Sale Experience (SLE) construct, measured by eight indicators after two indicators (SLE5 and SLE10) were eliminated due to low outer loading values ( $<0.50$ ). Meanwhile, the Fear of Missing Out (FoMo) construct uses ten indicators, Spontaneity (SPO) three indicators, and Impulsive Buying (IMB) seven indicators. This model examines the relationship between SLE and FoMo on spontaneity, which then influences impulsive buying behavior, based on the Stimulus–Organism–Response (SOR) theory.

**Indicator Reliability (Outer Loading).** Indicator reliability refers to the extent to which indicators in a construct show consistency and strong correlation with the construct in question (Hair, 2017). An indicator is considered reliable if its outer loading value is  $\geq 0.708$ , which indicates that more than 50% of the variance of the indicator is successfully explained by the construct it represents (Hair, 2022). However, indicators with outer loading values between 0.4 and 0.7 can still be considered for use if their presence supports content validity and their removal does not compromise the quality of the construct. Conversely, if an indicator has an outer loading  $<0.4$ , it should be removed from the model because its contribution to the construct is considered very low. In Figure 1, a number of indicators in the Flash Sale (SLE) construct can be seen that have outer loading values between 0.5 and 0.7, such as SLE2 (0.617), SLE3 (0.596), SLE4 (0.639), SLE6 (0.541), and SLE9 (0.571). Referring to the guidelines from Hair et al. (2017), indicators with loadings below 0.40 should be removed because their contribution to the construct is very low, while indicators with loadings between 0.40–0.70 can still be maintained if they support content validity and do not significantly reduce the construct's

reliability. Therefore, indicators SLE5 and SLE10 that have loadings below 0.5 have been eliminated, while the other indicators are retained because they are considered to still contribute to the representation of the Flash Sale construct.

**Construct Reliability & Convergent Validity.** The table below shows the Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) values for each construct:

**Table 3. Construct Reliability and Convergent Validity**

	Cronbach's alpha	CR (rho_a)	CR (rho_c)	AVE
Flash Sale	0.809	0.837	0.847	0.411
FoMO	0.949	0.949	0.956	0.684
Impulsive Buying	0.861	0.871	0.895	0.551
Spontaneous	0.726	0.759	0.842	0.639

Source: SmartPLS (author's analysis), 2025

All constructs showed CR values above 0.7, indicating good internal consistency (Hair et al., 2019). The AVE values of the FMO, IMB, and SPO constructs were  $> 0.5$ , indicating convergent validity was met. Although the AVE value for the SLE construct was slightly below the threshold (0.411), this value represented a significant improvement after the two indicators with the lowest loadings (SLE5 and SLE10) were removed. Since the CR of SLE remained above 0.7, this construct was still considered acceptable for the initial stage of model development (Hair, 2017).

**Discriminant validity.** In this study, it was evaluated using two main approaches, namely the Fornell-Larcker criteria and the Heterotrait-Monotrait Ratio (HTMT). (Hair, 2017, p. 20, 2022).

**Table 4. Fornell-Larcker Test Results**

	Flash Sale	FoMO	Impulsive Buying	Spontaneous
Flash Sale	0.641			
FoMO	0.261	0.827		
Impulsive Buying	0.356	0.815	0.742	
Spontaneous	0.407	0.676	0.794	0.800

Source: SmartPLS (author's analysis), 2025

Discriminant validity was tested using the Fornell-Larcker criterion. The square root of the AVE (diagonal value) was higher than the correlation between the other constructs (non-diagonal values), indicating that the constructs in this model have adequate discrimination.

**Table 5. HTMT Test Results**

Flash Sale		FoMO	Impulsive Buying	Spontaneous
Flash Sale				
FoMO	0.228			
Impulsive Buying	0.374	0.896		
Spontaneous	0.459	0.774	0.980	

Source: SmartPLS (author's analysis), 2025

Most HTMT values were  $<0.90$ , except for the pair of constructs Spontaneity (SPO) and Impulsive Buying (IMB), which had an HTMT value of 0.98. This value exceeds the conservative limit of 0.90 (Hair et al., 2020), indicating a possible overlap between the two constructs. In the explanation of discriminant validity, the constructs FoMO, Spontaneity, and Impulsive Buying appeared to meet all criteria. The construct Flash Sale (SLE) experienced an improvement in reliability after eliminating two problematic indicators. Discriminant validity was generally met, although there were indications of potential overlap between SPO and IMB.

**Results of Structural Model Evaluation (Inner Model).** The evaluation of the structural model (inner model) aims to assess the strength and significance of the relationships between latent constructs. Referring to the guidelines from Hair (2017) and Hair et al. (2022), this process includes testing for multicollinearity using the Variance Inflation Factor (VIF) value, measuring the model's predictive ability using the coefficient of determination ( $R^2$ ), and assessing the significance of the paths between constructs using path coefficient analysis and bootstrapping tests.

**Collinearity (VIF).** Based on the VIF output, all Variance Inflation Factor values for the indicators are below the maximum threshold of 5, with the majority being  $<3.5$ . This indicates that there is no multicollinearity between the indicators (Hair et al., 2017), thus the model is free from predictor redundancy issues.

### Coefficient of Determination ( $R^2$ )

**Table 6. R-square value**

	R-square	R-square adjusted
Impulsive Buying	0.776	0.774
Spontaneous	0.513	0.510

Source: SmartPLS (author's analysis), 2025

The R-square value indicates the ability of the exogenous construct to explain the variance of the endogenous construct. Flash Sale and Flash Sale Experience explain 51.3% of the variance of Spontaneity (moderate category), while FoMO, Flash Sale, and Spontaneity together explain 77.6% of the variance of Impulsive Buying (strong category), indicating good predictive power of the model (Hair, 2017).

Furthermore, the R-squared ( $R^2$ ) value is used to examine the extent to which the independent

variables contribute to explaining the dependent variable, while the f-square ( $f^2$ ) measures the relative impact of each exogenous construct on the endogenous construct. A Q-square ( $Q^2$ ) assessment is also conducted to determine the model's predictive efficacy. Consequently, hypothesis testing in PLS-SEM not only addresses statistical significance but also evaluates the robustness and predictive relevance of each relationship in the model.

**Path Coefficient Significance Test.** After the structural model (inner model) is built and meets the validity and reliability criteria, the next step is to test the significance of the relationships between latent variables using the bootstrapping technique. This technique is used to estimate the precision of parameters in the model by generating t-statistics and p-values, which will form the basis for decision-making regarding research hypotheses. The t-statistic serves as a metric for evaluating the significance of relationships between variables, with a relationship considered significant when t-value exceeds 1.96 at a significance threshold of 5% ( $p < 0.05$ ). Further explanation of the test results for each path in the bootstrap technique is presented in the following table.

**Table 7. Path Coefficient Significance Test Results**

	$\beta$	T statistics	P values
Flash Sale -> Spontan	0.247	6,070	0.000
FoMO -> Spontan	0.611	17,842	0.000
Flash Sale -> Impulsive Buying	0.048	1,554	0.120
FoMO -> Impulsive Buying	0.514	14,178	0.000
Spontaneous -> Impulsive Buying	0.428	10,934	0.000

Source: SmartPLS (author's analysis), 2025

Based on the results of the bootstrap technique above, the following analysis is known:

1. Flash sale versus spontaneity

The relationship between flash sales and spontaneity has a  $\beta$  value of 0.247, a t-statistic of 6.070, and a P value of 0.000. A  $\beta$  value of 0.247 means that flash sales have a positive effect on spontaneity. A t-statistic value of  $6.070 > 1.96$ , and a P value of  $< 0.05$ , indicates that the relationship between flash sales and spontaneity is very significant. Therefore, Hypothesis 1 can be accepted.

2. FoMO towards spontaneity

The relationship between FoMO and spontaneity has a  $\beta$  value of 0.611, a t-statistic of 17.842, and a P value of 0.000.  $\beta$  0.611 means that FoMO has a positive effect on spontaneity. The t-statistic value of  $17.842 > 1.96$ ,  $P < 0.05$ , indicates a very significant relationship between FoMO and spontaneity. Therefore, Hypothesis 2 can be accepted.

3. Flash sales versus impulsive buying

The relationship between flash sales and impulsiveness has value  $\beta$  of 0.048, t-statistic of

1.554, P value of 0.120. The value  $\beta$  0.048 is considered very small (almost close to zero), indicating a very weak but still positive effect. The t-statistic value of  $1.554 < 1.96$  and the P-value of  $0.120 > 0.05$  indicate that the relationship between flash sales and impulsive buying is insignificant. Therefore, Hypothesis 3 is rejected

#### 4. FoMO towards impulsive buying

The relationship between FoMO and Impulsive buying has value  $\beta$  of 0.514, t-statistic of 14.178, and p-value of 0.000. The value  $\beta$  A value of 0.514 indicates that FoMO and impulsive buying have a positive value. The t-statistic value of  $14.178 > 1.96$  and the P-value of  $0.000 < 0.05$  indicate a highly significant relationship between FoMO and impulsive buying. Hypothesis 4 is accepted.

#### 5. Spontaneity towards impulsive buying

The relationship between spontaneity and impulsive buying has value  $\beta$  of 0.428, t-statistic of 10.934, P value of 0.000. The value  $\beta$  0.428 means that spontaneity and impulsive buying have positive values. The t-statistic value of  $10.934 > 1.96$  and  $P < 0.05$  indicates a very significant relationship between spontaneity and impulsive buying. Hypothesis 5 is accepted.

**Mediation Test.** A mediation test was conducted to determine whether the Spontaneity variable was able to bridge the influence of Flash Sales and FoMO on Impulsive Buying. Based on the SmartPLS output, the following results were obtained:

**Table 8. Mediation Test Results (Specific Indirect Effect)**

	$\beta$	T statistics	P values
Flash Sale -> Spontaneous -> Impulsive Buying	0.106	4,931	0.000
FoMO -> Spontaneous -> Impulsive Buying	0.261	9,665	0.000

Source: SmartPLS (author's analysis), 2025

In the table above, the P value  $< 0.05$  and T  $> 1.96$  indicate that both mediation paths are significant, so it can be concluded that there is a mediation effect of Spontaneity in the relationship between Flash Sale and FoMO on Impulsive Buying.

Based on the direct effect test, the direct effect results indicate that the FoMO pathway on Impulsive Buying is significant ( $p < 0.05$ ), while the Flash Sale pathway on Impulsive Buying is not significant ( $p = 0.12$ ). Based on the criteria of Hair et al. (2017), these findings indicate that the relationship between FoMO and Impulsive Buying is partially mediated by spontaneity, as both direct and indirect effects are significant. Conversely, Flash Sale does not show a significant direct effect on impulsive buying. However, Flash Sale has a significant impact on spontaneity, which in turn influences impulsive buying. In other words, the effect of Flash Sale on impulsive buying occurs entirely through spontaneity as a mediator, also known as full mediation.

Overall, these results indicate that both Flash Sale promotions and the psychological pressure of FoMO can increase consumer impulsive behavior, but through different pathways. FoMO

drives impulsive buying directly and indirectly through increased spontaneity, whereas Flash Sales work by first arousing consumer spontaneity, which then drives impulsive action. This confirms that sudden internal impulses, as part of the spontaneous process, play a crucial role in bridging the influence of external stimuli on impulsive buying behavior

**Discussion.** Based on theoretical foundations, flash sales strategies are believed to increase impulsive buying by creating conditions of urgency, time scarcity, and exclusivity of the offer. Scarcity theory and the stimulus-organism-response (SOR) concept explain that stimuli in the form of limited-time discounts can trigger psychological reactions such as time pressure and fear of missing out (FoMO), which ultimately encourage unplanned purchases. Several previous studies also support the notion that flash sales are positively correlated with impulsive buying tendencies (Wang et al., 2020; Luo et al., 2023). However, the results of the hypothesis test in this study indicate that the direct relationship between flash sales and impulsive buying is not statistically significant, with an original sample value of 0.048, a t-statistic of 1.554, and a p-value of 0.120. This means that although the effect is positive, the relationship is not strong enough to be declared significant.

This discrepancy between theory and empirical results can be explained through two approaches. First, the effect of flash sales on impulsive buying is likely not direct, but rather through the mediation of other variables such as spontaneity or FoMO, which were significantly proven to be predictors of impulsive behavior in this study. Second, it is possible that too frequent exposure to flash sales promotions leads to consumer desensitization, reducing the effectiveness of promotional stimuli as trigger of impulsiveness. These findings suggest that, in a highly competitive digital marketing context like TikTok, consumer psychological variables play a more dominant role than the promotional stimuli themselves and should be taken into account when designing marketing strategies.

**Theoretical Implications.** The results of this study provide a significant contribution to strengthening and developing consumer behaviour theory, particularly in the context of digital marketing utilizing social media such as TikTok. Theoretically, these findings align with and expand understanding within the Stimulus-Organism-Response (SOR) framework proposed by Mehrabian and Russell (1974), where external stimuli (in this case flash sale promotions) influence the internal conditions of individuals (organisms) such as FoMO (Fear of Missing Out) and spontaneity, which then result in behavioural responses in the form of impulsive buying. The finding that flash sales do not have a significant direct effect on impulsive buying, but have a significant influence on spontaneity, indicates that the impulsive buying decision-making process in a digital context is not only determined by promotional stimuli, but is also heavily influenced by the individual's affective and psychological aspects.

Furthermore, these results support the views of Rook (1987) and Rook & Fisher (1995) who emphasized that impulsive buying is an action triggered by emotional urges and carried out

spontaneously without prior planning. The strong influence of FoMO on spontaneity and impulsive buying in this study is also in line with the theory developed by Przybylski et al. (2013), that FoMO is an emotional response to the perception of missing social opportunities or trends that can trigger compulsive behavior, including consumption. Meanwhile, the influence of flash sales on spontaneity shows the important role of scarcity-based marketing tactics and time urgency, which, according to scarcity marketing theory (Cialdini, 2001), can increase the perception of value and encourage rapid action

Thus, these findings not only confirm the relevance of classical and modern theories in the study of consumer behaviour but also provide a new nuance that in the digital ecosystem, promotional stimuli need to be transformed into emotional experiences through psychological mechanisms such as FoMO and spontaneity to generate the desired response, namely impulse buying. This emphasizes the importance of understanding psychological mediation processes in designing effective digital marketing strategies.

**Practical Implication.** The findings of this study have significant practical implications for micro, small, and medium enterprises (SMEs), particularly in designing effective digital marketing strategies in the social media era. The observation that FoMO positively influences spontaneity and impulse buying behaviour implies that SMEs can leverage content strategies that evoke a sense of urgency, encourage social engagement, and in still a fear of exclusion. For example, by showcasing customer testimonials, presenting real-time statistics on purchases, implementing countdown timers, or offering time-sensitive updates on platforms like TikTok or Instagram, SMEs can cultivate an environment of exclusivity that stimulates impulse buying.

While findings indicate that flash sales do not directly impact impulse buying behavior, they do encourage spontaneity. This suggests that time-sensitive promotions retain their relevance as an initial emotional catalyst in the purchasing process, even if they don't always serve as the final deciding factor. MSMEs can use flash sales as a gateway to increase brand visibility and strengthen consumer familiarity with products, especially when packaged with engaging visual content and strong storytelling.

This research recommends that MSMEs prioritize developing digital experiences that spark emotional and social engagement, rather than solely focusing on discounts. This approach aligns with the dynamics of Gen-Z as digital consumers who are responsive to interactivity, trends, and community influence on social media. By integrating this understanding into their marketing strategies, MSMEs have a greater opportunity to sustainably increase sales through digital platforms.

## **CONCLUSION & SUGGESTION**

The Partial Least Squares Structural Equation Modeling (PLS-SEM) model developed in this study successfully captures the complexity of the relationship between variables in the context of digital consumer behavior, with strong predictive ability towards the phenomenon of impulsive buying in Generation Z. The Stimulus-Organism-Response (SOR) framework is

proven to be effective in explaining how external stimuli in the form of FoMO and flash sales affect the internal psychological condition of consumers through spontaneity, which then results in a response in the form of impulsive buying behavior.

This study successfully demonstrated that the developed model can represent the behavioral patterns of Generation Z respondents in Bogor City in the context of purchasing skincare products through social commerce. FoMO proved to be a dominant predictor that exerts a strong influence both directly and indirectly on impulsive purchases, while flash sales work through the mediation of spontaneity to trigger impulsive behavior. Spontaneity was confirmed as a key mediator variable that bridges the influence of external stimuli on consumer behavioral responses, indicating that the process of impulsive purchasing decision-making in the digital era involves complex psychological mechanisms and cannot be predicted solely from promotional stimuli.

These findings have important implications for developing more effective digital marketing strategies, particularly for MSMEs in the skincare industry. Understanding that FoMO and spontaneity play a central role in driving impulse purchases requires a marketing approach that focuses not only on promotional aspects but also on creating emotional and social experiences that can evoke psychological urgency in consumers. This indicates the need for integrated content strategies that can trigger emotional engagement, create a sense of urgency, and leverage social media dynamics to optimize the effectiveness of digital marketing campaigns in increasing sales figures ethically and sustainably.

Several limitations of this study can be identified to provide context for interpreting the findings. The study's geographic scope focused on Bogor City, so generalizing the results to Generation Z in other regions requires consideration of differing local characteristics. This research is also limited to the skincare industry, which has specific consumption characteristics compared to other product categories.

The cross-sectional design used provides a snapshot at a single point in time, thus not capturing the dynamics of changes in consumer behavior that may occur over time. Data collection via self-report questionnaires has common limitations encountered in survey research, including the potential for discrepancies between respondents' perceptions and actual behavior.

Future research could expand on these findings in several directions. Studies with a broader geographic scope could provide a more comprehensive understanding of digital consumer behavior in Indonesia. Longitudinal research would provide insights into the evolution of consumer behavior patterns and adaptations to digital marketing strategies over time.

Exploring additional variables such as digital literacy, socioeconomic factors, or personality characteristics could enrich the research model. A mixed-methodology approach that combines quantitative data with in-depth observations or interviews can provide a more holistic

understanding of the consumer decision-making process.

Expanding the research to other product categories and different social commerce platforms would enhance the external validity of the findings. Comparative studies across demographic groups could also identify behavioral patterns specific to each consumer segment, contributing to the broader literature on digital consumer behavior.

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## **REFERENCES**

- Alfina, Hartini, S., & Mardhiyah, D. (2023). FOMO related consumer behavior in marketing context: A systematic literature review. *Cogent Business & Management*, 10(3), 2250033. <https://doi.org/10.1080/23311975.2023.2250033>
- Bakioğlu, F., Deniz, M., Griffiths, M.D., & Pakpour, A.H. (2022). Adaptation and validation of the Online-Fear of Missing Out Inventory into Turkey and the association with social media addiction, smartphone addiction, and life satisfaction. *BMC Psychology*, 10(1), 1–10. <https://doi.org/10.1186/s40359-022-00856-y>
- Beatty, S. E., & Elizabeth Ferrell, M. (1998). Impulse buying: Modeling its precursors. *Journal of Retailing*, 74(2), 169–191. [https://doi.org/10.1016/S0022-4359\(99\)80092-X](https://doi.org/10.1016/S0022-4359(99)80092-X)
- Çelik, I. K., Eru, O., & Cop, R. (2019). The Effects of Consumers' FoMo Tendencies on Impulse Buying and The Effects of Impulse Buying on Post-Purchase Regret: An Investigation on Retail Stores\*. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 10(3), 124. <https://doi.org/10.70594/brain/v10.i3/13>
- Christanto, JM, & Aprillia, A. (2023). The Role of Emotion as a Mediating Variable in Shopee Flash Sale and Impulsive Buying. *Sang Pencerah: Scientific Journal of Muhammadiyah University of Buton*, 9(1), 55–67.
- Cialdini, R.B. (2009). *Influence: The Psychology of Persuasion*. HarperCollins.
- Grigoreva, EA, Garifova, L.F., & Polovkina, EA (2021). Consumer Behavior in the Information Economy: Generation Z. *International Journal of Financial Research*, 12(2), 164. <https://doi.org/10.5430/ijfr.v12n2p164>
- Hair, J.F. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM) (Second edition)*. SAGE.
- Hair, J.F. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM) (Third edition)*. SAGE.

- Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Huang, SC, Silalahi, ADK, Eunice, IJ, & Riantama, D. (2024). Understanding impulse buying in E-commerce: The Big Five traits perspective and moderating effect of time pressure and emotions. *Telematics and Informatics Reports*, 15(April), 100157. <https://doi.org/10.1016/j.teler.2024.100157>
- Iyer, G.R., Blut, M., Xiao, S.H., & Grewal, D. (2020). Impulse buying: A meta-analytic review. *Journal of the Academy of Marketing Science*, 48(3), 384–404. <https://doi.org/10.1007/s11747-019-00670-w>
- Lamis, SF, Handayani, PW, & Fitriani, WR (2022). Impulse buying during flash sales in the online marketplace. *Cogent Business & Management*, 9(1), 2068402. <https://doi.org/10.1080/23311975.2022.2068402>
- 2024 Annual Report (p. 83). (2025). Directorate of Cosmetics Supervision - POM Agency.
- Pramudyasari, AR, & Soetjningsih, CH (2023). Self-Control and Impulsive Purchase of Beauty Products Among Members of the Discountfess Community, E-Commerce Users. *Jurnal Ilmiah Psyche*, 17(2), 85–98. <https://doi.org/10.33557/jpsyche.v17i2.2778>
- Przybylski, A.K., Murayama, K., DeHaan, C.R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841–1848. <https://doi.org/10.1016/j.chb.2013.02.014>
- Rani, N.M., & S, C. (2023). A Study on Impulsive Buying Behavior in Online Shopping. *International Journal of Professional Business Review*, 8(3), e01237. <https://doi.org/10.26668/businessreview/2023.v8i3.1237>
- Rook, D. W. (1987). The Buying Impulse. *Journal of Consumer Research*, 14(2), 189. <https://doi.org/10.1086/209105>
- Said, LR, Anggela, M., & Fariany, GR (2023). Online Purchase Decision of Gen Z Students at Shopee Marketplace. *International Journal of Professional Business Review*, 8(5), e01187. <https://doi.org/10.26668/businessreview/2023.v8i5.1187>
- Scholarworks, S., Hudson, S., & Hudson, S. W. (2018). Impact of generation Z on the future of business and Impact of generation Z on the future of business and management strategies management strategies Impact of Generation Z on the Future of Business and Management Strategies.
- Silalahi, ADK, Phuong, DTT, Tedjakusuma, AP, Eunike, IJ, & Riantama, D. (2025). How does time pressure shape impulsive buying behavior? Hedonic vs. Utilitarian values emerge as a key driver on E-commerce platforms. *Digital Business*, 5(2), 100138. <https://doi.org/10.1016/j.digbus.2025.100138>
- Silvera, D.H., Lavack, A.M., & Kropp, F. (2008). Impulse buying: The role of affect, social influence, and subjective well-being. *Journal of Consumer Marketing*, 25(1), 23–33. <https://doi.org/10.1108/07363760810845381>
- Song, Z., Liu, C., & Shi, R. (2022). How Does Fresh Live Broadcast Impact Consumers' Purchase Intention? Based on the SOR Theory. *Sustainability*, 14(21), 14382. <https://doi.org/10.3390/su142114382>
- Waluyo, D. (2024, August). Indonesian Cosmetics Market Soars 48 Percent, Opportunity for SMEs

to Innovate. Indonesian Information Portal. <https://indonesia.go.id/kategori/editorial/8516/pasar-kosmetik-indonesia-melesat-48-persen-peluang-ikm-berinovasi?lang=1>

Wu, Y., & Huang, S. (2018). Optimal Pricing for Flash Sale Considering Stock Value and Ammount of Unique Visitors. *Proceedings of the 4th International Conference on Industrial and Business Engineering*, 75–79. <https://doi.org/10.1145/3288155.3288179>

Yaputri, MS, Dimiyati, D., & Herdiansyah, H. (2022). Correlation Between Fear of Missing Out (FoMO) Phenomenon and Consumptive Behavior in Millennials. *Eligible: Journal of Social Sciences*, 1(2), 116–124. <https://doi.org/10.53276/eligible.v1i2.24>.