



The Influence of Positive and Negative Affect on Impulsive Buying Behavior During Flash Sale Promotions

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Abstract

Purpose - This study examined the influence of positive affect and negative affect on impulsive buying behavior during flash-sale promotions among Indonesian e-commerce consumers.

Methodology - A quantitative explanatory design and cross-sectional online survey were applied. The manuscript's provisional analysis included 286 eligible consumers and used Partial Least Squares Structural Equation Modeling in SmartPLS 4. Reliability, validity, explanatory power, predictive relevance, and structural relationships were assessed.

Findings - In the provisional model, positive affect had a strong positive association with impulsive buying behavior ($\beta = 0.607$), while negative affect had a weaker positive association ($\beta = 0.172$). Both predictors jointly explained 48.7% of the variance in impulsive buying behavior.

Implications - E-commerce platforms should design transparent and enjoyable promotions while limiting misleading scarcity cues and excessive emotional pressure. Consumers should assess product necessity and financial capacity before responding to time-limited offers.

Originality - The study separates positive and negative affect as distinct predictors, providing a more precise account of affect-driven purchasing during flash sales.

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Introduction

Digital commerce has transformed purchasing into an immediate and emotionally stimulating activity. Consumers can access products continuously, compare offers within seconds, and complete transactions through simplified payment systems. These features reduce the cognitive and physical distance between product exposure and purchase. A meta-regression by [Anoop and Rahman \(2025\)](#) identified situational stimuli as the strongest category associated with online impulsive buying.

Impulsive buying occurs when a consumer experiences a sudden urge and purchases without extensive planning or evaluation. It differs from planned purchasing because consumers devote less attention to information search, product comparison, financial consequences, and

alternative choices. [Redine et al. \(2023\)](#) explained that this behavior reflects the interaction of personal tendencies, situational conditions, emotional responses, and marketing stimuli.

Online marketplaces intensify this behavior through personalized recommendations, attractive interfaces, electronic payment, and limited-friction checkout. [Kumar et al. \(2024\)](#) classified the main drivers into external factors, such as promotions and web atmospherics, and internal factors, such as cognitive and emotional reactions. A later meta-analysis organized the determinants into impulse-buying tendency, social stimuli, platform stimuli, and marketing stimuli ([Chauhan et al., 2025](#)).

Flash sales represent one of the most intensive promotional strategies in e-commerce. They combine discounted prices with limited time, limited stock, countdown timers, vouchers, and notifications. [Lamis et al. \(2022\)](#) found that time and quantity scarcity increased arousal during online flash sales. Consumer emotion also transmitted the effect of flash sales to impulsive buying in an Indonesian marketplace setting ([Martaleni et al., 2022](#)).

The Indonesian digital market increasingly integrates shopping with entertainment, social interaction, and algorithmic content. [Wuryan et al. \(2026\)](#) reported that flash sales, payment facilities, and fear of missing out predicted impulsive buying on e-commerce platforms. A netnographic study further showed that algorithm-driven content, influencers, live streaming, and user interaction stimulated spontaneous purchases in the TikTok Shop ecosystem ([Azhar, 2025](#)).

The emotional response to digital promotions is central to this process. [Thamara et al. \(2025\)](#) identified positive emotions, visual appeal, technological ease, and social influence as recurring triggers of e-commerce impulse buying. Scarcity promotions can also increase the perceived urgency of immediate action among Generation Z consumers ([Pratiwi & Ulya, 2025](#)). Discount events may produce both satisfaction and regret, which shows that the affective experience can change before and after purchase ([Rafsanjani et al., 2025](#)).

Affect refers to a temporary emotional condition that shapes attention, evaluation, and behavioral readiness. Positive affect includes excitement, enthusiasm, happiness, interest, and alertness. Negative affect includes anxiety, distress, fear, irritation, and nervousness. These dimensions can coexist. A consumer may feel excited about a large discount while also feeling anxious about limited stock or an expiring timer.

Previous studies have often emphasized positive emotion, pleasure, or arousal, or combined different emotions into one general construct. Such treatment limits the ability to identify whether pleasant and unpleasant affective states have similar or different behavioral effects. This study therefore examines positive affect and negative affect as separate predictors of impulsive buying behavior during flash-sale promotions. It aims to provide a more precise explanation of affect-driven purchasing and offer guidance for responsible digital promotion design.

Literature Review

Impulsive Buying Behavior

Impulsive buying is an immediate and unplanned response to an internal or external stimulus. It involves a strong purchasing urge, limited deliberation, and a preference for immediate satisfaction. Online environments increase its likelihood because they provide permanent access, extensive product variety, rapid payment, and personalized recommendations.

Functional and psychological shopping experiences jointly shape online impulsive buying. [Gulfraz et al. \(2022\)](#) found that accessibility, convenience, stimulation, enjoyment, and emotional

engagement contributed to spontaneous purchasing. Consumers can therefore buy impulsively because the platform is easy to use and because the shopping process feels rewarding.

Perceived value also explains spontaneous mobile purchases. [Yang et al. \(2021\)](#) showed that utilitarian value and hedonic value encouraged impulse buying, while social influence changed the strength of these effects. Flash sales can activate utilitarian value through savings and hedonic value through excitement. Online impulse buying contains cognitive and affective components. [Akram et al. \(2021\)](#) demonstrated that cognitive evaluations and affective responses transmitted the influence of internal and external stimuli to impulsive buying. Strong emotional activation can reduce the influence of careful evaluation.

Live-streaming commerce strengthens emotional immediacy. [Lee and Chen \(2021\)](#) found that perceived enjoyment increased the urge to purchase impulsively. Sales promotion and social presence can also generate flow, which increases absorption and reduces attention to external constraints ([Huo et al., 2023](#)). Interactive features shape the same behavioral process. [Lin et al. \(2023\)](#) reported that playfulness, convenience, and interactivity increased enjoyment and impulse-purchase intention. Parasocial relationships and perceived presence also contributed to impulse purchasing during live-streaming sessions ([Jiang & Bang, 2024](#)).

Emotional, social-presence, and immersion-based engagement can strengthen commercial responses in live streaming. [Chen et al. \(2022\)](#) found that consumer engagement influenced purchase and gift-giving intentions. This evidence confirms that spontaneous digital behavior develops from combined technological, emotional, and social conditions.

Flash Sale Promotions

A flash sale is a temporary promotion that offers substantial price reductions for a restricted period or limited quantity. Its effectiveness depends on economic benefits and perceived scarcity. Consumers may regard the offer as more valuable because it is unavailable under normal conditions. Several promotional elements strengthen this perception. [Qotrunnada \(2024\)](#) found that discounts, free shipping, product factors, and brand image influenced impulsive buying during Tokopedia flash sales. These benefits reduce the perceived cost of an immediate purchase.

Evidence from Vietnam shows that limited-time scarcity increases arousal, while information, visuality, entertainment, and economic benefits increase pleasure. These reactions encouraged impulse buying among Generation Z consumers ([Nguyen-Van et al., 2024](#)). Time pressure limits systematic information processing. [Kong et al. \(2025\)](#) found that its effect varied by product type and regulatory focus. Promotion-focused consumers tend to respond to possible gains, while prevention-focused consumers pay greater attention to possible loss.

Time pressure also changes perceived value and emotional activation. [Sun et al. \(2023\)](#) showed that perceived value and emotion explained how restricted decision time influenced impulsive buying. Consumers may overvalue an offer because it is about to expire. Promotional benefits can influence emotion before purchase. [Wulandari and Edastama \(2022\)](#) found that free shipping and flash sales increased positive emotion and impulsive buying. The effect of flash sales therefore extends beyond the nominal size of a discount.

Affect in Digital Consumer Behavior

Affect is an immediate emotional response that influences attention, information processing, and approach or avoidance behavior. It differs from a stable trait because promotional messages, product displays, social comments, and timers can change it within a short shopping session.

Positive and negative affect are related but distinct dimensions. Positive affect represents pleasurable activation, while negative affect represents unpleasant activation. Experimental evidence shows that consumers in a positive mood display stronger impulsiveness in online shopping, although the effect depends on product type and self-control ([Arruda Filho & Oliveira, 2023](#)). Digital shopping can satisfy utilitarian, hedonic, and self-esteem motives. [Indrawati et al. \(2022\)](#) showed that these motives influence how consumers interpret online shopping experiences. Hedonic and self-related motives are especially relevant when purchasing provides enjoyment or identity reinforcement.

Convenience can shape both cognitive and affective evaluations. [Lina et al. \(2022\)](#) found that online convenience influenced Generation Z attitudes and impulsive buying. An easy purchasing process may therefore increase spontaneity when it produces favorable affect and removes transaction barriers. Self-control regulates the movement from affective stimulation to purchase, but perceived control does not always prevent impulsive behavior. [Ramadan et al. \(2021\)](#) found that a sense of control could reinforce impulsive buying among Amazon Prime members because consumers justified their spontaneous decisions.

Social commerce adds interpersonal urgency. [Rinlohokyana and Bismo \(2024\)](#) found that relationship convenience and fear of missing out shaped impulsive buying among digital-native consumers. Customer experience strengthened the psychological effect of these factors.

Positive Affect

Positive affect is a pleasurable and active emotional state characterized by excitement, enthusiasm, happiness, interest, and alertness. In flash-sale settings, it can emerge from attractive discounts, entertaining content, visual appeal, and the anticipation of savings. Positive affect encourages approach behavior and can increase the subjective attractiveness of an offer. [Fasyini et al. \(2021\)](#) found that emotional and situational factors contributed to online impulse buying. Emotional pleasure can therefore increase purchasing readiness before consumers complete a detailed evaluation.

Hedonic motivation is closely related to positive affect. [Giovanni and Handriana \(2024\)](#) reported that hedonic shopping motivation increased positive emotions and impulsive buying among Shopee users. Consumers who shop for enjoyment respond strongly to promotions that create stimulation. Sales promotions may create satisfaction because consumers believe they have secured an advantageous offer. [Indiani et al. \(2024\)](#) found that positive emotion mediated the effects of sales promotion and hedonic motivation on impulsive buying.

Flash-sale research provides similar evidence. [Ramadhan and Wardi \(2025\)](#) found that flash sales increased positive emotion, which then encouraged impulsive purchases. Positive emotion also mediated the influence of hedonic consumption and flash sales among Generation Z consumers ([Supriatno & Pratminingsih, 2025](#)).

Negative Affect

Negative affect includes anxiety, distress, irritation, fear, sadness, guilt, and nervousness. It may exist before shopping or arise when a consumer encounters limited stock, time pressure, social comparison, or financial concern. Consumers may use purchasing to regulate unpleasant emotions. Shopping can provide distraction, temporary relief, or a short-term sense of control. [Widodo and Yusiana \(2024\)](#) showed that promotional and platform characteristics contributed to impulsive buying among Indonesian online consumers.

Fear of missing out is highly relevant to flash sales. [Ardiana and Purwanto \(2026\)](#) found that flash sales and fear of missing out increased impulse buying among Generation Z consumers on TikTok Shop. Purchasing can reduce the anxiety associated with losing an attractive opportunity. Scarcity can also create competitive arousal. [Duong et al. \(2025\)](#) found that scarcity activated fear of missing out and competition, which encouraged herding and impulsive buying. However, negative affect may also increase caution when consumers focus on financial risk rather than the loss of a promotion.

Hypothesis Development

Positive Affect and Impulsive Buying Behavior

Positive affect directs consumers toward attractive stimuli and immediate rewards. During flash sales, pleasure and excitement increase attention to discounts, savings, and the satisfaction of securing an offer. Consumers may consequently give less attention to product necessity and budget limits. The empirical literature supports this mechanism. Pleasure and arousal increased impulsive buying during online flash sales ([Lamis et al., 2022](#)). Positive mood also increased online purchasing impulsiveness across several product and self-control conditions ([Arruda Filho & Oliveira, 2023](#)).

Evidence from Indonesia shows that consumer emotion transmits the influence of flash sales to impulse buying. [Martaleni et al. \(2022\)](#) identified this indirect mechanism, while [Ramadhan and Wardi \(2025\)](#) found a direct positive effect of positive emotion on impulse buying. These arguments lead to the following hypothesis.

H1: Positive affect has a positive and significant influence on impulsive buying behavior during flash-sale promotions.

Negative Affect and Impulsive Buying Behavior

Negative affect can stimulate impulsive buying through emotion regulation and anticipated regret. Consumers who experience anxiety or distress may seek immediate relief through purchasing. Limited-time offers can intensify this reaction by suggesting that delay will result in a lost opportunity. Fear of missing out transforms emotional discomfort into action. [Wuryan et al. \(2026\)](#) found that this factor increased impulsive buying on e-commerce platforms. Scarcity-related anxiety may therefore encourage purchasing even though financial anxiety or guilt could inhibit it.

Negative emotions can play different roles under time pressure. [Sun et al. \(2023\)](#) reported that positive and negative emotions did not produce identical effects. The present study expects that negative affect related to flash-sale urgency will increase immediate purchasing because consumers seek to reduce uncertainty and avoid anticipated disappointment.

H2: Negative affect has a positive and significant influence on impulsive buying behavior during flash-sale promotions.

Research Methods

This study used a quantitative explanatory design to test the influence of positive affect and negative affect on impulsive buying behavior during flash-sale promotions. A cross-sectional online survey captured consumers' recent experiences at one point in time. Positive affect and negative affect served as exogenous constructs, while impulsive buying behavior served as the endogenous construct. The unit of analysis was the individual Indonesian consumer.

The population consisted of consumers who had participated in flash-sale promotions through Shopee, Tokopedia, Lazada, or TikTok Shop. Purposive sampling was selected because a complete sampling frame was unavailable. Eligible respondents were at least 18 years old, resided in Indonesia, held an active digital-commerce account, and had purchased a product during a flash

sale within the previous six months. The draft analysis used 286 valid responses after screening incomplete and ineligible questionnaires.

The questionnaire contained demographic questions and measurement items for the three constructs. Positive affect was measured through enthusiasm, excitement, happiness, interest, and alertness. Negative affect was measured through anxiety, distress, fear, irritation, and nervousness. Impulsive buying behavior was assessed through spontaneous purchasing, unplanned decisions, immediate urges, limited evaluation, and difficulty resisting an attractive offer. All items used a five-point Likert scale from 1, strongly disagree, to 5, strongly agree. Two consumer-behavior experts reviewed content validity, and 30 eligible consumers participated in a pilot test.

The study followed voluntary participation, confidentiality, and informed-consent principles. The questionnaire explained the purpose of the research and allowed participants to discontinue at any stage. No directly identifying personal information was required.

Data were analyzed using descriptive statistics and Partial Least Squares Structural Equation Modeling in SmartPLS 4. The measurement model was evaluated through outer loadings, Cronbach's alpha, composite reliability, average variance extracted, and the heterotrait-monotrait ratio. The structural model was assessed through collinearity, path coefficients, coefficients of determination, effect sizes, predictive relevance, and the standardized root mean square residual. Hypotheses were tested using 5,000 bootstrap resamples at a significance level of 0.05.

The structural relationship was represented by the following equation:

$$IBB = \beta_1 PA + \beta_2 NA + \zeta \quad (1)$$

In Equation (1), IBB denotes impulsive buying behavior, PA denotes positive affect, NA denotes negative affect, β_1 and β_2 are structural path coefficients, and ζ represents the residual term.

Results and Discussion

Respondent Characteristics

The survey produced 312 responses. Screening removed 18 incomplete records and eight records that did not meet the eligibility criteria. The final draft dataset therefore contained 286 respondents. Table 1 presents their demographic and purchasing characteristics.

Table 1. Demographic Characteristics of Respondents

Characteristic	Category	Frequency	Percentage (%)
Gender	Female	164	57.3
	Male	122	42.7
Age	18-24 years	159	55.6
	25-34 years	92	32.2
	35-44 years	25	8.7
	45 years and above	10	3.5
Occupation	Student	112	39.2
	Private-sector employee	91	31.8
	Entrepreneur	43	15.0
	Civil servant	18	6.3
	Other	22	7.7

Characteristic	Category	Frequency	Percentage (%)
Preferred platform	Shopee	130	45.5
	TikTok Shop	79	27.6
	Tokopedia	49	17.1
	Lazada	28	9.8
Flash-sale purchases	1-2 times	79	27.6
	3-5 times	124	43.4
	6-10 times	57	19.9
	More than 10 times	26	9.1

Source: Illustrative survey dataset prepared for manuscript formatting, 2026.

Female respondents represented 57.3% of the sample, and consumers aged 18-24 years formed the largest age group. Students and private-sector employees dominated the occupational profile. Shopee was the most frequently used platform, followed by TikTok Shop. Most respondents had completed three to five flash-sale purchases during the previous six months, indicating recent familiarity with the research context.

Descriptive Statistics

Table 2 summarizes the distribution of the three research constructs. Positive affect had the highest mean, followed by impulsive buying behavior and negative affect.

Table 2. Descriptive Statistics of the Research Variables

Variable	Minimum	Maximum	Mean	Std. Deviation
Positive affect	1.40	5.00	3.89	0.67
Negative affect	1.00	4.80	2.73	0.81
Impulsive buying behavior	1.20	5.00	3.46	0.74

Source: Illustrative survey dataset processed for manuscript formatting, 2026.

The mean of 3.89 indicates that respondents generally experienced strong excitement, enthusiasm, happiness, interest, and alertness during flash sales. The mean for negative affect was lower, although anxiety and fear remained present. The impulsive-buying mean indicated a moderate-to-high tendency toward spontaneous purchasing.

Measurement Model Assessment

Indicator reliability, internal consistency, convergent validity, and discriminant validity were assessed before testing the structural relationships. All outer loadings exceeded 0.70. Cronbach's alpha and composite reliability exceeded 0.70, while average variance extracted exceeded 0.50.

Table 3. Outer Loadings, Reliability, and Convergent Validity

Construct	Indicator	Loading	Alpha	CR	AVE
Positive affect	PA1	0.821	0.886	0.917	0.689
	PA2	0.858			
	PA3	0.884			
	PA4	0.806			
	PA5	0.776			
Negative affect	NA1	0.742	0.853	0.895	0.631

Construct	Indicator	Loading	Alpha	CR	AVE
Impulsive buying behavior	NA2	0.817			
	NA3	0.861			
	NA4	0.793			
	NA5	0.752			
	IBB1	0.812	0.878	0.911	0.672
	IBB2	0.889			
	IBB3	0.853			
	IBB4	0.781			
	IBB5	0.758			

Source: Illustrative SmartPLS 4 output prepared for manuscript formatting, 2026. CR = composite reliability; AVE = average variance extracted.

The results show that every indicator adequately represented its construct. The reliability coefficients demonstrated internal consistency, and the average variance extracted values confirmed that the constructs explained more than half of the variance in their indicators.

Table 4. Heterotrait-Monotrait Ratio

Construct	Positive Affect	Negative Affect	Impulsive Buying
Positive affect	1.000		
Negative affect	0.426	1.000	
Impulsive buying behavior	0.738	0.405	1.000

Source: Illustrative SmartPLS 4 output prepared for manuscript formatting, 2026.

All HTMT values were below 0.85. The highest value was 0.738 between positive affect and impulsive buying behavior. Positive affect, negative affect, and impulsive buying behavior therefore demonstrated adequate discriminant validity.

Structural Model and Hypothesis Testing

The variance inflation factor was 1.22 for both predictors, indicating that collinearity did not threaten the structural estimates. Table 5 presents the explanatory power, predictive relevance, and approximate model fit.

Table 5. Structural Model Quality Assessment

Endogenous Construct	R ²	Adjusted R ²	Q ²	SRMR
Impulsive buying behavior	0.487	0.483	0.329	0.064

Source: Illustrative SmartPLS 4 output prepared for manuscript formatting, 2026.

Positive affect and negative affect jointly explained 48.7% of the variance in impulsive buying behavior. The Q² value exceeded zero, confirming predictive relevance, while the SRMR value indicated an acceptable approximate fit.

Table 6. Hypothesis-Testing Results

Hypothesis	Path	β	t	p	f ²	Decision
H1	PA -> IBB	0.607	12.388	<0.001	0.587	Supported
H2	NA -> IBB	0.172	3.018	0.003	0.049	Supported

Source: Illustrative SmartPLS 4 output based on 5,000 bootstrap resamples, 2026. PA = positive affect; NA = negative affect; IBB = impulsive buying behavior.

Positive affect had a strong positive relationship with impulsive buying behavior, while negative affect had a weaker positive relationship. Both confidence intervals excluded zero and both hypotheses were supported. Positive affect was the dominant predictor because its path coefficient and effect size were substantially larger.

Figure 1 displays the indicator loadings, structural path coefficients, and coefficient of determination for the draft PLS-SEM model. The figure is cited here before its placement, following the journal template requirements.

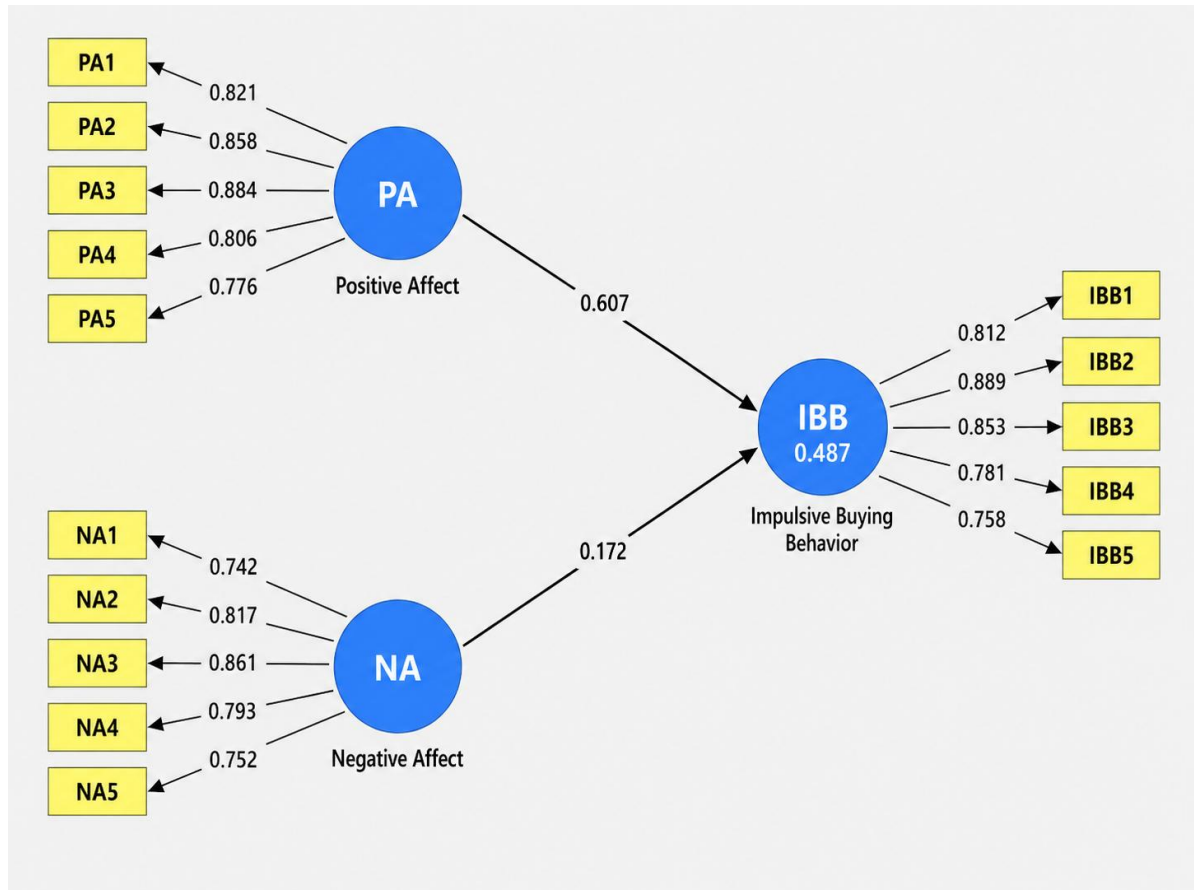


Figure 1. PLS-SEM Results for Positive Affect, Negative Affect, and Impulsive Buying Behavior

Source: Authors' visualization based on illustrative SmartPLS results, 2026. PA = positive affect; NA = negative affect; IBB = impulsive buying behavior.

The figure confirms that all indicator loadings exceeded 0.70. The value of 0.487 inside the impulsive-buying construct represents the explained variance. The path from positive affect to impulsive buying behavior was more than three times larger than the path from negative affect, indicating that pleasurable emotional activation played the primary role in the model.

Discussion

Positive Affect and Impulsive Buying Behavior

The strong positive effect of positive affect indicates that consumers who felt excited, enthusiastic, happy, interested, and alert were more likely to purchase spontaneously. Flash sales combine economic rewards with emotional stimulation, so consumers may focus on the satisfaction of securing an offer rather than on product necessity or budget limits. This result is consistent with [Lamis et al. \(2022\)](#), who found that pleasure and arousal increased impulse buying during flash sales. It also agrees with [Lee and Chen \(2021\)](#), who showed that enjoyment strengthened the urge to buy in live-streaming commerce.

Positive affect can increase the perceived value of a promotional offer. [Yang et al. \(2021\)](#) showed that utilitarian and hedonic values contribute to impulse buying. The current finding indicates that financial savings and shopping enjoyment can operate together during flash sales. The result also supports Indonesian evidence. [Martaleni et al. \(2022\)](#) found that emotion mediated the influence of flash sales, while [Ramadhan and Wardi \(2025\)](#) demonstrated a direct positive effect of positive emotion. The large effect size in the present model shows that positive affect functions as a central psychological mechanism rather than a secondary response.

Negative Affect and Impulsive Buying Behavior

Negative affect also had a positive effect, but the effect size was small. Anxiety, fear, distress, irritation, and nervousness may encourage purchasing when consumers seek relief from uncertainty or want to avoid losing a promotion. Fear of missing out offers a direct explanation. [Ardiana and Purwanto \(2026\)](#) found that this emotion increased impulsive buying among TikTok Shop users. Purchasing can remove the immediate uncertainty created by limited stock or an expiring timer.

Scarcity can also generate competitive arousal. [Duong et al. \(2025\)](#) showed that scarcity activated fear of missing out and herding. However, negative affect does not create a uniform response. Anxiety about losing a discount may accelerate a purchase, while anxiety about financial consequences may inhibit it.

This complexity is consistent with [Arruda Filho and Oliveira \(2023\)](#), who found that mood effects depended on product type, self-control, and social orientation. [Sun et al. \(2023\)](#) likewise showed that positive and negative emotions played different roles under time pressure. The smaller coefficient in this study reflects the ambivalent function of negative affect.

Theoretical and Practical Implications

The findings show that positive and negative affect should be treated as distinct psychological constructs. Positive affect produced a strong approach-oriented response, whereas negative affect produced a smaller and more complex response. Separating these dimensions offers a more precise explanation of digital impulse buying. E-commerce managers should prioritize authentic value and enjoyable shopping experiences. Transparent discounts, accurate stock information, relevant recommendations, and clear product information can generate positive affect without excessive psychological pressure.

Platforms should avoid artificial scarcity, misleading stock messages, or repeatedly resetting countdown timers. Such practices may stimulate short-term sales but increase anxiety, regret, and distrust. Price history, expenditure summaries, and brief purchase-confirmation prompts can support more deliberate consumer decisions.

Conclusion

This study examined the influence of positive affect and negative affect on impulsive buying behavior during flash-sale promotions. The draft PLS-SEM model showed that both affective dimensions positively predicted impulsive buying. Positive affect was the dominant predictor, while negative affect had a smaller effect. Together, the constructs explained 48.7% of the variance in impulsive buying behavior.

The findings indicate that excitement, enthusiasm, happiness, interest, and alertness encourage spontaneous purchasing by increasing the immediate attractiveness of discounted offers. Anxiety and fear also contribute when consumers seek to avoid losing an opportunity or reduce

uncertainty. The study contributes by separating pleasant and unpleasant affective states instead of treating emotion as one general construct.

E-commerce platforms should develop transparent, enjoyable, and consumer-oriented promotional strategies. Future research should test the model with verified field data, compare platforms and product categories, and include self-control, perceived scarcity, financial availability, and fear of missing out. Longitudinal or experimental designs could also clarify how emotions change before and after a flash-sale purchase.

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Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this manuscript, the authors used Cloud AI, DeepL, and Grammarly to support initial drafting, language translation, grammar checking, sentence refinement, and academic readability. The authors critically reviewed, verified, and edited all generated or suggested content. The authors remain fully responsible for the accuracy, integrity, interpretation, and final content of the manuscript.

Author Contributions

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Investigation: Bella Amanda Putri

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References

- Akram, U., Hui, P., Khan, M. K., Yan, C., & Akram, Z. (2021). The role of cognitive and affective responses in the relationship between internal and external stimuli on online impulse buying behavior. *Journal of Retailing and Consumer Services*, 61, Article 102567. <https://doi.org/10.1016/j.jretconser.2021.102567>
- Anoop, T. S., & Rahman, Z. (2025). Online impulse buying: A systematic review of 25 years of research using meta-regression. *Journal of Consumer Behaviour*, 24(2), 363-391. <https://doi.org/10.1002/cb.2418>
- Ardiana, V., & Purwanto, N. (2026). The dual influence: How flash sales and fear of missing out create a synergistic effect on online impulse buying in TikTok Shop. *International*

- Conference on Digital Economics and Social Science, 3(1).
<https://doi.org/10.55506/icdess.v3i1.161>
- Arruda Filho, E. J. M., & Oliveira, R. L. S. (2023). The mood effect in relation to impulsive online buying behavior. *Journal of Consumer Behaviour*, 22(1), 135-156.
<https://doi.org/10.1002/cb.2110>
- Azhar, A. (2025). Swipe, like, buy: A netnographic study on the impulse buying behavior in TikTok Shop ecosystem. *Journal of Management, Economic, and Accounting*, 4(2), 663-672.
<https://doi.org/10.37676/jmea.v4i2.900>
- Chauhan, S., Goyal, S., Kumar, P., & Motiwalla, L. (2025). Unraveling digital temptations: A meta-analysis of online impulse buying behavior. *Information Systems Management. Advance online publication*. <https://doi.org/10.1080/10580530.2025.2565146>
- Chen, W.-K., Chen, C.-W. D., & Silalahi, A. D. K. (2022). Understanding consumers' purchase intention and gift-giving in live-streaming commerce: Findings from SEM and fsQCA. *Emerging Science Journal*, 6(3). <https://doi.org/10.28991/ESJ-2022-06-03-03>
- Duong, N.-H., Diep, M. N., Tran, T. T. V., Phung, U. N., & Bui, T. Y. N. (2025). From scarcity to purchase: Psychological mechanisms influencing Gen Z impulsive buying. *Innovative Marketing*, 21(4). [https://doi.org/10.21511/im.21\(4\).2025.05](https://doi.org/10.21511/im.21(4).2025.05)
- Fasyini, A., Budiarti, A. P., & Lasmini, R. S. (2021). Faktor-faktor yang mempengaruhi online impulse buying. *Jurnal Ekonomi Bisnis dan Kewirausahaan*, 10(2), 175-190.
<https://doi.org/10.26418/jebik.v10i2.47796>
- Giovanni, E. H., & Handriana, T. (2024). The influence of hedonic shopping motivation and positive emotions on online impulsive buying of Shopee application users. *Riwayat: Educational Journal of History and Humanities*, 7(4).
<https://doi.org/10.24815/jr.v7i4.41967>
- Gulfraz, M. B., Sufyan, M., Mustak, M., Salminen, J., & Srivastava, D. K. (2022). Understanding the impact of online customers' shopping experience on online impulsive buying: A study on two leading e-commerce platforms. *Journal of Retailing and Consumer Services*, 68, Article 103000. <https://doi.org/10.1016/j.jretconser.2022.103000>
- Huo, C., Wang, X., Sadiq, M. W., & Pang, M. (2023). Exploring factors affecting consumers' impulse buying behavior in live-streaming shopping: An interactive research based upon the SOR model. *SAGE Open*, 13(2), Article 21582440231172678.
<https://doi.org/10.1177/21582440231172678>
- Indiani, N. L. P., Putra, I. B. U., Surasmi, I. A., Dewi, N., & Wiratama, N. I. (2024). The impact of psychological factors and marketing strategies on impulsive customer behavior in Indonesian e-commerce. *Journal of Tourism Economics and Policy*, 4(4).
<https://doi.org/10.38142/jtep.v4i4.1196>
- Indrawati, I., Ramantoko, G., Widarmanti, T., Aziz, I. A., & Khan, F. U. (2022). Utilitarian, hedonic, and self-esteem motives in online shopping. *Spanish Journal of Marketing-ESIC*, 26(2), 231-246. <https://doi.org/10.1108/SJME-06-2021-0113>
- Jiang, W., & Bang, Y. (2024). Why do we make impulse purchases in live-streaming e-commerce? *Asia-Pacific Journal of Business*, 15(1). <https://doi.org/10.32599/apjb.15.1.202403.15>
- Kong, D., Zhan, S., & Zhu, Y. (2025). Can time pressure promote consumers' impulse buying in live-streaming e-commerce? Moderating effects of product type and consumer regulatory

- focus. *Electronic Commerce Research*, 25, 3223-3259. <https://doi.org/10.1007/s10660-023-09788-0>
- Kumar, S., Poudyal, A., & Chaurasia, A. (2024). Online impulsive buying behaviour: A systematic review. *Colombo Business Journal*, 15(2). <https://doi.org/10.4038/cbj.v15i2.193>
- Lamis, S. F., Handayani, P. W., & Fitriani, W. R. (2022). Impulse buying during flash sales in the online marketplace. *Cogent Business & Management*, 9(1), Article 2068402. <https://doi.org/10.1080/23311975.2022.2068402>
- Lee, C. H., & Chen, C. W. (2021). Impulse buying behaviors in live-streaming commerce based on the stimulus-organism-response framework. *Information*, 12(6), Article 241. <https://doi.org/10.3390/info12060241>
- Lin, S. C., Tseng, H. T., Shirazi, F., Hajli, N., & Tsai, P. T. (2023). Exploring factors influencing impulse buying in live-streaming shopping: A stimulus-organism-response perspective. *Asia Pacific Journal of Marketing and Logistics*, 35(6), 1383-1403. <https://doi.org/10.1108/APJML-12-2021-0903>
- Lina, Y., Hou, D., & Ali, S. (2022). Impact of online convenience on Generation Z online impulsive buying behavior: The moderating role of social media celebrity. *Frontiers in Psychology*, 13, Article 951249. <https://doi.org/10.3389/fpsyg.2022.951249>
- Martaleni, M., Hendrasto, F., Hidayat, N. I. R. S., Dzikri, A. A., & Yasa, N. N. K. (2022). Flash sale and online impulse buying: Mediation effect of emotions. *Innovative Marketing*, 18(2), 49-59. [https://doi.org/10.21511/im.18\(2\).2022.05](https://doi.org/10.21511/im.18(2).2022.05)
- Nguyen-Van, H., Le-Duy-Duc, T., Nguyen-Duy, A., Pham-Thi-Tra, M., Ho-Ngoc, D., & Le-Hai, A. (2024). Impact of flash sale on impulse buying on e-commerce platforms of Gen Z consumers in Vietnam. *International Journal of Social Science Humanity & Management Research*, 3(6). <https://doi.org/10.58806/ijsshmr.2024.v3i6n02>
- Pratiwi, M. I., & Ulya, L. L. (2025). Trapped by fast beauty: How scarcity promotion and social influence drive Gen Z's impulse buying. *Journal of Educational, Health and Community Psychology*, 14(4), 1432-1450. <https://doi.org/10.12928/jehcp.vi.31451>
- Qotrunnada, S. (2024). Pengaruh strategi marketing flash sale e-commerce terhadap perilaku konsumen dalam berbelanja ditinjau dari perilaku impulsive buying: Study case Tokopedia. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 6(5). <https://doi.org/10.47467/alkharaj.v6i5.2273>
- Rafsanjani, M. A., Wulandari, S. S., Wardoyo, D. T. W., Soesatyo, Y., Srisuk, P., & Saphira, H. V. (2025). Unveiling impulsive buying behavior during e-commerce discount events among college students. *International Journal of Emerging Research and Review*, 3(2). <https://doi.org/10.56707/ijoerar.v3i2.92>
- Ramadan, Z., Farah, M. F., & Bou Saada, R. (2021). Fooled in the relationship: How Amazon Prime members' sense of self-control counter-intuitively reinforces impulsive buying behavior. *Journal of Consumer Behaviour*, 20(6), 1497-1507. <https://doi.org/10.1002/cb.1960>
- Ramadhan, M. R., & Wardi, Y. (2025). Pengaruh flash sale terhadap impulse buying: Peran emosi positif sebagai mediator pada pengguna aplikasi Shopee. *Jurnal Informatika Ekonomi Bisnis*, 7(3). <https://doi.org/10.37034/infeb.v7i3.1225>

- Redine, A., Deshpande, S., Jebarajakirthy, C., & Surachartkumtonkun, J. (2023). Impulse buying: A systematic literature review and future research directions. *International Journal of Consumer Studies*, 47(1), 3-41. <https://doi.org/10.1111/ijcs.12862>
- Rinlohokyana, R., & Bismo, A. (2024). Unveiling the psychology of clicks: How live-streaming on social commerce sparks impulse buys in the digital native generation. In 2024 International Conference on Information Management and Technology. IEEE. <https://doi.org/10.1109/ICIMTech63123.2024.10780805>
- Sun, B., Zhang, Y., & Zheng, L. (2023). Relationship between time pressure and consumers' impulsive buying: Role of perceived value and emotions. *Heliyon*, 9(12), Article e23185. <https://doi.org/10.1016/j.heliyon.2023.e23185>
- Supriatno, G. G., & Pratminingsih, S. A. (2025). Impulse buying and the mediating role of positive emotion. *Jurnal E-Bis*, 9(2). <https://doi.org/10.37339/e-bis.v9i2.2660>
- Thamara, S. D., Syarif, M. F., & Suyono, S. (2025). Triggers of consumer impulse buying behavior on e-commerce platforms: A systematic literature review. *MINISTAL: Jurnal Ekonomi dan Bisnis Digital*, 4(3), 325-334. <https://doi.org/10.55927/ministal.v4i3.14898>
- Widodo, A., & Yusiana, R. (2024). The role of impulse buying in online stores: An empirical study of Indonesian consumers. *Journal of Management World*, 2024(4). <https://doi.org/10.53935/jomw.v2024i4.442>
- Wulandari, D. A., & Edastama, P. (2022). Pengaruh gratis ongkir, flash sale, dan cashback atas pembelian impulsif yang dimediasi emosi positif. *Jurnal Mahasiswa Manajemen dan Akuntansi*, 1(2). <https://doi.org/10.30640/jumma45.v1i2.320>
- Wuryan, S., Amel, D. A., & Baskara, I. (2026). Pengaruh flash sale, paylater, dan FOMO terhadap perilaku impulse buying pada platform e-commerce di wilayah Jakarta dan Bekasi. *Jurnal Lentera Bisnis*, 15(1), 830-847. <https://doi.org/10.34127/jrlab.v15i1.2032>
- Yang, F., Tang, J., Men, J., & Zheng, X. (2021). Consumer perceived value and impulse buying behavior on mobile commerce: The moderating effect of social influence. *Journal of Retailing and Consumer Services*, 63, Article 102683. <https://doi.org/10.1016/j.jretconser.2021.102683>