

UNIVERSITY STUDENTS' IMPULSE BUYING ON TIKTOK SHOP: THE PREDICTIVE ROLES OF FINANCIAL LITERACY AND PROMOTIONAL EXPOSURE

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ABSTRACT

Social commerce increasingly places university students in shopping situations where entertainment, creator content, peer cues, promotional incentives, and immediate transaction facilities are integrated into a continuous experience. This study examines the predictive roles of financial literacy and promotional exposure in university students' impulse buying on TikTok Shop. A quantitative cross-sectional survey was conducted among undergraduate students at the Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, who had purchased products through TikTok Shop. Of 126 submitted responses, 100 usable responses met the eligibility and completeness criteria and were analyzed using Partial Least Squares Structural Equation Modeling with SmartPLS 4. The results indicate that financial literacy was negatively associated with impulse buying and showed a significant predictive relationship ($\beta = -0.263$, $t = 2.154$, $p = .031$). In contrast, promotional exposure was positively associated with impulse buying and demonstrated a stronger positive predictive relationship ($\beta = 0.431$, $t = 4.416$, $p < .001$). Together, the two predictors explained 27.2% of the variance in impulse buying. Financial literacy showed a small-to-moderate effect size, while promotional exposure showed a moderate effect size. These findings suggest that students' impulse buying reflects the tension between internal financial self-regulation and persuasive promotional stimuli in short-video social commerce. The study highlights the importance of ethical promotional practices and practical financial literacy education that addresses students' actual digital consumption behavior.

Keywords: financial literacy; promotional exposure; impulse buying; TikTok shop; social commerce

INTRODUCTION

Social commerce has transformed online shopping by integrating product discovery, entertainment, social interaction, promotional communication, and transaction facilities within the same digital environment. Consumers may

encounter products while watching short videos, following creators, reading peer responses, joining live sessions, and accessing digital payment options. In Indonesia, the institutional context of TikTok Shop changed after GoTo and TikTok announced a strategic e-

commerce partnership in December 2023, followed by the completion of the transaction in January 2024, which combined Tokopedia and TikTok Shop Indonesia under PT Tokopedia (TikTok Newsroom, 2023, 2024). Within this arrangement, TikTok Shop provides a commerce environment in which content, recommendations, promotions, and transactions are closely connected. The simultaneous presence of these elements may shorten consumers' evaluation processes because product appeal, social cues, and price incentives can be encountered within a continuous platform experience.

Impulse buying refers to an unplanned purchase that emerges from a sudden urge and is often accompanied by limited deliberation. In social commerce, this tendency may become more salient because product discovery, social endorsement, promotional pressure, and checkout convenience are presented within the same digital environment. Evidence from Indonesian TikTok users has examined brand reviews, sales promotion, satisfaction, religiosity, and brand expectation as interconnected factors in explaining online impulse buying (Febriandika et al., 2023). Research on e-commerce live streaming

further indicates that social presence, perceived usefulness, and positive emotions are associated with impulsive buying among Generation Z consumers (Andika et al., 2025). Together, these findings suggest that social commerce does not merely facilitate transactions. It also creates an interactive and emotionally engaging environment that may shorten consumers' evaluation processes and increase the likelihood of spontaneous purchasing.

The issue is particularly relevant when consumers are university students. Students are active users of digital platforms, but their purchasing power may be limited, and their income sources may not be stable. The 2025 National Survey on Financial Literacy and Inclusion reported a national financial literacy index of 66.46%, while the combined school and university student category recorded 61.76%. At the same time, the 18 to 25 age group recorded a higher financial literacy index of 73.22% (Otoritas Jasa Keuangan & Badan Pusat Statistik, 2025). Although the combined student category is broader than the undergraduate population examined in this study, these differing classifications indicate that the financial capability of young consumers is heterogeneous and should not be inferred

solely from age or student status. Nevertheless, the lower index reported for the combined student category suggests that part of this population may still face limitations in applying financial knowledge to everyday decisions. When students encounter persuasive promotions, limited budgeting discipline or weak spending control may reduce their ability to distinguish needs from wants, postpone purchases, and anticipate the consequences of unplanned spending.

Financial literacy is relevant in this context because it concerns not only an understanding of financial concepts but also the application of that understanding in everyday decisions. In this study, financial literacy is operationalized as an applied financial capability reflected in students' ability to distinguish needs from wants, plan spending, record income, and expenses, and monitor daily expenditures. Indonesian evidence has linked financial literacy with university students' financial management behavior (Veriwati et al., 2021), while research in a broader consumer setting has associated financial knowledge, financial attitudes, financial experience, and income with financial behavior (Wahyuni & Raprayogha, 2021). Evidence from Japan further indicates that financial literacy is negatively associated

with impulsivity in financial and economic decision-making (Katauke et al., 2023). Taken together, these findings suggest that stronger applied financial capability may provide students with a more adequate basis for evaluating promotional offers against their actual needs, financial priorities, and available budgets before making spontaneous purchases.

Promotional exposure represents the external marketing stimuli that students encounter while using TikTok Shop. In this study, promotional exposure is operationalized through discount attractiveness, students' reported tendency to purchase when large discounts are available, flash sales as checkout triggers, and limited-stock information conveyed by live hosts. Flash sales and scarcity cues are particularly relevant because they may compress the perceived time available for evaluation and create concern that a purchase opportunity will soon disappear. Arousal and pleasure played important roles in impulse buying during online flash sales, while limited-time and limited-quantity scarcity contributed to consumers' internal responses (Lamis et al., 2022). Emotions mediated the relationship between flash sales and online impulse

buying (Martaleni et al., 2022). More recent evidence from young Indonesian consumers also indicates that price discounts, positive emotions, and hedonic motivation are associated with impulsive purchasing decisions (Utama et al., 2025). Promotional exposure should therefore be understood not only as information about economic benefits, but also as a combination of effective, persuasive, and urgency-based stimuli that may be positively associated with impulse buying.

Conceptually, this study adopts a focused financial behavior perspective to explain how students evaluate and regulate consumption decisions within a persuasive digital shopping environment. This perspective is not treated as a separately tested formal theory. Instead, financial literacy is positioned as an internal evaluative and self-regulatory capability, while promotional exposure is positioned as an external situational stimulus encountered during the shopping process. The Theory of Planned Behavior is used only as supplementary conceptual background because contemporary research continues to examine its development, explanatory mechanisms, and future applications in behavioral studies (Hagger & Hamilton, 2025). TPB-related reasoning is relevant to the extent

that purchase decisions may involve favorable evaluations, perceived social influence, and perceptions of control over behavior. However, the present study does not test the Theory of Planned Behavior as a complete structural model because attitude, subjective norm, perceived behavioral control, and behavioral intention were not measured as separate constructs. Accordingly, the theoretical interpretation is limited to supporting the predictive relationships examined among financial literacy, promotional exposure, and impulse buying without claiming a comprehensive test of TPB.

Although impulse buying has been widely examined in e-commerce and social commerce, prior studies have often emphasized promotional, emotional, psychological, or relational mechanisms separately. Flash sales, emotions, hedonic motivation, social presence, and live-streaming interaction have been associated with impulse buying in digital commerce (Lamis et al., 2022; Martaleni et al., 2022; Utama et al., 2025). Live-stream e-branding on Shopee Live has also been linked to impulse buying through parasocial interaction, highlighting the relational and affective mechanisms of live commerce (Prasetia et al., 2025). However, limited empirical

evidence explains whether students' financial literacy serves as an evaluative and self-regulatory capacity that is negatively associated with impulse buying while promotional exposure is positively associated with the same behavior in short-video social commerce. This gap is important because students' impulse buying cannot be understood solely from the intensity or attractiveness of promotional stimuli. It may also depend on whether students can translate financial knowledge into practical spending control when facing urgency-based discounts, vouchers, creator persuasion, scarcity messages, and rapid checkout facilities.

Based on this background, this study aims to examine the predictive roles of financial literacy and promotional exposure in university students' impulse buying on TikTok Shop. Specifically, the study analyzes the direction and statistical significance of the relationship between financial literacy and impulse buying, the relationship between promotional exposure and impulse buying, and the combined explanatory contribution of both predictors to impulse buying. The contribution of this study lies in providing empirical evidence on how internal financial capability and external promotional stimuli are associated with

students' spontaneous purchasing tendencies in short-video social commerce. Rather than establishing causal relationships, the study offers a focused predictive explanation of how financial literacy and promotional exposure contribute differently to the variance in impulse buying. Practically, the findings are expected to inform digital sellers, platform actors, and higher education institutions in promoting transparent and responsible promotional practices as well as financial literacy education that is more closely connected to students' actual online shopping behavior.

LITERATURE REVIEW

Impulse Buying in Social Commerce

Impulse buying refers to an unplanned purchasing response that emerges from a sudden urge and is commonly made with limited prior deliberation. Although this behavior involves reduced cognitive evaluation, it should not be understood solely as an irrational act or a stable personal weakness. In digital commerce, impulse buying may emerge from the interaction between external shopping stimuli and consumers' cognitive, affective, and personal conditions. A recent systematic

review of live-streaming e-commerce identified marketing cues, streamer characteristics, platform-related features, content stimuli, cognitive and affective reactions, and personal traits as recurring factors in explaining impulse buying (Li et al., 2025). Impulse buying in social commerce is therefore more appropriately understood as a context-dependent purchasing response shaped by both individual conditions and the digital environment in which shopping occurs.

Social commerce may intensify the situational conditions surrounding impulse buying because shopping activities are embedded within interactive, entertaining, and persuasive content. In live-streaming commerce, streamer attractiveness and expertise were positively associated with perceived enjoyment, while product usefulness and purchase convenience were associated with perceived usefulness (Lee & Chen, 2021). Their findings further showed that perceived enjoyment was positively related to the urge to buy impulsively, whereas perceived usefulness did not demonstrate the same direct relationship. Indonesian research on TikTok has also examined brand reviews, sales promotion, satisfaction, religiosity, and brand expectations as interconnected factors in

explaining online impulse buying (Febriandika et al., 2023). More recent evidence from TikTok Shop users in Vietnam indicates that time pressure, economic benefits, social influence, entertainment experience, and emotional arousal are relevant to online impulse buying, although quantity pressure and information usefulness did not demonstrate significant direct relationships with the behavior (Ngo et al., 2025). These findings indicate that short-video and live-commerce environments may increase the likelihood of spontaneous purchasing by integrating product exposure, social interaction, emotional stimulation, promotional incentives, and convenience transactions.

This issue is particularly relevant to university students because frequent engagement with digital platforms may coexist with limited financial resources, irregular income sources, and financial routines that are still developing. Nevertheless, students' impulse buying should not be attributed solely to their age, student status, or intensity of platform use. The behavior may be better examined through the simultaneous presence of internal evaluative capability and external shopping stimuli. Accordingly, this study positions financial literacy as an internal

capability associated with spending evaluation and self-regulation, while promotional exposure is positioned as an external stimulus associated with perceived benefits, urgency, and emotional attraction. This focused framing provides the conceptual basis for examining the different predictive relationships of financial literacy and promotional exposure with university students' impulse buying on TikTok Shop.

Financial Literacy

Financial literacy generally concerns the knowledge and capability required to understand financial information and apply it in everyday decisions. In this study, the construct is operationalized more specifically as an applied financial capability, reflected in students' ability to distinguish needs from wants, plan expenses, record income and spending, and monitor daily expenditures. This clarification is important because the indicators capture not only financial understanding but also the practical application of that understanding in routine financial management. Among Indonesian economic education students, financial literacy was positively associated with financial management behavior, indicating that stronger financial

understanding may support more orderly financial practices (Veriwati et al., 2021).

Financial decision-making is nevertheless shaped by more than financial knowledge alone. In a study of cooperative members, financial knowledge, financial experience, and income were positively and significantly related to financial behavior, whereas financial attitude was not statistically significant (Wahyuni & Raprayogha, 2021). Although their study did not focus on university students or impulse buying, it indicates that the translation of financial understanding into behavior may depend on experience, available resources, and the practical context of decision-making. For students using TikTok Shop, applied financial literacy may therefore be relevant to how promotional offers are evaluated, how spending priorities are arranged, and whether a purchase is completed immediately or postponed.

More direct support for the relationship between financial literacy and impulsivity is provided by evidence showing that financial literacy is negatively associated with hyperbolic discounting as a proxy for impulsive financial and economic decisions (Katauke et al., 2023). However, their study used Japanese survey data and did

not specifically examine online shopping or university students. Its findings therefore provide relevant conceptual support but should not be treated as direct evidence of impulse buying on TikTok Shop. In the present context, students with stronger applied financial literacy may be more likely to compare promotional attractiveness with their actual needs, available budgets, and future financial consequences. This reasoning provides a cautious basis for examining whether financial literacy is negatively associated with university students' impulse buying on TikTok Shop.

Promotional Exposure

Promotional exposure refers to consumers' contact with, and perceived salience of marketing cues intended to communicate economic value, urgency, and purchase opportunities. In this study, the construct is operationalized through the attractiveness of discounts, students' reported tendency to purchase when large discounts are available, flash sales as checkout triggers, and limited-stock information conveyed by live hosts. Accordingly, promotional exposure is interpreted as perceived exposure and responsiveness to price- and scarcity-based cues rather than as an objective

count of advertisements viewed. This narrower definition keeps the conceptual discussion aligned with the indicators actually measured in the questionnaire.

Promotional cues may be associated with impulse buying because they can alter both perceived value and emotional arousal. Research on impulse buying during flash sales in online marketplaces demonstrated the importance of arousal and pleasure in explaining impulsive purchase responses (Lamis et al., 2022). However, the relationship between promotional cues and impulse buying is not necessarily direct. Flash sales did not have a statistically significant direct relationship with online impulse buying but showed a positive and significant indirect relationship through consumer emotions (Martaleni et al., 2022). These findings indicate that time-limited promotions may become behaviorally relevant when they generate emotional activation, rather than simply because a discount is displayed.

Evidence from TikTok Shop also suggests that promotional stimuli do not operate uniformly. Time pressure, economic benefits, social influence, entertainment experience, and emotional arousal were relevant to online impulse buying among TikTok Shop users, while

the direct relationships of quantity pressure and information usefulness were not statistically significant (Ngo et al., 2025). In an Indonesian consumer setting, hedonic motivation and positive emotion were more substantial in explaining impulse buying than price discounts (Utama et al., 2025). Promotional exposure should therefore be understood as a multidimensional stimulus whose relationship with impulse buying may depend on how consumers interpret economic benefits, urgency, entertainment, and emotional appeal.

Live commerce adds a relational mechanism to promotional exposure because consumers may respond not only to prices and scarcity cues but also to their perceived connection with a host or creator. Live-stream e-branding on Shopee Live was not directly associated with impulse buying, whereas its indirect relationship through parasocial interaction was significant (Prasetia et al., 2025). Although the platform differs from TikTok Shop, the finding is relevant because it shows that host-related promotional communication may be associated with unplanned purchasing through relational and affective processes. Taken together, the literature supports examining promotional exposure as a

positive predictor of impulse buying, while also recognizing that this relationship may involve emotional and relational mechanisms that are not directly tested in the present model.

Hypothesis Development

Financial literacy is expected to show a negative predictive relationship with impulse buying because students who manage their financial priorities may be more likely to evaluate whether a product is necessary, affordable, and consistent with their spending plans. Promotional offers may still attract attention, but students with stronger applied financial capability may be better able to use budgeting habits, need-based evaluation, and expenditure monitoring before completing an unplanned purchase. This expectation is supported by previous studies linking financial literacy with financial management behavior and lower impulsivity in financial and economic decision-making (Katauke et al., 2023; Veriwati et al., 2021; Wahyuni & Raprayogha, 2021). Accordingly, the first hypothesis is formulated as follows: Financial literacy has a negative predictive relationship with university students' impulse buying on TikTok Shop.

Promotional exposure is expected to show a positive predictive relationship with impulse buying because price- and scarcity-based cues may generate perceived economic benefits, emotional excitement, and urgency. Discounts, flash sales, and limited-stock messages may reduce the time consumers perceive as available for evaluation and encourage faster purchasing consideration. Previous studies have associated flash sales, emotional responses, price discounts, and promotional stimuli in digital commerce with impulsive purchasing tendencies, although some relationships operate indirectly through emotional mechanisms (Lamis et al., 2022; Martaleni et al., 2022; Utama et al., 2025). Accordingly, the second hypothesis is formulated as follows: Promotional exposure has a positive predictive relationship with university students' impulse buying on TikTok Shop.

The combined explanatory contribution of financial literacy and promotional exposure is assessed through the coefficient of determination of impulse buying. Financial literacy represents an internal evaluative capability, whereas promotional exposure represents an external situational stimulus. Examining both predictors within the

same structural model allows the study to determine how much variance in impulse buying is collectively explained by the model and to compare the relative predictive contribution of each predictor. Accordingly, the third hypothesis states that financial literacy and promotional exposure jointly explain university students' impulse buying on TikTok Shop. This hypothesis is evaluated at the model level through R^2 rather than through a separate path-specific t-test.

RESEARCH METHOD

This study employed a quantitative cross-sectional explanatory survey to examine the predictive relationships of financial literacy and promotional exposure with impulse buying on TikTok Shop. The research model comprised three reflectively measured constructs, namely Financial Literacy and Promotional Exposure as exogenous constructs and Impulse Buying as the endogenous construct. The structural model specified two direct predictive paths, from Financial Literacy to Impulse Buying and from Promotional Exposure to Impulse Buying. Because the data were collected at one point in time, the analysis was intended to estimate associations and predictive

contributions rather than establish causal relationships.

The target population consisted of active undergraduate students at the Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, who had experience purchasing products through TikTok Shop. Respondents were selected using purposive sampling because participation required characteristics that were directly relevant to the research purpose. The inclusion criteria were active undergraduate status, at least one TikTok Shop purchase during the three months preceding data collection, and voluntary agreement to participate in the study. The survey initially obtained 126 responses. After screening the responses for eligibility, completeness, and consistency with the inclusion criteria, 26 responses were excluded and 100 usable responses were retained for analysis. An a priori power analysis for a multiple regression model with two predictors, a medium effect size of $f^2 = 0.15$, a significance level of 0.05, and statistical power of 0.80 indicated a minimum requirement of approximately 68 respondents. The final sample of 100 respondents exceeded this minimum requirement and was considered

sufficient for estimating the specified two-predictor model.

Data were collected through a structured online questionnaire distributed using Google Forms in April 2026. The questionnaire contained an introductory explanation, an informed consent statement, screening questions, respondent profile questions, and measurement items for the three research constructs. The respondent profile covered cohort year, monthly allowance, and TikTok Shop purchase frequency. All construct indicators were measured using a five-point Likert scale ranging from strongly disagreement to strongly agree. Participation was voluntary, and respondents were informed that their responses would be used exclusively for academic purposes and analyzed in aggregate form.

The measurement items were informed by relevant previous studies and contextualized for TikTok Shop shopping behavior. Financial Literacy was measured using four indicators reflecting students' ability to distinguish needs from wants, record income and expenses, prepare a budget, and monitor daily spending. The development of these indicators was informed by literature on financial literacy and financial

management behavior (Veriwati et al., 2021; Wahyuni & Raprayogha, 2021). Promotional Exposure was measured using four indicators reflecting the attractiveness of discounts, the reported tendency to purchase when large discounts were available, flash sales as checkout triggers, and limited-stock information conveyed by live hosts. These indicators were informed by research on digital promotion, flash sales, and online impulse buying (Lamis et al., 2022; Martaleni et al., 2022; Utama et al., 2025). Impulse Buying was measured using four indicators reflecting unplanned purchasing, regret when promotional opportunities were missed, emotional enthusiasm during shopping, and regret after purchasing. These indicators were informed by previous studies of impulse buying in digital and social commerce (Febriandika et al., 2023; Lee & Chen, 2021). Content relevance and wording clarity were addressed through literature-based indicator mapping, contextual adaptation, and an internal review of item clarity before the questionnaire was distributed.

The data were analyzed using Partial Least Squares Structural Equation Modeling with SmartPLS 4 (Hair et al., 2022). PLS-SEM was selected because the

study focused on estimating predictive relationships among latent constructs measured using multiple indicators. The analysis was conducted in two stages. The first stage evaluated the reflective measurement model through indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Indicator reliability was examined using outer loadings, with values around 0.70 regarded as desirable. Indicators with lower loadings were interpreted together with their theoretical relevance, Composite Reliability, and Average Variance Extracted rather than being removed automatically. Internal consistency reliability was assessed using Cronbach's Alpha and Composite Reliability, with values of at least 0.70 considered acceptable. Convergent validity was assessed using Average Variance Extracted, with values of at least 0.50 considered adequate. Discriminant validity was evaluated using the Heterotrait-Monotrait ratio, with values below the conservative threshold of 0.85 indicating adequate distinction among the constructs (Hair et al., 2022).

The second stage evaluated the structural model by examining collinearity, path coefficients, statistical significance, explained variance, effect

sizes, predictive relevance, and supplementary model-fit information. Collinearity among the predictor constructs was assessed using inner model Variance Inflation Factor values. The statistical significance of the structural paths was evaluated through bootstrapping with 5,000 subsamples. A relationship was considered statistically significant in the two-tailed test when the t-statistic exceeded 1.96 and the p-value was below 0.05. The coefficient of determination was used to assess the proportion of variance in Impulse Buying explained collectively by Financial Literacy and Promotional Exposure, while f^2 was used to evaluate the relative contribution of each predictor. The combined explanatory contribution represented by R^2 was treated as a model-level assessment rather than as a separate test of simultaneous causality. Predictive relevance was examined using a supplementary k-fold cross-validation-based predictive assessment that produced $Q^2_{predict}$ values for Impulse Buying and its indicators. Indicator-level prediction errors were also compared with the linear model benchmark. The Standardized Root Mean Square Residual was reported as supplementary model-fit information, while the primary interpretation remained

focused on measurement quality, collinearity, path significance, effect sizes, explained variance, and predictive performance.

Because all constructs were measured using the same questionnaire, respondents, and data-collection period, the study considered the potential presence of common method bias. Procedurally, the questionnaire provided an introductory explanation, emphasized voluntary participation, and informed respondents that the data would be reported only in aggregate form. Statistically, full collinearity VIF values were examined as a supplementary diagnostic. Values below 3.3 were interpreted as indicating that severe common method bias was unlikely to dominate the estimated relationships. However, this diagnostic was not treated as definitive proof that common method variance was entirely absent, particularly because the study relied on cross-sectional self-report data.

RESULTS AND DISCUSSION

Respondent Profile

The screening process yielded 100 usable responses from 126 initial submissions. All respondents were active undergraduate students at the Faculty of

Economics and Business Education, Universitas Pendidikan Indonesia, and had purchased products through TikTok Shop during the three months preceding data collection. Respondents from the 2025 cohort constituted the largest proportion of the sample, accounting for 68.0%. Regarding monthly allowance, 50.0% of respondents reported receiving between IDR 1,000,000 and IDR 2,000,000, while 41.0% received less than IDR 1,000,000. In terms of TikTok Shop purchase frequency, 69.0% of respondents reported making one to two purchases during the three-month period, 23.0% made three to five purchases, and 8.0% made more than five purchases. These figures describe the composition of the sample and indicate that most respondents were from the most recent cohort and reported relatively infrequent TikTok Shop purchases during the specified period.

Table 1. Respondent Profile

Aspect	Cat.	n	%
Cohort	2022	5	5.0
	2023	3	3.0
	2024	24	24.0
	2025	68	68.0
Allow.	< IDR 1.0m	41	41.0
	IDR 1.0-2.0m	50	50.0
	> IDR 2.0m	9	9.0
Freq.	1-2 times	69	69.0
	3-5 times	23	23.0
	> 5 times	8	8.0

Descriptive Analysis

The descriptive results show that Financial Literacy obtained a total score of 1,464 out of a maximum possible score of 2,000, corresponding to 73.20%. Among its indicators, the ability to distinguish needs from wants received the highest score, while the practice of recording income and expenses received the lowest score. Promotional Exposure obtained a total score of 1,360, corresponding to 68.00%. Discount attractiveness was the most strongly endorsed promotional indicator, whereas limited stock information conveyed by live hosts received the lowest score. Impulse Buying obtained a total score of 1,085, corresponding to 54.25%. Emotional enthusiasm during shopping received the highest indicator score, while regret after purchasing received the lowest score.

Table 2. Descriptive Results of Research Constructs

C.	Score	%	Cat.
FL	1,464 / 2,000	73.2	High
PE	1,360 / 2,000	68.0	Mod.
IB	1,085 / 2,000	54.3	Mod.

Note: FL = Financial Literacy; PE = Promotional Exposure; IB = Impulse Buying; Mod. = Moderate. Item-level details are explained in the text.

The descriptive pattern shows that Financial Literacy received the highest percentage among the three constructs, followed by Promotional Exposure and Impulse Buying. However, the relatively

higher Financial Literacy score should not be interpreted as evidence that respondents were entirely protected from spontaneous purchasing tendencies. The item-level results indicate that respondents reported greater confidence in distinguishing needs from wants than in consistently recording income and expenses. This difference suggests that conceptual financial awareness may not always be accompanied by equally consistent financial management practices. The promotional results also show that respondents were more responsive to direct price incentives than to limited stock messages conveyed by live hosts. These descriptive findings provide contextual information for the structural model analysis, but they do not independently establish relationships among the constructs.

Measurement Model Evaluation

The reflective measurement model was evaluated before structural relationships were examined. Indicator reliability was assessed using outer loadings, internal consistency reliability was evaluated using Cronbach's Alpha and Composite Reliability, and convergent validity was assessed using Average Variance Extracted. Table 3

presents the outer loadings and their statistical significance, while Table 4 presents the construct-level reliability and convergent validity results. All outer loadings were statistically significant and ranged from 0.652 to 0.864. Three indicators, namely X1.2, X2.1, and Y1.4, had outer loadings below 0.70. These indicators were retained because they represented theoretically relevant aspects of their respective constructs, while the corresponding Composite Reliability and Average Variance Extracted values remained above the recommended thresholds. Financial Literacy recorded a Cronbach's Alpha of 0.714, Composite Reliability of 0.821, and Average Variance Extracted of 0.537. Promotional Exposure recorded a Cronbach's Alpha of 0.768, Composite Reliability of 0.852, and Average Variance Extracted of 0.593. Impulse Buying recorded a Cronbach's Alpha of 0.745, Composite Reliability of 0.840, and Average Variance Extracted of 0.568. These results indicate acceptable internal consistency reliability and convergent validity for all three constructs, although the indicators with lower outer loadings should be interpreted with appropriate caution (Hair et al., 2022).

Table 3. Outer Loadings and Indicator Significance

C.	Item	Load.	t	p
FL	X1.2	0.652	3.583	0.000
FL	X1.3	0.741	3.308	0.001
FL	X1.4	0.707	2.986	0.003
FL	X1.5	0.820	4.511	0.000
PE	X2.1	0.662	4.142	0.000
PE	X2.2	0.829	6.320	0.000
PE	X2.3	0.864	6.457	0.000
PE	X2.4	0.708	6.599	0.000
IB	Y1.1	0.803	9.737	0.000
IB	Y1.2	0.793	9.433	0.000
IB	Y1.4	0.677	3.911	0.000
IB	Y1.5	0.734	9.706	0.000

Note: Item wording is described in the measurement section.

Table 4. Construct Reliability and Convergent Validity

C.	Alpha	CR	AVE
FL	0.714	0.821	0.537
PE	0.768	0.852	0.593
IB	0.745	0.840	0.568

Discriminant Validity

Discriminant validity was assessed using the Heterotrait-Monotrait ratio. The HTMT value between Financial Literacy and Promotional Exposure was 0.178, the value between Financial Literacy and Impulse Buying was 0.414, and the value between Promotional Exposure and Impulse Buying was 0.595. All values were below the conservative threshold of 0.85, indicating that the three constructs demonstrated adequate empirical distinction. Accordingly, the measurement model met the discriminant validity criterion and was considered appropriate for subsequent structural model evaluation (Hair et al., 2022).

Table 5. Heterotrait-Monotrait Ratio

Pair	HTMT	Decision
FL and PE	0.178	Accepted
FL and IB	0.414	Accepted
PE and IB	0.595	Accepted

Common Method Bias and Collinearity Assessment

Because all constructs were measured using the same respondents, questionnaire, and data-collection period, the potential presence of common method bias was examined using full collinearity VIF values as a supplementary diagnostic. The full collinearity VIF values were 1.036 for Financial Literacy, 1.258 for Promotional Exposure, and 1.288 for Impulse Buying. All values were below the conservative threshold of 3.3, suggesting that severe common method bias was unlikely to dominate the estimated relationships. However, these results should not be interpreted as definitive evidence that common method variance was entirely absent because the study relied on cross-sectional self-report data collected through a single instrument. The inner model collinearity assessment also showed VIF values of 1.006 for both Financial Literacy and Promotional Exposure as predictors of Impulse Buying. These values indicate that problematic multicollinearity was not identified

between the predictor constructs in the structural model.

Table 6. Collinearity and Common Method Bias Diagnostics

Type	Variable/Path	VIF
Full coll.	Financial Literacy	1.036
Full coll.	Promotional Exposure	1.258
Full coll.	Impulse Buying	1.288
Inner model	FL to IB	1.006
Inner model	PE to IB	1.006

Structural Model Evaluation, Predictive Relevance, and Hypothesis Testing

The structural model was evaluated using SRMR, R^2 , f^2 , inner model VIF, Q^2 predict, and bootstrapping results. The SRMR value was 0.113, which exceeded both the 0.10 threshold and the more conservative threshold of 0.08. Accordingly, the SRMR result was interpreted as marginal and did not indicate satisfactory approximate model fit. This result should be acknowledged when interpreting the findings, although SRMR was treated as supplementary information rather than the sole basis for evaluating the PLS-SEM model. The coefficient determination for Impulse Buying was 0.272, indicating that Financial Literacy and Promotional Exposure collectively explained 27.2% of its variance. The remaining 72.8% of the variance was not explained by the two-

predictor model and may be associated with variables not examined in this study, such as self-control, hedonic motivation, fear of missing out, peer influence, creator trust, shopping mood, platform-use habits, live-streaming quality, and pay later use.

The effect size results showed that Financial Literacy had an f^2 value of 0.094, indicating a small-to-moderate contribution to the explained variance in Impulse Buying. Promotional Exposure had an f^2 value of 0.254, indicating a moderate contribution and a larger relative contribution than Financial Literacy. Both predictor constructs recorded inner model VIF values of 1.006, indicating that problematic collinearity was not identified. The reported Q^2 predict value for Impulse Buying was 0.190. At the indicator level, the Q^2 predict values were 0.132 for Y1.1, 0.065 for Y1.2, 0.085 for Y1.4, and 0.142 for Y1.5. The positive values indicate that the PLS-SEM predictions produced lower prediction errors than the native mean-value benchmark. However, the predictive results should be interpreted cautiously because the prediction error for Y1.4 was higher than the corresponding linear model benchmark. Therefore, the model demonstrated positive but mixed out-of-

sample predictive performance rather than uniformly strong predictive performance.

Table 7. Structural Model and Predictive Assessment

Ind.	Value	Interp.
SRMR	0.113	Marginal
R ² IB	0.272	Weak-mod.
f ² FL	0.094	Small-mod.
f ² PE	0.254	Moderate
VIF FL/PE	1.006	Accepted
Q ² IB	0.190	Positive

Note: Indicator-level Q²predict values are reported in the text.

Bootstrapping with 5,000 subsamples showed that the first hypothesis was supported. Financial Literacy had a negative and statistically significant predictive relationship with Impulse Buying, with a path coefficient of -0.263, a t-statistic of 2.154, and a p-value of .031. This result indicates that higher Financial Literacy scores were associated with lower Impulse Buying scores within the observed sample. The second hypothesis was also supported. Promotional Exposure had a positive and statistically significant predictive relationship with Impulse Buying, with a path coefficient of 0.431, a t-statistic of 4.416, and a p-value below .001. This result indicates that higher Promotional Exposure scores were associated with higher Impulse Buying scores. The absolute path coefficient and effect size of Promotional Exposure were greater than those of Financial Literacy,

indicating that Promotional Exposure made the stronger relative predictive contribution in the specified model. Separately, the R² value showed that both predictors collectively explained 27.2% of the variance in Impulse Buying. This combined explanatory contribution was used to evaluate H3 at the model level and should not be interpreted as evidence of simultaneous causality.

Table 8. Hypothesis Testing Results

Hyp.	Path	β/R ²	t	p
H1	FL→IB	-0.263	2.154	0.031
H2	PE→IB	0.431	4.416	<.001
H3	Model	R ² =.272	-	-

Discussion of Findings

The findings indicate that Financial Literacy and Promotional Exposure showed statistically significant predictive relationships with Impulse Buying in different directions. Financial Literacy was negatively associated with Impulse Buying, whereas Promotional Exposure was positively associated with Impulse Buying and demonstrated the larger path coefficient and effect size. These results should not be interpreted as evidence of an interaction between the two predictors because the model did not include an interaction or moderation term. Instead, the findings show that internal financial capability and external promotional

stimuli contributed differently to explaining university students' impulse buying within the same predictive model. This pattern is relevant in the TikTok Shop environment, where product discovery, entertainment, promotional cues, creator communication, and transaction facilities may be encountered within a continuous shopping experience.

The negative and statistically significant relationship between Financial Literacy and Impulse Buying supports H1. The path coefficient of -0.263 indicates that higher Financial Literacy scores were associated with lower Impulse Buying scores among the respondents. Students who reported greater ability to distinguish needs from wants, prepare budgets, record financial activities, and monitor daily spending may have possessed a stronger evaluative basis for considering whether a purchase was necessary, affordable, and consistent with their financial priorities. Nevertheless, because the study used cross-sectional self-report data, this result should be interpreted as a predictive association rather than proof that financial literacy directly caused a reduction in impulse buying.

The finding is consistent with previous evidence linking financial literacy with financial management

behavior and lower impulsivity in financial and economic decision-making. A positive relationship between financial literacy and financial management behavior was reported among economic education students (Veriwati et al., 2021). Financial literacy was negatively associated with hyperbolic discounting as a proxy for impulsivity (Katauke et al., 2023). Financial knowledge, financial experience, and income were significantly associated with financial behavior, although the study involved cooperative members and did not specifically examine university students' online impulse buying (Wahyuni & Raprayogha, 2021). The present findings extend this discussion to short-video social commerce by showing that applied financial capability remained negatively associated with impulsive purchasing tendencies in a TikTok Shop context.

The contribution of Financial Literacy should nevertheless be interpreted proportionally. Its f^2 value of 0.094 indicated a small-to-moderate contribution to the explained variance in Impulse Buying. The descriptive results also showed that Financial Literacy obtained a higher percentage score than Impulse Buying, but spontaneous purchasing tendencies were still reported

by the respondents. Within Financial Literacy, recording income and expenses received the lowest indicator score, suggesting weaker reported consistency in this practical financial management activity than in distinguishing needs from wants. Therefore, Financial Literacy may be understood as a relevant internal evaluative capability, but it is not sufficient to provide a complete explanation of university students' impulse buying.

Promotional Exposure showed a positive and statistically significant predictive relationship with Impulse Buying, supporting H2. The path coefficient of 0.431 indicates that higher Promotional Exposure scores were associated with higher Impulse Buying scores among the respondents. Its path coefficient and f^2 value were also larger than those of Financial Literacy, indicating that Promotional Exposure made the stronger relative predictive contribution within the specified model. Discounts, flash sales, and limited-stock messages may be associated with impulse buying because they communicate perceived economic benefits and urgency. However, because the study used cross-sectional self-report data, the finding should not be interpreted as evidence that

promotional exposure directly caused students to purchase impulsively.

The finding is broadly consistent with previous studies that have linked promotional and emotional stimuli with impulse buying in digital commerce. Arousal and pleasure played important roles in explaining impulse buying during online flash sales (Lamis et al., 2022). Flash sales were not directly associated with online impulse buying but showed a positive and significant indirect relationship through consumer emotions (Martaleni et al., 2022). Price discounts, positive emotions, and hedonic motivation were relevant to impulse buying among young Indonesian consumers, although the emotional and hedonic variables provided stronger explanatory contributions than price discounts (Utama et al., 2025). Promotional and platform-related factors formed part of a broader model explaining online impulse buying on TikTok (Febriandika et al., 2023). Accordingly, the present result should be understood as evidence of a positive predictive relationship, while the emotional mechanisms identified in previous studies were not directly examined in the current model.

The descriptive results provide additional context for interpreting

Promotional Exposure. Discount attractiveness received the highest indicator score, whereas limited-stock information conveyed by live hosts received the lowest score. This pattern indicates that respondents reported greater responsiveness to direct price incentives than to the scarcity messages represented by the measured indicators. Although most respondents reported monthly allowances of IDR 2,000,000 or less, the present study did not test whether allowance levels explained or moderated their responses to different promotional cues. Therefore, the distribution allowance should be treated only as descriptive context. Relational mechanisms may also remain relevant in live commerce. Live-stream e-branding was not directly associated with impulse buying but demonstrated a significant indirect relationship through parasocial interaction (Prasetia et al., 2025). Although that study examined Shopee Live rather than TikTok Shop, it suggests that host-related communication may be associated with unplanned purchasing through relational and affective processes that were not tested in the present study.

The R^2 value of 0.272 indicates that Financial Literacy and Promotional Exposure collectively explained 27.2% of

the variance in Impulse Buying within the specified model. This proportion provides a meaningful but limited explanatory contribution because 72.8% of the variance remained unexplained. The unexplained variance may be associated with other factors not included in the model, such as self-control, hedonic motivation, fear of missing out, peer influence, creator trust, shopping mood, platform-use habits, social media intensity, live-streaming quality, and pay later use. However, these variables should be treated as potential directions for future research rather than as factors established by the present findings. The SRMR value of 0.113 also exceeded the commonly referenced threshold of 0.10. Accordingly, approximate model fit was not established based on this criterion. Although SRMR was treated as supplementary information in the PLS-SEM evaluation, this result reinforces the need to interpret the model as a focused and incomplete explanation of university students' impulse buying rather than as a comprehensive representation of the behavior.

Theoretically, this study contributes to consumer behavior and digital marketing literature by showing that Financial Literacy and Promotional Exposure have significant predictive

relationships with Impulse Buying in different directions within a short-video social commerce context. Financial Literacy represents an internal evaluative capability associated with lower impulsive purchasing tendencies, whereas Promotional Exposure represents an external situational stimulus associated with higher impulsive purchasing tendencies. These findings do not indicate that the two predictors interact with each other or establish causal relationships. The study also does not test the Theory of Planned Behavior as a complete empirical model because attitude, subjective norm, perceived behavioral control, and behavioral intention were not operationalized as separate constructs. TPB-related reasoning is therefore used only as supplementary conceptual background for interpreting purchase evaluations, perceived social influence, and perceptions of behavioral control may be relevant in digital shopping decisions. The primary theoretical contribution lies in providing a focused predictive explanation of how internal financial capability and external promotional stimuli are differently associated with university students' impulse buying on TikTok Shop.

Practically, the findings offer relevant considerations for digital sellers, platform actors, and higher education institutions. For sellers and platform actors, the positive predictive relationship between Promotional Exposure and Impulse Buying indicates that discounts, flash sales, limited-stock messages, and other promotional cues are associated with students' spontaneous purchasing tendencies. Promotional communication should therefore be presented transparently and responsibly, particularly when it involves urgency or scarcity claims. Although this study did not directly examine misleading promotions or consumer vulnerability, sellers and platforms should avoid promotional practices that obscure relevant information or create unjustified pressure to complete purchases immediately. For higher education institutions, the negative predictive relationship between Financial Literacy and Impulse Buying suggests the value of connecting financial literacy education with students' actual digital consumption experiences. Such education may include practical discussions of budgeting for online purchases, distinguishing needs from wants, monitoring expenditures, delaying checkout decisions, evaluating

promotional claims, and considering product necessity before purchasing. These recommendations should be understood as practical implications derived from the observed relationships rather than as interventions whose effectiveness was directly tested in this study.

Overall, the findings show that Financial Literacy and Promotional Exposure were significantly associated with university students' Impulse Buying in different directions. Financial Literacy demonstrated a negative predictive relationship, whereas Promotional Exposure demonstrated a positive predictive relationship and made the stronger relative contribution in the specified model. The results therefore suggest that applied financial capability may be relevant to more reflective purchasing decisions, but it does not provide a complete explanation of students' spontaneous purchasing tendencies in a promotional social commerce environment. Transparent and responsible promotional communication, together with financial literacy education that addresses actual digital shopping practices, may consequently serve as complementary practical considerations. These conclusions are limited to the

observed relationships in the present cross-sectional sample and should not be interpreted as evidence of causal effects.

CONCLUSION

This study concludes that Financial Literacy and Promotional Exposure significantly predict university students' Impulse Buying on TikTok Shop in opposite directions. Financial Literacy is negatively associated with impulse buying, whereas Promotional Exposure shows a stronger, positive relationship, with both predictors collectively explaining 27.2% of the variance. While these findings provide predictive evidence rather than causal proof, they suggest that platform actors should communicate offers responsibly, and higher education institutions should align financial literacy programs with practical digital shopping habits.

However, the study has several limitations that affect its generalizability and scope. The sample was restricted to undergraduate business education students at one specific university, selected via purposive sampling, and relied entirely on self-report data. Additionally, the cross-sectional design prevents any causal conclusions, common method variance cannot be fully excluded,

and the Promotional Exposure construct blended exposure with behavioral responsiveness. Lastly, the model did not achieve an approximate fit based on the supplementary SRMR criterion. To address these limitations, future research should involve more diverse demographic and institutional backgrounds and utilize longitudinal or experimental designs to better capture causal relationships. Future studies should also refine measurement models to clearly separate exposure from responsiveness, and incorporate additional variables such as self-control, hedonic motivation, or "buy now, pay later" usage. Finally, combining questionnaires with actual behavioral or transaction data would reduce reliance on self-reporting and provide a deeper understanding of social commerce impulse buying.

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