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The effects of social media and fear of missing out on university students' online purchase decisions while using TikTok: Evidence from Northern Vietnam

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Abstract: The rapid expansion of social commerce has positioned TikTok as a dominant platform influencing consumer decision-making, particularly among university students in Vietnam. With the rise of short-form videos and interactive livestream shopping, users are continuously exposed to persuasive stimuli such as instant promotions, real-time product demonstrations, and socially driven cues. These features create an environment in which psychological factors, especially Fear of Missing Out (FOMO) may strongly shape online purchasing behavior. Despite growing interest in TikTok-based commerce, empirical evidence examining how social media engagement and FOMO jointly influence purchase intention and impulsive buying among Vietnamese students remains limited. To address this gap, the present study investigates the effects of social media use and FOMO on online purchase behavior while students watch TikTok livestreams. A structured questionnaire employing five-point Likert scales was administered to 300 students in Northern Vietnam, and the dataset was analyzed using SmartPLS 3. Findings reveal that sales promotions and livestream participation significantly elevate both purchase intention and impulsive buying decisions. The study contributes to the emerging literature on social commerce by highlighting the psychological and promotional mechanisms driving student purchasing behavior within TikTok's livestream environment.

Keywords: *Northern Vietnam, Online purchase, Sales promotion, Social media, TikTok livestream, University students.*

1. Introduction

Among contemporary e-commerce platforms, TikTok Shop has rapidly emerged as a "rising star," outpacing many competitors through its livestream-based retail model. Livestreaming enables real-time interaction between sellers and buyers, creating a dynamic, engaging environment that facilitates instant inquiry and response while showcasing products through vivid, attention-grabbing visuals. In such sessions, consumers often hear direct product endorsements and encounter information about limited quantities that signal scarcity. Continuous offers promotions, price discounts, bundled gifts, and free shipping further stimulate purchase needs, prompting decisions even in the absence of prior intention. Accordingly, examining the determinants of online purchase intention and decision among Thanh Dong University students in the context of TikTok livestreams is warranted to clarify students' psychological drivers and to propose appropriate managerial implications for encouraging youth consumption.

In universities across Northern Vietnam, students display diverse consumption patterns and are highly sensitive to socio-psychological cues such as fear of missing out (FOMO), the anxiety that others may be accessing opportunities or experiences that one is not [1, 2]. FOMO is thus posited to influence online purchase decisions indirectly through online purchase intention. However, prior research reveals several gaps: many studies examine individual antecedents (e.g., social media exposure, sales promotions) in isolation rather than integrating them with FOMO within a unified model; moreover,

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findings regarding FOMO's effect on purchase decisions remain inconclusive between international and Vietnamese settings [3]. To address these gaps, this study investigates how social media, promotional programs, and FOMO shape online purchase decisions via the mediating role of online purchase intention in the TikTok livestream context.

2. Theoretical Background

The Stimulus–Organism–Response (S–O–R) framework proposed by Mehrabian and Russell [4] explains how individuals react to environmental cues. External stimuli (S) influence an individual's internal state (O), which in turn triggers behavioral responses (R). In this study, Stimulus encompasses factors such as scarcity messages, promotional offers, visual appeal, and social interaction on social media [5]; Organism reflects internal psychological states, for example, the pressure induced by scarcity cues [6]; and Response is expressed through purchasing behavior or related actions [7]. The S–O–R model is particularly well-suited to livestream commerce, where consumers are continuously exposed to compelling visuals, audio, time-limited deals, and community interactions.

Fear of Missing Out (FOMO) is a prevalent psychological phenomenon in the era of pervasive social media, arising from individuals' desire to pursue a more fulfilling life [8]. FOMO is defined as "a pervasive apprehension that others might be having rewarding experiences from which one is absent, accompanied by a desire to stay continually connected with what others are doing" [2]. The phenomenon is closely tied to social influence effects because it rests on social comparison processes [9]. Based on this, the study proposes the following hypotheses:

H_1: Fear of Missing Out (FOMO) positively influences online purchase intention.

Sales promotions not only stimulate purchase intention but may also exert a direct effect on consumers' purchase decisions. Incentives such as price discounts, bundled gifts, and free shipping typically create a sense of urgency and heighten action motivation, prompting purchases even in the absence of prior planning [10]. Accordingly, we propose:

H_2: Sales promotions positively influence online purchase intention.

Social media now plays a central role in the digital lives of young people, especially Generation Z. Platforms such as Facebook, Instagram, and TikTok are not only connection tools but also powerful consumption channels that diffuse trends and amplify experiential sharing. Recent studies document a link between social media use and FOMO, as content about experiences, products, or events one might miss heightens this feeling [11]. To avoid missing out, users often make swift purchases of trending items they encounter online [12]. Building on this logic, we propose:

H_3: Social media use positively influences online purchase intention.

Purchase intention is the degree to which consumers plan or desire to buy a specific product or service. It typically forms through deliberation, during which prospective buyers attend more closely to advertising messages and promotional cues. In contrast, impulsive buying is driven by immediate stimuli and is strongly shaped by factors such as FOMO and sales promotions, which can spur action without prior planning [13]. Consistent with technology acceptance and planned behavior perspectives, purchase intention is grounded in perceived usefulness, trust, attitudes toward online shopping, exposure to promotions, and interactions with sellers [14]. Accordingly:

H_4: Online purchase intention positively influences online purchase decision.

Online shopping behavior refers to the process of searching for, evaluating, and purchasing products or services via the Internet [15]. It has become prevalent among Gen Z consumers [16]. In particular, FOMO is regarded as a potent driver of impulsive purchase decisions in TikTok livestream contexts [3], underscoring the close association between FOMO and *students' online consumption behavior at Thanh Dong University.*

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3. Methodology

This study adopts a quantitative approach using partial least squares structural equation modeling (PLS-SEM) to analyze the relationships among fear of missing out (FOMO), sales promotions, and social media as antecedents of online purchase intention, and the subsequent effect of intention on online purchase decision. PLS-SEM is selected for its advantages in testing complex theoretical models with multiple latent constructs under relatively small sample sizes [17], its robustness to non-normal data, and its ability to estimate causal relationships [18]. The expected results provide deeper insights into the drivers of students' online shopping behavior, thereby informing e-commerce and digital marketing strategies tailored to this segment [19]. Data were analyzed using SmartPLS 3.

The research team distributed 320 questionnaires via email and Google Forms to students from six universities in Northern Vietnam. Descriptive statistics are summarized in Table 1. We obtained 300 valid responses, yielding a 93% response rate. Among respondents, approximately 57% identified as male and 43% as female. In terms of age, the majority were 20–22 years old and enrolled in their second to fourth years of study at universities in Northern Vietnam. Students' online consumption behavior at Thanh Dong University.

Table 1.
Descriptive statistics of respondents.

No.	University	Approx enrollment	Respondents (n)	Share of sample (%)
1	National Economics University (NEU)	22.000	52	17.33
2	Banking Academy (Hanoi)	16.000	32	10.67
3	Vietnam National University, Hanoi (VNU Hanoi)	63.280	70	23.33
4	Diplomatic Academy of Vietnam (DAV)	32.400	65	21.67
5	Thuongmai University (TMU)	19000	34	11.33
6	Thanh Dong University (TDU)	21.000	47	15.67

The data were collected using a self-administered questionnaire comprising two sections: (1) general information about respondents, and (2) multi-item scales capturing the focal constructs fear of missing out (FOMO), sales promotions, social media, online purchase intention, and online purchase decision. All scales were adapted from prior studies and contextually refined for Vietnam. Specifically, FOMO was measured with three indicators, sales promotions with three indicators, social media with three indicators, online purchase intention with three indicators, and online purchase decision with three indicators. All items employed a five-point Likert scale (1 = very low/strongly disagree; 5 = very high/strongly agree).

We applied PLS-SEM using SmartPLS 3.3 to analyze the data. PLS-SEM was chosen over covariance-based SEM due to its suitability for moderate sample sizes, its robustness to non-normal data, and its capacity to estimate complex latent-variable models. With a sample of N = 300, PLS-SEM is an appropriate choice to maximize explained variance in the endogenous constructs while mitigating violations of distributional assumptions.

The analysis proceeded in two stages: (1) measurement model assessment to examine the reliability and validity of the scales, and (2) structural model assessment to test H1–H4.

Measurement model. Internal consistency was evaluated using Cronbach's alpha and composite reliability (CR) with the criterion > 0.70. Convergent validity was assessed via the average variance extracted (AVE), requiring > 0.50. Discriminant validity was examined using the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT). To diagnose multicollinearity, we inspected variance inflation factors (VIF) for exogenous constructs; values < 3 were deemed acceptable.

Structural model. Explanatory power was gauged using R^2 for endogenous constructs, and effect sizes (f^2) were computed to quantify the contribution of each exogenous construct to its endogenous counterpart [20]. Finally, hypotheses H1–H4 were tested based on the magnitude and statistical

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significance of path coefficients (obtained via bootstrapping), alongside the substantive effect sizes and explained variance.

4. Results

Following recommended guidelines [21], an a priori power consideration targeting 80% power at $\alpha = 0.05$ to detect small path coefficients ($\beta \approx 0.11$–0.20) indicates a required sample size above the common minimum for PLS-SEM. Our final dataset contains 300 valid observations, which satisfies this requirement. Data were analyzed using SmartPLS 3.

Grounded in the Stimulus–Organism–Response (S–O–R) framework and prior literature, we propose a model in which social media and sales promotions (Stimuli), together with FOMO (Organism), shape online purchase intention, which subsequently drives online purchase decisions (Response).

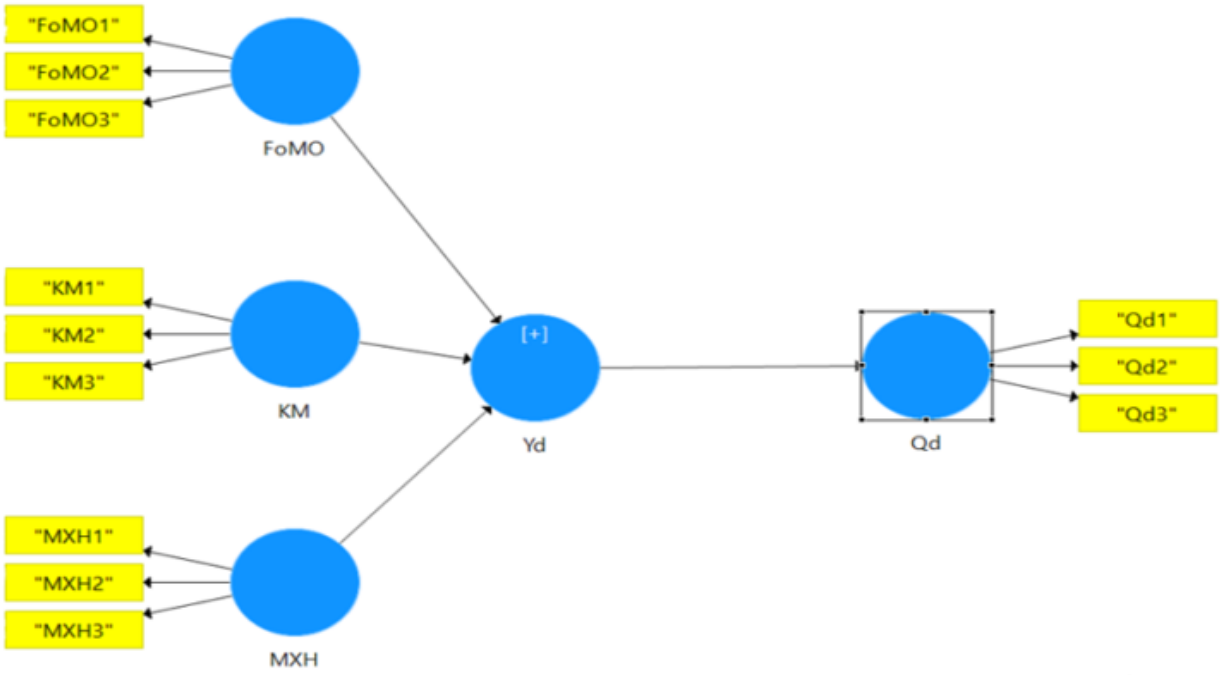

Figure 1.
Presents the proposed research model.

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Table 2.
External model values.

Research Concept	Measurement Variable	Outer Loading	Cronbach's Alpha	Composite Reliability (rho_A)	Average Variance Extracted (AVE)
FOMO	FOMO1	0.901	0.882	0.895	0.808
	FOMO2	0.904			
	FOMO3	0.893			
KM	KM1	0.866	0.858	0.862	0.779
	KM2	0.890			
	KM3	0.892			
QD	QD1	0.908	0.892	0.895	0.822
	QD2	0.901			
	QD3	0.911			
YD	YD1	0.908	0.903	0.904	0.774
	YD2	0.901			
	YD3	0.911			

The results of the internal consistency reliability assessment in Table 2 show that the values are all greater than the threshold of 0.7 recommended by Hair, et al. [21] The KM scale (Cronbach's Alpha: 0.858; rho_A: 0.862) has the lowest internal consistency reliability, while the highest value belongs to the YD scale (Cronbach's Alpha: 0.903; rho_A: 0.904). In conclusion, the scales demonstrate high internal consistency reliability. The results of the convergent validity assessment (Table 1) show that the average variance extracted (AVE) for the concepts FOMO (0.808), KM (0.779), QD (0.882), and YD (0.774) are all above 0.50. All scales meet the required thresholds and exhibit high convergence, indicating that the constructs are well-measured and reliable for further analysis.

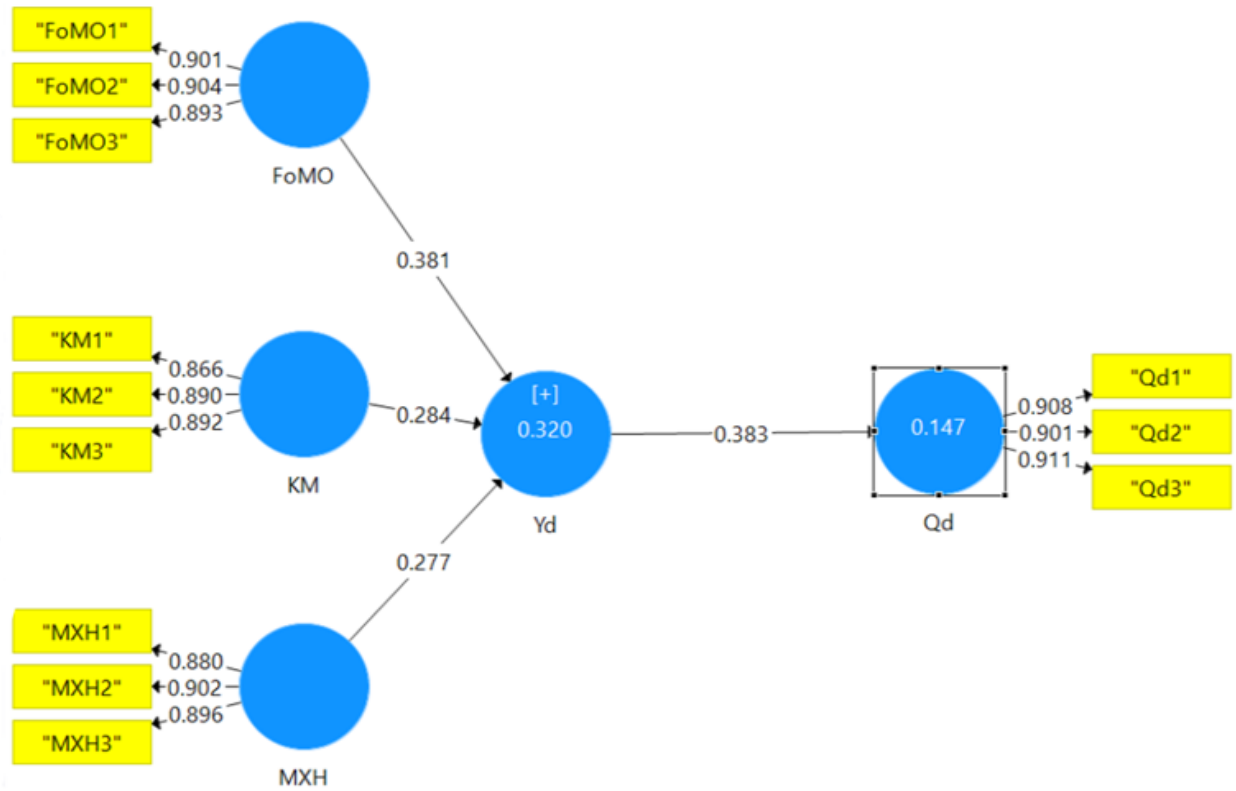

Figure 2.
Internal model of the structural equation.

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Structural model results. Using a structural equation model (SEM), we evaluated both the measurement (outer) and structural (inner) relations among Fear of Missing Out (FOMO), Sales Promotions (KM), Social Media Use (MXH), Online Purchase Intention (YD), and Online Purchase Decision (QĐ). The analysis reveals distinct associations between the latent constructs and their indicators, as well as among the constructs themselves. FOMO exerts the strongest positive effect on YD (β = 0.381). Sales Promotions also positively affect YD (β = 0.284), and Social Media Use shows a comparable positive effect (β = 0.277). In turn, YD positively influences QĐ. Collectively, these findings underscore the central role of social-normative cues in shaping consumers' cognitions and purchase intentions.

Table 3.
Results of testing research hypotheses.

Relationship	Impact Factor (O)	Sample Mean (M)	Standard Deviation (STDEV)	t-Statistic	p-Value	Decision
Fear of Missing Out (FOMO) - Online Shopping Intention (YD)	0.318	0.382	0.045	8.567	0.000	Accept
Promotion Program (KM) - Online Shopping Intention (YD)	0.284	0.285	0.045	6.283	0.000	Accept
Social Networks (MXH) - Online Shopping Intention (YD)	0.227	0.279	0.043	6.470	0.000	Accept
Online shopping intention (YD) - Online shopping decision (QD)	0.383	0.384	0.053	7.199	0.000	Accept
Fear of Missing Out (FOMO) - Online Shopping Intention (YD) - Online Shopping Decision (QD)	0.146	0.146	0.026	5.612	0.000	Accept
Promotion program (KM) - Online shopping intention (YD) - Online shopping decision (QĐ)	0.109	0.110	0.024	5.612	0.000	Accept
Social Networks (MXH) - Online Shopping Intention (YD) - Online Shopping Decision (QĐ)	0.106	0.107	0.024	4.478	0.000	Accept

Based on the statistical analyses, the hypothesized relationships among the variables underlying online purchase decisions were supported.

FOMO → Online purchase intention (YD). The path is statistically significant ($t = 8.567$, $p < 0.001$), indicating that higher levels of Fear of Missing Out are associated with greater intention to purchase online. H1 is supported.

Sales promotions (KM) → Online purchase intention (YD). The path is statistically significant ($t = 4.576$, $p < 0.001$), indicating that stronger promotional incentives are associated with a higher intention to purchase online. H2 is supported.

If you are reporting the mediation to a decision:

KM → YD → Online purchase decision (QD). The indirect effect is significant ($t = 4.576$, $p < 0.001$), suggesting that promotions enhance purchase intention, which subsequently translates into a higher purchase decision.

Social media (MXH) → Online purchase intention (YD). The path is statistically significant ($t = 4.476$, $p < 0.001$), indicating that greater exposure to social media is associated with a higher intention to purchase online. In turn, intention contributes to the online purchase decision in the model. H3 is supported.

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Table 4.
R^2 and adjusted R^2.

	R^2	Adjusted R^2
Online purchase intention (YD)	0.725	0.719
Online purchase decision (QD)	0.598	0.589

R^2 quantifies the proportion of variance in an endogenous construct explained by its predictors in the model.

The model accounts for 72.5% of the variance in online purchase intention (YD) (R^2 = 0.725; adjusted R^2 = 0.719), indicating substantial explanatory power. For online purchase decision (QĐ), the model explains 59.8% of the variance (R^2 = 0.598; adjusted R^2 ≈ 0.597), which reflects moderate explanatory power. These results suggest that the antecedents jointly provide a strong explanation for intention and a solid, though comparatively lower, explanation for decision.

5. Discussion and Results

In the S–O–R framework and estimated via PLS-SEM (N = 300), the study demonstrates that three TikTok livestream stimuli, social media exposure (MXH), sales promotions (KM), and fear of missing out (FOMO), have positive and statistically significant effects on the organismic state, operationalized as online purchase intention (YD). In turn, YD leads to the behavioral response, online purchase decision (QD). All paths from FOMO, KM, and MXH to YD are positive and significant ($p < 0.001$), with FOMO exhibiting the largest effect, followed by KM and MXH. The YD → QD path is likewise significant ($p < 0.001$), establishing the mediating role of intention in translating these stimuli into purchase decisions within the TikTok livestream context. The model explains a substantial share of variance in intention ($R^2 \approx 0.725$) and a moderate share in decision ($R^2 \approx 0.598$), indicating strong explanatory power while leaving scope for additional determinants beyond the model.

The findings are consistent with the core propositions of the S–O–R framework: (i) TikTok stimuli, salient visuals and audio, "flash deals," and community comments heighten viewers' action-readiness, i.e., purchase intention (YD); and (ii) once intention crosses a threshold, purchasing tends to occur rapidly, often impulsively. Notably, the prominent role of FOMO indicates that time pressure and fear of missing the trend function as powerful affective drivers in a short-form, scarcity-cued environment where limited-quantity messages and countdown timers are pervasive. In other words, FOMO is not merely a generic social-media phenomenon but a psychological lever that aligns closely with livestream mechanics, immediacy, crowd interaction, and the amplification of social signals via real-time views, likes, and comments.

Beyond FOMO, sales promotions (KM) exhibit a significant positive effect on purchase intention (YD). This finding corroborates the role of price-based incentives and scarcity tactics in compressing the consideration cycle, particularly for students with constrained budgets. However, promotion effectiveness is contingent on transparency and procedural simplicity: complex eligibility rules, unexpected shipping surcharges, or extended delivery times introduce friction that can attenuate the impact on intention. In the present study, the positive and significant coefficient for KM suggests that the observed offers met a practical threshold of clarity and ease of redemption, thereby translating into higher purchase intention.

Social media (MXH) → Purchase intention (YD). The positive effect of social media underscores the role of digital social capital among Gen Z. Continuous exposure to user-generated content, KOL reviews, and social proof (e.g., comments and visible counts of successful orders) enhances perceived credibility and reduces perceived risk, thereby elevating intention. Nevertheless, the smaller coefficient for social media relative to FOMO and sales promotions (KM) indicates that virality or popularity alone is insufficient to trigger strong intention without higher-intensity stimuli. This pattern suggests that social media provides the enabling context, whereas the decisive push typically comes from affective drivers (FOMO) and salient economic incentives (promotions).

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Mediation and explanatory power. Mediation tests show that FOMO, sales promotions (KM), and social media (MXH) each exert significant indirect effects on online purchase decision (QD) via purchase intention (YD) (bootstrapped $p < 0.001$). These results reinforce the view of intention as the proximal lever of behavior, consistent with TikTok's practice logic: viewers move from affective/cognitive arousal to a concrete intention and then close the purchase within the same session.

With $R^2\_QD = 0.598$, the model exhibits moderate explanatory power for decision, implying that, beyond intention, moment-of-purchase triggers likely play a role. Potential candidates include the availability of payment methods, final shipping charges, and delivery expectations, livestream connection quality, and perceived seller trustworthiness. Future studies may incorporate these factors as controls or boundary conditions (moderators) to capture variance that remains outside the present model.

Measurement reliability and validity. All reflective scales exhibit adequate internal consistency (Cronbach's α and composite reliability > 0.70), convergent validity (AVE > 0.50), and discriminant validity (Fornell–Larcker and HTMT criteria satisfied). Collinearity diagnostics show no serious multicollinearity (all VIFs < 3). Taken together, these conditions indicate that the structural results reflect substantive conceptual relationships rather than measurement artifacts. We employed bootstrapping with 5,000 resamples to derive stable standard errors and confidence intervals, which is especially important for assessing the significance of indirect (mediated) effects.

Positioning within prior research. Situated against the extant literature, the finding that FOMO exerts the strongest effect on purchase intention (YD) sharpens our understanding of affective motives under TikTok's distinctive conditions of real-time information and co-present community during livestreams. Earlier studies have reported mixed FOMO effects, likely due to platform affordance differences. By focusing on Vietnamese undergraduates in Northern universities, this study adds context-specific evidence that FOMO becomes particularly salient when users face dynamic scarcity cues (e.g., limited quantities, countdowns) in tandem with online resonance effects (real-time views, likes, comments).

At the same time, the results reaffirm the enduring role of sales promotions (KM) in activating intention even amid potential "promotion fatigue." The implication is that offer design remains effective when it optimizes timeliness, clarity, and perceived fairness (e.g., straightforward eligibility, transparent shipping, credible delivery windows). Together, these insights refine theory by linking affect-laden triggers and incentive structures to intention formation in short-form livestream commerce.

Theoretical implications. A key implication is the need to integrate social-affective variables alongside economic stimuli within a unified S–O–R framework when examining behavior on short-form video platforms. Moreover, purchase intention (YD) remains a pivotal though not exclusive mediator; the R^2 for purchase decision (QD) indicates the presence of point-of-purchase frictions. Accordingly, future models should expand to include constructs such as perceived risk, seller trustworthiness, livestream quality, payment experience, and perceived social presence.

For firms and livestream sellers on TikTok, four tactics should be combined to translate intention into purchase:

Truthful scarcity messaging. Use verifiable, time-bounded scarcity (e.g., real inventory counters, countdowns tied to actual stock) to avoid reactance and sustain trust.

Simple, transparent promotions. Design offers with plain eligibility rules and fully displayed total costs (item price + shipping/fees) to minimize cognitive friction.

Authentic social proof. Elevate credible signals UGC from real buyers, verifiable KOL reviews, and moderated comment highlights to reduce perceived risk.

Optimized conversion flow. Streamline checkout (one-tap pay, prefilled fields, multiple payment options), clarify delivery expectations, and surface shipping incentives at the point of decision.

For the student segment, the "golden moment" to convert intention (YD) into decision (QD) typically occurs when FOMO peaks and the offer is unambiguous. Accordingly, employ: viewer-

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threshold coupon drops, countdown-linked mini-games, and pinned testimonials from verified buyers to create synchronized emotional (FOMO) and economic (promotion) triggers within the same session.

This study has several limitations. First, the sample comprises undergraduate students from universities in Northern Vietnam; thus, external validity to other consumer segments and regions is limited. Second, the cross-sectional, self-reported design may be susceptible to common method bias and cannot capture the real-time dynamics of the YD → QD transition during livestreams. Third, the model omits potentially important determinants such as KOL/source credibility, product attributes, and transactional infrastructure quality, which may introduce omitted-variable bias. Finally, we did not examine moderating effects (e.g., TikTok usage frequency, session duration, gender, monthly spending).

Future research should: (i) broaden sampling frames beyond students and across regions; (ii) employ longitudinal, experimental, or clickstream and field data to observe within-session intention–decision trajectories; (iii) incorporate additional constructs (e.g., KOL credibility, product category characteristics, payment/logistics quality), and test moderators via MGA/interaction terms; and (iv) strengthen design against CMB (temporal/proximal separation, marker variables) and address endogeneity (e.g., Gaussian copula, 2SLS-PLS).

Future work may: (i) employ longitudinal or experimental designs to strengthen causal inference; (ii) perform multi-group analyses (e.g., PLS-MGA) by gender, TikTok usage frequency, or prior online-shopping experience to detect behavioral heterogeneity; (iii) incorporate the aforementioned moderators; and (iv) leverage observed behavioral data (e.g., clickstream/transaction logs) to mitigate self-report bias. Broadening the sampling frame to young workers and other regions will help assess the model's external validity and generalizability.

Conclusion. In the TikTok livestream context, the evidence shows that FOMO, sales promotions, and social media influence jointly elevate online purchase intention, and intention is the proximal conduit that translates these stimuli into purchase decisions. FOMO emerges as a platform-specific affective trigger characteristic of livestream immediacy, while promotions act as a cost-friction lubricant that lowers perceived sacrifice; social media provides the contextual scaffold and social proof that reduce perceived risk. Integrating these levers with a seamless conversion experience (transparent offers, credible scarcity cues, and low-friction checkout) is key to converting intention into purchase among Vietnamese students on short-form video platforms.

6. Conclusion

The findings confirm that in the era of pervasive social media, particularly on TikTok, the online purchasing behavior of university students in Northern Vietnam is significantly shaped by Fear of Missing Out (FOMO), social media influence (MXH), and sales promotions (KM). Framed within the S–O–R paradigm and estimated via PLS-SEM, the model shows that these socio-psychological stimuli exert positive, statistically significant effects on purchase intention (YD), while intention functions as a strong mediator that translates external stimuli into online purchase decisions (QD).

Specifically, FOMO emerges as the most influential antecedent of purchase intention (YD), reflecting a prevalent psychology among young consumers in digital environments where "trends" and "co-present community experiences" function as social value cues. Exposure to urgency-laden content limited time and quantity, combined with direct social signals (e.g., live view counts, comment streams, visible orders), powerfully activates fear of missing out, thereby increasing susceptibility to rapid, sometimes impulsive, purchasing. This pattern is consistent with recent international evidence, suggesting that FOMO is not merely a generic social-media correlate but a robust predictor of online consumer behavior under real-time conditions.

Social media (MXH) → Purchase intention (YD). The results indicate a positive, albeit smaller, effect of social media relative to FOMO and sales promotions (KM). Social media functions as an enabling substrate by cultivating trust and social proof through user-generated content, ratings/reviews, and comment streams. When students observe peers, KOLs, or online communities sharing and purchasing the same products, they perceive behavioral legitimization as a core mechanism

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of the subjective norm in behavioral models, thereby elevating purchase intention (YD) even if the immediate "push" arises more strongly from affective triggers (FOMO) and economic incentives (KM).

Purchase intention (YD) → Purchase decision (QD). The relationship is strong and highly significant ($p < 0.001$), reinforcing the proposition that in interactive, short-form video environments like TikTok, intention can rapidly crystallize into actual behavior within the same viewing session. This finding affirms the suitability of the S–O–R framework and highlights the value of treating purchase intention as the proximal behavioral mediator in studies of digital consumption.

Synthesis. Taken together, the findings indicate that FOMO is the dominant affective stimulus, social media is the key source of social influence, and sales promotions are the direct economic lever that reduces decision frictions. These forces interact to form an "activation triangle" that accelerates the transition from intention to decision, producing faster, more affect-laden purchases while remaining grounded in students' motives to affiliate socially and capitalize on perceived opportunities.

This study has several limitations. The sample comprises only undergraduates from Northern Vietnam, which restricts generalizability to other regions and non-student populations. The cross-sectional design weakens causal inference. In addition, important factors such as KOL/source credibility, livestream quality, and perceived risk were not incorporated, which may limit the explained variance of purchase decision (QD). Future research should broaden the sampling frame, employ longitudinal or experimental designs, and include relevant moderators/controls to further refine the behavioral model in the TikTok environment.

Managerial implications. The findings provide actionable guidance for e-commerce firms and TikTok retailers to optimize marketing strategies. First, leverage FOMO ethically and transparently: time-limited and "only X items left" messages must be grounded in verifiable inventory and real-time data; avoid artificial scarcity, which undermines trust among young consumers. Second, disclose promotions clearly and display the all-in ("final") price prior to checkout (including shipping and fees) to reduce decisional hesitation and facilitate conversion.

Second, strengthen social proof. Authentic, purchase-verified reviews, comments from real buyers, and highly interactive livestreams reinforce trust. Collaborations with KOLs/micro-influencers whose personas align with student lifestyles increase message relevance and improve reach within this segment.

Third, optimize the conversion flow. Streamline checkout by reducing steps, integrating widely used digital wallets, and offering expedited delivery options. A smooth, interruption-free experience lowers friction and accelerates the translation of purchase intention into actual purchase within the same TikTok viewing session.

Finally, institutionalize continuous monitoring. Key funnel metrics such as add-to-cart rate, checkout completion rate, and the average latency between purchase intention (YD) and purchase decision (QD) should be tracked on an ongoing basis. Leveraging these data, firms can conduct A/B experiments to optimize FOMO message framing, promotion type, and livestream scheduling, thereby identifying statistically superior variants and improving conversion performance.

TikTok should develop transparent FOMO-support tools alongside consumer-protection features, such as displaying verified real-time inventory levels, flagging suspected artificial scarcity, and assigning "verified offer" badges. In addition, the platform should standardize its review system and curb comment spam, leveraging AI to detect and filter fabricated reviews so as to safeguard the credibility of social proof.

In addition, TikTok could collaborate with banks and digital-wallet providers to implement secure and flexible payment programs, particularly tailored to students. Public disclosure of open data metrics (e.g., verified view counts, authentic engagement rates) would further strengthen trust and enhance transparency across the social-commerce ecosystem.

The findings suggest that key opinion leaders (KOLs) should balance persuasive appeal with authenticity. Content should be structured in three parts: (1) capture attention with credible scarcity cues or promotions; (2) provide transparent, verifiable product information; and (3) conclude with a clear

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call to action. Disclosure of sponsorship relationships and avoidance of exaggerated claims are essential to sustain long-term credibility and viewer trust.

In addition, KOLs should deploy salient social signals such as pinning comments from verified buyers, sharing personal post-use experiences, and running real-time mini-games that distribute discount codes to foster two-way interaction and reduce psychological distance from viewers.

Regulatory authorities should develop a social-commerce governance framework that ensures information transparency, advertising oversight, and protection of young consumers' rights. For universities, integrating digital consumption literacy and risk-recognition skills into coursework and co-curricular activities can foster responsible purchasing behavior and reduce students' vulnerability to FOMO and deceptive promotions.

Overall, the findings suggest that an effective TikTok marketing strategy should integrate three pillars:

(1) Affective (FOMO) — create calibrated urgency;
(2) Social (MXH) — build trust through credible, community-based social proof;
(3) Economic (KM) — deliver genuine value via transparent promotions.

When orchestrated within a short, seamless, and transparent purchase journey, these levers can maximize conversion while preserving trust among young consumers. We anticipate that the foregoing findings and implications not only advance scholarly understanding of consumer behavior on short-form video platforms but also offer actionable value for firms, platforms, and educators amid the rapid expansion of Vietnam's social-commerce ecosystem.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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