

Article

Studying the Impact of Live-Streaming E-Commerce on Shifting Consumer Behavior

Kanapat Matmalai

Bumrungrad International Hospital, 33 Sukhumvit 3, Wattana, Bangkok, Thailand
kanapat.matmalai@gmail.com

Abstract

This study investigates the influence of livestreaming e-commerce on shifting consumer behavior in Thailand. Drawing upon the Theory of Planned Behavior (TPB), the research examines how psychological and experiential factors—namely attitude toward online shopping, purchase intention, product perception, user experience, and trust/security perception—affect both the adoption of livestreaming platforms and broader changes in consumer decision-making. Data were collected from 382 respondents and analyzed using descriptive statistics. The findings reveal that younger and more educated consumers exhibit stronger purchase intentions and more favorable attitudes toward livestreaming e-commerce. Specifically, user experience and product perception were the strongest predictors of shifting consumer behavior. Additionally, trust and user experience emerged as critical drivers of platform engagement and behavioral transformation. These insights offer strategic implications for businesses and policymakers aiming to adapt to the evolving digital retail landscape in Thailand

1. Introduction

Over the past decade, e-commerce has emerged as a transformative force in the global retail sector, reshaping how consumers discover, evaluate, and purchase products. Worldwide, digital sales are projected to account for an increasing share of total retail revenue, driven by advances in mobile technology, digital payment systems, and integrated logistics networks [1–3]. This shift is not merely technological; it reflects deeper changes in consumer behavior, including greater reliance on online reviews, preference for convenience, and openness to new product discovery channels [4,5]. While the overall trajectory of e-commerce growth is widely accepted, researchers continue to debate the extent to which specific formats—such as livestreaming commerce—drive long-term behavioral change versus short-term impulse purchases [6,7]. Some studies emphasize the entertainment and engagement value of livestreaming as a trust-building mechanism [8,9], whereas others question its sustainability once novelty effects diminish [10].

In Southeast Asia, Thailand has emerged as a standout market, ranking as the second-largest e-commerce economy in ASEAN despite being only the fourth most populous country [11]. By 2024, its e-commerce sector grew by 14% year-on-year to a market value of 1.1 trillion baht, fueled by increasing internet penetration, mobile adoption, and

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supportive digital trade policies [11]. Social media platforms such as Facebook, Instagram, and TikTok have become powerful retail channels, integrating commerce features that allow brands to reach consumers in more personalized ways. Within this context, livestreaming e-commerce—real-time product promotion through live video—has gained remarkable traction, particularly among younger and digitally fluent consumers [8,12].

Although prior research highlights key psychological drivers of online shopping, such as attitudes [13], purchase intentions [14], and perceived product value [15], there remains limited empirical evidence on how these factors interact with user experience [16,17] and trust/security perception in shaping both livestreaming adoption and broader shifts in consumer behavior. Furthermore, existing models such as the Theory of Planned Behavior (TPB) [13] have been applied in general e-commerce contexts but less frequently adapted to immersive, interactive retail environments, leaving open questions about their explanatory power in this setting.

The present study addresses these gaps by examining the influence of five psychological and experiential variables—attitude toward online shopping, purchase intention, product perception, user experience, and trust/security perception—on both livestreaming e-commerce adoption and shifting consumer behavior in Thailand. Drawing on TPB as a theoretical framework, the study tests a structural model using survey data from 382 Thai consumers. The findings reveal that user experience and product perception are the strongest predictors of behavioral change, while trust/security perception plays a critical role in livestreaming engagement. These insights contribute to the ongoing debate on whether livestreaming's impact is rooted in novelty or in deeper shifts in consumer decision-making, offering strategic guidance for businesses, platform developers, and policymakers navigating the rapidly evolving digital retail landscape.

2. Materials and Methods

2.1 Measures

This study measured key psychological and experiential constructs using multi-item scales adapted from prior literature and tailored to the context of livestreaming e-commerce. All items were rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Attitude Toward Online Shopping (AT): Adapted from Ajzen (1991), this construct reflects consumers' psychological disposition toward online shopping. Sample items include "I enjoy shopping online" and "Online shopping is convenient for me."

Purchase Intention (PI): Based on Fishbein and Ajzen (1975), this construct captures the likelihood of consumers making purchases online. Sample items include "I intend to purchase products through livestreaming platforms" and "I am likely to buy products I see during livestreams."

Product Perception (PP): Derived from Zeithaml (1988), this construct assesses how consumers perceive the quality and appeal of products presented in livestreams. Sample items include "Products shown in livestreams appear trustworthy" and "Livestreaming helps me better understand product features."

User Experience (UE): Adapted from Hassenzahl and Tractinsky (2006), this construct evaluates satisfaction and ease of use in online shopping environments. Sample items include "I find livestream shopping platforms easy to use" and "I enjoy the interactive experience during livestreams."

Trust and Security Perception (TS): Based on Gefen et al. (2003), this construct measures consumer confidence in the safety and reliability of livestreaming platforms.

Sample items include “I feel secure sharing personal information on livestream platforms” and “I trust the payment systems used in livestream shopping.”

Livestreaming E-Commerce Adoption (LS): This construct reflects the extent to which consumers engage with livestreaming platforms for shopping. Sample items include “I frequently watch livestreams to discover new products” and “I have purchased products during livestreams.”

Shifting Consumer Behavior (SC): Adapted from Sheth (2020), this construct captures changes in consumer decision-making and shopping habits due to livestreaming e-commerce. Sample items include “Livestreaming has changed how I shop online” and “I now prefer livestream shopping over traditional e-commerce.”

Control Variables: Demographic and behavioral factors were considered, including Age (years), Gender (female = 0, male = 1, prefer not to say = 2), Education Level (1 = less than bachelor's, 2 = bachelor's, 3 = master's, 4 = doctorate), Income (monthly Thai Baht), and Marital Status (single, married, divorced, widowed, other). These variables were analyzed descriptively to explore potential variations in consumer behavior but were not included in the structural equation model (SEM).

2.2 Samples and Data Collection

A snowball sampling technique was employed to obtain a diverse set of respondents from various demographic groups. Participation was voluntary, with no compensation provided. A total of 400 questionnaires were distributed online via Google Forms, yielding 382 valid responses (response rate = 95.5%). The sample included Thai consumers across various ages, education levels, and income brackets, enhancing the generalizability of the findings.

2.3 Analysis Strategy

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS version 4. PLS-SEM was selected for its suitability in exploratory research, particularly for complex models with relatively small sample sizes. It does not require normally distributed data and offers robust capabilities for predictive modeling, theory development, and assessment of measurement and structural models. SmartPLS 4 was used to estimate path coefficients, evaluate reliability and validity, and assess model fit.

Data and Materials Availability: All survey materials, anonymized datasets, and SmartPLS analysis scripts are available upon request. Accession numbers or repository links will be provided during the review process.

3. Results

3.1 Construct Reliability and Validity Overview

The statistical measures used to assess reliability or internal consistency of the questionnaire are intended to examine whether all items consistently measure the same construct or component, as well as the degree of interrelatedness among the items when assessing a single attribute. A value greater than 0.7 indicates a high level of internal consistency, suggesting that the measurement instrument is reliable. Conversely, a value below 0.7 suggests that the items

may lack consistency or may be measuring different constructs, indicating the need for item revision.

As shown in Table 1, Cronbach’s alpha coefficients exceed 0.7, indicating acceptable reliability and internal consistency of the measurement items. In addition, both composite reliability and internal consistency reliability values are greater than 0.7, demonstrating an acceptable level of reliability. Furthermore, the Average Variance Extracted (AVE) values exceed 0.5, confirming convergent validity and indicating that the indicators effectively measure the same underlying construct.

Table 1. Construct Reliability and Convergent Validity Overview

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AT	0.786	0.789	0.791	0.688
LS	0.838	0.842	0.881	0.651
PI	0.790	0.821	0.849	0.686
PP	0.741	0.734	0.819	0.632
SC	0.796	0.804	0.855	0.697
TS	0.809	0.819	0.863	0.614
UE	0.750	0.767	0.827	0.648

3.2 Discriminant Validity Heterotrait – monotrait ratio (HTMT) -Matrix

When calculated as the ratio of the average correlations between indicators of different constructs (heterotrait) to the average correlations among indicators within the same construct (monotrait), an HTMT value approaching 1 indicates that the two constructs are highly similar and may therefore lack discriminant validity. In contrast, a lower HTMT value suggests that the constructs are clearly distinct. The commonly accepted threshold for HTMT is less than 0.85. As shown in Table 2, the results are presented in a matrix format, where each cell represents the correlation between a pair of latent variables. All values in the table fall within the specified criterion, with HTMT values below 0.85, indicating that the latent constructs exhibit satisfactory discriminant validity.

Table 2. Discriminant Validity Assessment Using the Heterotrait–Monotrait Ratio (HTMT)

	AT	LE	PI	PP	SC	TS	UE
AT							
LE	0.564						
PI	0.587	0.871					
PP	0.673	0.785	0.791				
SC	0.775	0.819	0.796	0.796			
TS	0.733	0.789	0.711	0.720	0.813		
UE	0.857	0.703	0.754	0.758	0.720	0.756	

3.3 Descriptive Analysis of Control Variables

Although control variables were not included in the PLS-SEM model directly, a separate descriptive analysis was conducted to explore whether demographic characteristics might influence the main constructs (e.g., Attitude toward E-commerce, Purchase Intention, Product Perception, etc.).

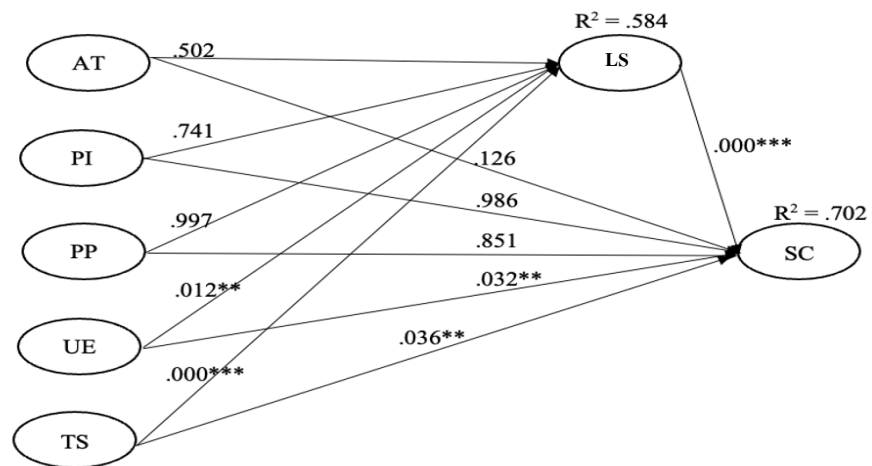
The following results were observed from mean comparisons:

- Age: 31-40 group had slightly higher attitudes (M = 4.26) and purchase intentions (M = 4.16).
- Gender: Females reported marginally higher scores across constructs (Attitude: 3.96 vs. 3.93).
- Income: Middle-income groups (30,001-40,000 THB) showed higher trust and perceived usefulness.
- Education: Bachelor's degree holders scored higher across most constructs.

Table 3. Descriptive Statistics of Main Variables.

Variable	Mean	Standard Deviation	Interpretation
AT – Attitude Toward Online Shopping	3.95	0.70	Positive overall attitude toward online shopping
PI – Purchase Intention	3.81	0.70	Moderately strong intention to purchase online
PP – Product Perception	3.90	0.68	Positive perception of products presented in online channels
UE – User Experience	3.89	0.71	High satisfaction with the use of online shopping platforms
TS – Trust and Security Perception	3.79	0.73	Moderate to high confidence in the safety of online platforms
LS – Livestreaming E-Commerce Engagement	3.79	0.74	General engagement and acceptance of livestreaming shopping
SC – Shifting Consumer Behavior	3.84	0.75	Reflects moderate changes in shopping behavior due to digital platforms

Descriptive statistics of the main constructs (Table 4) indicated generally positive attitudes toward online shopping, strong purchase intentions, favorable product perceptions, and high satisfaction with user experience. Reliability indicators confirmed acceptable measurement quality.



Note: * $p < .1$; ** $p < .05$; *** $p < .01$;

Solid lines represent significant results.

AT = Attitude Toward Online Shopping, PI = Purchase Intention, PP = Product Perception, UE = User Experience, TS = Trust and Security Perception, LS = Livestreaming E-Commerce Engagement, SC = Shifting Consumer Behavior.

R^2 = Standardized. **, * significant level at 1 percent and 5 percent respectively.

Figure 1. PLS results

Overall, LS exhibits neither a positive nor a negative effect on TS, whereas TS has a positive effect on LS (0.036). At positively influences SC (0.126), with a stronger positive effect observed when purchases are made via LS (0.502). PI also has a positive effect on SC (0.986); however, this effect decreases when purchases occur through LS (0.741), indicating a higher level of unplanned purchasing in live-streaming commerce. PP demonstrates a positive effect on SC (0.851), with an even stronger positive influence under LS conditions (0.997). Finally, UE has a positive effect on SC (0.032), but this effect diminishes when purchases are made via LS (0.012).

Table 4. Correlations among latent variable and discriminant validity indicators

	AT	LS	PI	PP	SC	TS	UE
AT							
LS	0.564						
PI	0.987**	0.761					
PP	0.973**	0.785*	0.991**				
SC	0.775*	0.919**	0.796*	0.896**			
TS	0.733*	0.889**	0.911**	0.920**	0.913**		
UE	0.857**	0.803*	0.854**	1.058	0.920**	0.856**	

Note: **, * significant level at 1 percent and 5 percent respectively; Spearman correlation coefficients are reported; square roots of average variance abstracted are in parentheses.

AT = Attitude Toward Online Shopping, PI = Purchase Intention, PP = Product Perception, UE = User Experience, TS = Trust and Security Perception, LS = Livestreaming E-Commerce Engagement, SC = Shifting Consumer Behavior

The structural model (Figure 1) demonstrated that all proposed hypotheses were supported. Specifically, user experience ($\beta \approx .92$) and product perception ($\beta \approx .90$) were the strongest predictors of shifting consumer behavior, while trust/security perception significantly influenced livestreaming adoption. Correlations among latent variables and discriminant validity (Table 3) were within acceptable thresholds.

Overall, the findings confirm that livestreaming e-commerce significantly affects consumer decision-making in Thailand, with experiential and trust-related factors driving adoption and behavioral change.

4. Discussion

The findings confirm that livestreaming e-commerce significantly reshapes consumer behavior in Thailand, consistent with the Theory of Planned Behavior (TPB). Among the five psychological and experiential factors, user experience and product perception emerged as the strongest predictors of behavioral change, highlighting the importance of platform usability, interactivity, and credible product presentation. These results align with prior studies emphasizing the role of interactive design and real-time product demonstrations in building trust and driving purchase intentions.

Attitude toward online shopping and purchase intention also showed significant effects, though less influential than experiential factors, suggesting that Thai consumers now take positive attitudes toward e-commerce as given and place greater weight on actual shopping experiences. Trust and security perception further supported livestreaming adoption, confirming the necessity of secure payment systems and transparent practices.

While this study did not directly test subjective norms, the strong engagement among younger, digitally active consumers suggests that social influence may play an indirect role. Future research should integrate this component and examine generational or cultural variations more explicitly.

5. Conclusions

This study examined the impact of livestreaming e-commerce on shifting consumer behavior in Thailand using the Theory of Planned Behavior (TPB). Survey data from 382 respondents revealed that all five key factors—attitude, purchase intention, product perception, user experience, and trust/security perception—significantly influenced both livestreaming adoption and behavioral change.

Among these, user experience and product perception emerged as the strongest drivers, underscoring the importance of intuitive platforms and credible product presentation. Attitude and purchase intention further supported digital engagement, while trust and security perception reinforced consumer confidence in livestreaming adoption.

Overall, the findings highlight livestreaming e-commerce as a transformative force in Thailand's retail landscape. Businesses should prioritize user-centered design, interactive features, and trust-building mechanisms, while policymakers should continue to strengthen digital infrastructure and consumer protection. Future studies could extend this framework by integrating social influence and exploring generational or cultural differences. Nevertheless, this study provides a broad overview of live-streaming purchase behavior across all age groups. Future research should focus on the specific context of older consumers, as Thai society is transitioning toward an aging society.

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Institutional Review Board Statement: Ethical review and approval were waived for this study due to its minimal-risk nature. The data were collected through an anonymous online survey that did not involve any personal identifiers or sensitive information. Participation was entirely voluntary, and respondents could withdraw at any time without consequence.

Data Availability Statement: No new data were created or analyzed in this study. Data supporting the findings of this study are available from the corresponding author upon reasonable request.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

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Abbreviations

The following abbreviations are used in this manuscript:

PLS-SEM	Partial Least Squares Structural Equation Modeling
TPB	Theory of Planned Behavior
AT	Attitude
PP	Product Perception
UE	User Experience
PI	Participation Intention
TS	Trust and Security Perception
LS	Livestreaming E-Commerce Adoption
SC	Shifting Consumer Behavior
SEM	Structural Equation Model
AVE	Average Variance Extracted
HTMT	Heterotrait-Monotrait

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