

Analysis Of The Influence Of E-Commerce Platform Types On Purchasing Behavior Through Live Shopping Features In Indonesia Using PLS-SEM

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Abstract — This study investigates the influence of various e-commerce platforms on consumers' purchasing behavior through live shopping features in Indonesia. Employing the Theory of Planned Behavior (TPB) and integrating variables such as trust and online live shopping experience, the study uses a quantitative approach with Multigroup Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze responses from 500 users of Shopee, Tokopedia, TikTok, and Lazada. Results indicate that platform differences significantly affect the Trust–Attitude pathway, particularly on Shopee and TikTok, while Attitude, Subjective Norm, and Perceived Behavioral Control consistently influence purchase intention across all platforms. Furthermore, Intention to Live Shopping strongly predicts actual purchasing behavior. The study highlights the necessity for e-commerce businesses to tailor live shopping strategies according to platform-specific characteristics and consumer profiles. These findings contribute both theoretically and practically to understanding digital consumer behavior in the evolving landscape of social commerce.

Keywords— Live Shopping, E-Commerce Platform, Purchase Intention, PLS-SEM, Consumer Behavior.

I. INTRODUCTION

The rapid development of information and communication technology has significantly transformed global business dynamics, including in Indonesia. As one of Southeast Asia's largest e-commerce markets, Indonesia reached a transaction value of USD 32 billion in 2020 [1]. This growth has been fueled by increased digital technology adoption, internet accessibility, and changing consumer preferences toward online shopping [2], [3].

Online shopping is now preferred over traditional methods due to convenience, time efficiency, and the availability of diverse products. One key innovation driving this shift is the emergence of live shopping, which blends real-time video streaming with direct purchase options, offering a more interactive and personalized shopping experience [4].

According to CNN Indonesia, 60% of users prefer live shopping over conventional e-commerce due to its interactive nature [5]. Consumers can engage with sellers in real-time,

ask questions, and view product demonstrations via streaming. This trend indicates a growing desire for engaging and trustworthy shopping environments. Shopee, Tokopedia, TikTok, and Lazada have become dominant platforms in this field [6], each offering unique features that may shape user intention differently.

Prior research has identified several factors influencing consumer behavior in live shopping, such as trust [7], user engagement [8], word of mouth [9], platform usability [10], and entertainment elements [11]. However, most studies have treated users as a homogeneous group, failing to consider the moderating role of the platform itself [10]. Thus, there is a research gap in understanding how platform-specific characteristics affect behavioral intention in live shopping contexts.

This study addresses that gap by adopting the Theory of Planned Behavior (TPB) [11], which posits that attitude, subjective norm, and perceived behavioral control this study analyzes data from 500 respondents who have used Shopee Live, Tokopedia Play, TikTok Shop, or LazLive.

The findings offer a novel perspective on live shopping behavior across platforms, contributing theoretically to TPB influence behavioral intention. Additionally, trust and online live shopping experience are integrated to reflect digital interactivity [10]. Using Multigroup Partial Least Squares Structural Equation Modeling (PLS-SEM),

applications in e-commerce and providing practical recommendations for optimizing platform-specific marketing strategies.

II. THEORITICAL REVIEW

A. Platform

A platform can be defined as a collaboration between hardware and software [12]. In this sense, a platform provides significant benefits as a supporting tool in operating a device system.

B. Live Shopping

Live shopping is an activity where sellers broadcast live to introduce their products, often demonstrating how to use

them [13]. This provides a more interactive and engaging shopping experience for consumers, who can directly view products in real time and interact with sellers.

C. Trust

Trust is a consumer's willingness to trust or rely on a brand despite the risks involved [14]. Consumer trust in e-commerce platforms is influenced by perceptions of transaction security, product quality, and seller reputation. High trust encourages repeat purchases and increases loyalty to the brand or platform.

D. Online Shopping Experience

The online shopping experience is a form of experience that someone experiences when they experience convenience and ease in conducting online transactions [15]. Online shopping experiences have a significant influence on future consumer purchasing behavior [16].

E. Purchase Intention

Purchase intention describes a consumer's desire or tendency to purchase a product in the future [17]. This interest develops through a process of understanding and considering the product offered, which then forms the impulse to make a purchase [17].

F. Theory of Planned Behavior

The Theory of Planned Behavior (TPB) provides a useful framework for understanding and analyzing human behavior, including consumer behavior in live shopping [18]. First introduced in 1992, the Theory of Planned Behavior (TPB) is a theory that develops the principles of the Theory of Reasoned Action (TRA) by Martin Fishbein and Icek Ajzen [19].

G. Online Shopping Behavior

Online purchasing behavior refers to the process by which consumers purchase products or services over the internet [20]. This process differs from physical purchases, particularly in the way consumers seek information about the products or services they need.

H. Platform Live Shopping

Online live shopping platforms are an innovation in e-commerce that combines live streaming with in-person product purchases through a digital platform. This concept allows sellers to promote products in real time and interact directly with consumers through chat or comments, creating a more interactive and personalized shopping experience.

III. METHODS

This study employed a quantitative research method using a Multigroup Partial Least Squares Structural Equation Modeling (PLS-SEM) approach to examine the influence of different e-commerce platforms Shopee, Tokopedia, TikTok, and Lazada on consumer purchase intention through live shopping features.

A. Research Model and Variables

The research model is developed based on the Theory of Planned Behavior (TPB) [1], consisting of three main constructs: Attitude (ATT), Subjective Norm (SN), and Perceived Behavioral Control (PBC). To strengthen the explanatory power of the model, two additional variables were integrated: Trust (T) and Online Live Shopping Experience (OLSE) [2]. The dependent variables are Intention to Live Shopping (ITLS) and Online Live Shopping

Behavior (OLSB). The conceptual framework of the study is shown in Figure 1.

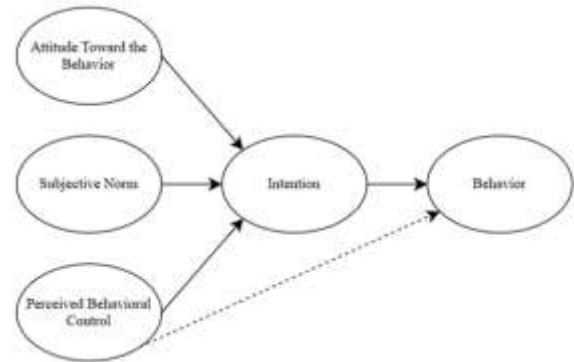


FIGURE 1
(CONCEPTUAL MODEL OF THE THEORY OF PLANNED BEHAVIOR)

B. Data Collection

The population of this study includes Indonesian consumers who have experience using live shopping features on Shopee, Tokopedia, TikTok, and Lazada. A non-probability purposive sampling method was employed. Data were collected using an online questionnaire distributed via Google Forms. A total of 500 valid responses were collected. All respondents had experience with at least one platform's live shopping feature.

C. Measurement and Instrument

All constructs were measured using a 5-point Likert scale, adapted from prior studies:

- Attitude, Subjective Norm, and Perceived Behavioral Control were adapted from Ajzen [1].
- Trust and Online Live Shopping Experience were adapted from Zami [2] and Fadila et al. [3].
- Intention and behavior constructs were adapted from previous behavioral research in e-commerce [4], [5].

Validity and reliability were assessed using outer loading, composite reliability (CR), and average variance extracted (AVE).

D. Research Procedure

The research was conducted through several systematic stages, starting from identifying the research gap and conducting a literature review to build the theoretical framework. Subsequently, a conceptual model was developed based on the Theory of Planned Behavior (TPB) and extended with trust and online live shopping experience variables. The next stage involved questionnaire development and data collection using purposive sampling of users from Shopee, Tokopedia, TikTok, and Lazada.

After data collection, the analysis was carried out using SmartPLS 4.0 to evaluate both the measurement model (outer model) and the structural model (inner model). Multigroup Analysis (MGA) was applied to examine differences across platform groups. Prior to hypothesis testing, data screening and assumption checking, such as normality and multicollinearity, were conducted to ensure the robustness of the results.

IV. RESULT AND DISCUSSION

A. RESPONDENT DATA COLLECTION

A total of 500 valid responses were obtained through an online questionnaire distributed via social media and messaging platforms. The target population was Generation Z users who had engaged in online live shopping through platforms such as Shopee, TikTok, Tokopedia, and Lazada. The demographic composition of the respondents is summarized in Table 1. Most respondents were female (54.0%) and aged between 18–24 years (88.7%), reflecting the dominance of Gen Z in Indonesia's live shopping market, consistent with trends reported by CNN Indonesia [21] and Katadata [22]. A majority of respondents were students (71.4%), indicating high technology exposure and social media usage. The most used platforms were Shopee (41.8%) and TikTok (30.0%), aligning with market reports from Aloshop [23].

| Characteristic | Category | Frequency | Corrected Percentage (%) |
|----------------|-------------|-----------|--------------------------|
| Gender | Male | 219 | 43.8% |
| | Female | 257 | 51.4% |
| Age | <18 years | 21 | 4.2% |
| | 18–24 years | 422 | 84.4% |
| | >24 years | 33 | 6.6% |
| Occupation | Student | 340 | 68.0% |
| | Private | 91 | 18.2% |
| | Employee | | |
| Platform Used | Others | 45 | 9.0% |
| | Shopee | 199 | 39.8% |
| | TikTok | 143 | 28.6% |
| | Tokopedia | 75 | 15.0% |
| | Lazada | 59 | 11.8% |

B. Measurement Model Evaluation (Outer Model)

To assess the reliability and validity of the constructs, the measurement model was evaluated using three main indicators: Composite Reliability (CR), Average Variance Extracted (AVE), and Indicator Loadings. All constructs in this study met the threshold values required for good measurement validity. Specifically:

- CR values for all constructs exceeded 0.7, indicating strong internal consistency.
- AVE values were all above 0.5, confirming convergent validity, meaning that each construct adequately explains the variance of its indicators.

This result ensures that each construct is measured reliably and validly, in accordance with the PLS-SEM framework and recommendations by Hair et al. (2021) and previous behavioral intention research [2], [11].

| Construct | CR | AVE | CR > 0.7 | AVE > 0.5 |
|----------------------|-------|-------|----------|-----------|
| Attitude (ATT) | 0.876 | 0.651 | Yes | Yes |
| Subjective Norm (SN) | 0.853 | 0.597 | Yes | Yes |
| PBC | 0.861 | 0.622 | Yes | Yes |
| Trust | 0.889 | 0.671 | Yes | Yes |
| OLSE | 0.872 | 0.640 | Yes | Yes |
| Intention | 0.901 | 0.755 | Yes | Yes |
| Behavior | 0.924 | 0.785 | Yes | Yes |

C. Structural Model Evaluation (Inner Model)

The structural model was evaluated using R² values and path coefficients (β) to assess how well the independent variables explain the variance in the dependent constructs.

- The R² for Intention to Live Shopping (ITLS) was 0.705, indicating that 70.5% of the variation in intention can be explained by attitude, subjective norm, perceived behavioral control, trust, and online live shopping experience.
- The R² for Online Live Shopping Behavior (OLSB) was 0.728, meaning that intention accounts for 72.8% of the variance in actual behavior.

These R² values fall into the “substantial” category and demonstrate that the model has strong predictive accuracy, as per Chin’s (1998) criteria.

| Endogenous Variable | R ² Value | Interpretation |
|--------------------------------------|----------------------|----------------|
| Intention to Live Shopping (ITLS) | 0.705 | Strong |
| Online Live Shopping Behavior (OLSB) | 0.728 | Strong |

D. Multigroup Analysis: Platform-Based Comparison

To assess whether the relationship between constructs differs across platforms, a Multigroup Analysis (MGA) was conducted comparing Shopee, TikTok, Tokopedia, and Lazada. The most notable result was the significant difference in the Trust → Attitude path.

| Platform | Path Coefficient (β) | Significance | Effect |
|-----------|----------------------|-----------------|----------------------|
| Shopee | 0.382 | Significant | Positive effect |
| TikTok | -0.154 | Significant | Negative effect |
| Tokopedia | 0.108 | Not Significant | Weak positive effect |
| Lazada | 0.096 | Not Significant | Weak positive effect |

E. STRUCTURAL MODEL IMPACT ANALYSIS

This subsection presents the direct effects between variables as measured in the structural model. Path coefficients and significance values were used to test the hypotheses.

| Hypothesis | Path | β | P-value | Result |
|---------------------------------|---------------|-------|---------|----------------------|
| H1: Attitude → Intention | Supported | 0.267 | 0.000 | Significant |
| H2: Subjective Norm → Intention | Supported | 0.189 | 0.000 | Significant |
| H3: PBC → Intention | Supported | 0.186 | 0.000 | Significant |
| H4: Trust → Attitude | Supported | 0.255 | 0.000 | Significant |
| H5: OLSE → Attitude | Not Supported | 0.040 | 0.074 | Not Significant |
| H6: Intention → Behavior | Supported | 0.732 | 0.000 | Strongly Significant |

F. MANAGERIAL IMPLICATIONS

Based on the findings above, several actionable insights can be drawn for platform managers, brand marketers, and live shopping strategists:

1. Invest in Trust-Building Mechanisms

Platforms like TikTok should strengthen seller verification, provide transparent return policies, and promote host credibility to improve consumer trust. As shown, trust significantly influences attitudes and varies by platform.

2. Leverage Social Influence Among Gen Z

Since subjective norms strongly influence intention, campaigns should involve community endorsement, peer reviews, and influencer partnerships to enhance perceived social validation [12], [16].

3. Focus on Attitude Formation

The significant impact of attitude suggests that marketing content must appeal to values, preferences, and shopping motivations. Educational, informative, and visually engaging live sessions can drive positive perceptions.

4. Rethink Live Shopping Experience Strategy

The non-significance of OLSE \rightarrow Attitude implies that frequency of exposure is not enough—quality of content, relevance of product, and interactive engagement are crucial to shaping perceptions [20], [19].

5. Platform-Specific Strategy is Key

Managers must understand that each platform has unique trust dynamics. Shopee can capitalize on its transactional credibility, while TikTok must work harder to convert attention into intention.

V. CONCLUSION

This study explored the key factors influencing Gen Z's purchase intention and behavior through live shopping platforms in Indonesia. Using the Theory of Planned Behavior (TPB) enriched with the variables Trust and Online Live Shopping Experience (OLSE), the study confirmed that Attitude, Subjective Norm, Perceived Behavioral Control, and Trust significantly affect Intention to Live Shopping, which in turn strongly influences Online Live Shopping Behavior (OLSB). The Intention \rightarrow Behavior path showed the strongest effect, indicating that behavioral intention is a strong predictor of actual purchase behavior.

The Multigroup Analysis revealed significant differences in the Trust \rightarrow Attitude relationship across platforms. Shopee showed a positive and significant influence of trust on attitude, while TikTok showed a significant but negative effect. Tokopedia and Lazada showed no significant effect of trust on attitude. These findings highlight that Trust is a platform-sensitive factor, influenced by platform credibility and features.

Interestingly, Online Live Shopping Experience (OLSE) did not significantly affect Attitude on any platform, suggesting that experience alone is not enough to build positive perception—unless supported by trust and consistent quality. This underlines the importance of integrating trust-building efforts in platform design and live shopping strategies.

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