

The Impact of Knowledge Transmission Quality in Tourism Live Streaming E-commerce on Consumers' Purchase Intentions in Hainan Province, China

Lingyu LI¹, Nontavat Siangchokyoo², and Thaunjai Sangthong³

Receive January 31, 2026; Retrieved June 19, 2026; Accepted June 20, 2026

Abstract

This research article aims to examine the key factors influencing consumers' purchase intentions and to construct a conceptual model of live streaming e-commerce within the tourism industry of Hainan Province, using a quantitative research design. Using convenience sampling, 450 valid responses were obtained from consumers in Hainan Province who had engaged with tourism-related live streaming e-commerce for at least six months. Data were analyzed using structural equation modeling. The findings indicate that: 1) Knowledge transmission quality has a significant direct positive effect on purchase intentions, with beta equal to 0.145. Consumer perception has a significant direct positive effect, with beta equal to 0.416. Live streamer professionalism has a significant direct positive effect, with beta equal to 0.336. Consumer perception fully mediates the relationship between knowledge transmission quality and purchase intentions, with an indirect effect equal to 0.270 and a 95 percent confidence interval from 0.218 to 0.325. Live streamer professionalism also fully mediates this relationship, with an indirect effect equal to 0.222 and a 95 percent confidence interval from 0.169 to 0.278. Among the sub-dimensions, completeness, perceived trust, and professional knowledge are the most influential. 2) A conceptual model of live-streaming e-commerce and purchase intentions is proposed. Extending the Stimulus Organism Response framework, known as SOR, the model positions knowledge transmission quality as the stimulus, consumer perception and live streamer professionalism as organism mechanisms, and purchase intentions as the response. The model enriches theory and provides managerial guidance for strengthening engagement strategies in Hainan's tourism live commerce sector.

Keywords: Knowledge Transmission Quality, Consumers' Purchase Intentions, Live Streaming E-commerce, Live Streamer Professionalism, Consumer Perception

¹Doctor student in Doctor of Philosophy (Business Administration) Program, Rattana Bundit University

^{2, 3}Lecturer of Doctor of Philosophy (Business Administration), Rattana Bundit University

E-mail: nsian001@gmail.com



Introduction

Tourism live streaming e-commerce has rapidly evolved from a promotional channel into a transaction-driven marketplace, reshaping how consumers evaluate destinations, cultural products, and duty-free goods in real time. This shift is especially visible in China, where live streaming has become embedded in everyday digital consumption. By December 2025, China's online live streaming users reached 833 million, accounting for 75.2% of total internet users, indicating that live streaming is no longer a niche format but a mainstream infrastructure for information search and purchasing behavior (China Internet Network Information Center (CNNIC), 2025). Alongside scale, the strategic importance of live streaming is increasingly defined by its ability to convert complex information into purchase-ready decisions, particularly in sectors where consumers face high uncertainty, time sensitivity, and policy constraints.

Hainan Province provides a high-stakes tourism setting where the quality of information delivery matters as much as the attractiveness of the product. Hainan's tourism live streaming e-commerce has become a core driver of its digital economy: 2024 data shows it contributes 38% of the province's duty-free sales, 12 percentage points higher than general e-commerce, with transaction volume growing 42% year-on-year (Hainan Provincial Bureau of Statistics, 2025; China E-Commerce Research Center, 2025). Unlike general product categories, tourism live streaming in Hainan often requires consumers to process layered knowledge during the live stream, such as duty-free policy details, inventory and discount timing, and cultural interpretation linked to Li-Miao heritage. These tourism-specific knowledge requirements create a decision environment in which the effectiveness of knowledge delivery is not simply a matter of content availability, but a matter of communication skill and professional execution.

However, the existing literature has not sufficiently addressed this tourism-specific knowledge problem. First, many studies remain concentrated on general e-commerce contexts such as apparel or agricultural products and thus understate the information intensity of tourism live streaming, particularly policy timeliness and cultural interpretation (Liu, L. 2024). Second, prior mechanisms are often simplified by focusing on a single psychological route, with limited attention to how information becomes intention through multiple internal processes. For example, Xu, X. L. (2024) examined perceived value, while Fan, M., Tian, J., & Li, Y. (2023) emphasized trust, but few studies integrate consumer perception and live streamer professionalism as dual mediators, leaving the "information-transformation" pathway theoretically underdeveloped. Third, much of the discussion in prior work implicitly centers on consumers' platform use and response to live streaming features, whereas the operational challenge for tourism conversion hinges on skill-based factors: the skill of



transmitting tourism knowledge with high quality, and the skill signals embedded in perceived streamer professionalism.

To address these gaps, this study focuses on Hainan's tourism live streaming e-commerce and examines the central question: how does knowledge transmission quality influence consumers' purchase intentions through the dual mediation of consumer perception and live streamer professionalism, and which sub-dimensions dominate this process. Building on the research team's prior SEM-based analysis of tourism e-commerce trust and the identification of live streamer professionalism as an understudied variable, this study responds directly to the need for a framework that goes beyond "use" explanations and clarifies "skill-based" conversion mechanisms. The intended beneficiaries include academics seeking cross-regional tests of the proposed framework, Hainan's live streaming operators and streamers seeking actionable guidance for optimizing knowledge transmission quality, and policymakers supporting digital tourism governance aligned with the "International Tourism Consumption Center" strategy (Hainan Provincial Government, 2025). The novelty of this study lies in its tourism-specific operationalization of knowledge transmission quality and its proposed dual-mediation model that explains how knowledge-delivery skill is transformed into purchase intention through consumer perception and live streamer professionalism.

Objectives

1. To examine the key factors influencing consumers' purchase intentions in the context of live streaming e-commerce within Hainan Province's tourism industry.
2. To construct a conceptual model of consumer purchase intentions in live streaming e-commerce within Hainan Province's tourism industry.

Review of literature and ideas

This study extends the Stimulus–Organism–Response framework to tourism live streaming e-commerce in Hainan Province (Pan, J., Li, D., & Wang, S., 2024). Knowledge transmission quality is conceptualized as the stimulus, consumer perception and live streamer professionalism as organism states, and consumers' purchase intentions as the response. Research hypotheses are developed as follows:

1. Knowledge transmission quality and consumers' purchase intentions

From a knowledge management perspective, the effectiveness of knowledge creation and transfer determines whether audiences can convert information into actionable decisions, which is central to Nonaka, I. (1994). In tourism live streaming, consumers often require layered knowledge such as duty-free shopping rules, destination culture, and product attributes, so purchase intentions are more likely when knowledge is transmitted with high quality rather than fragmented information. Accordingly, this study conceptualizes knowledge transmission quality as accuracy, completeness, timeliness, comprehensibility, relevance, and interactivity, aligning the construct with tourism information complexity (Xu, X. L., 2024;



Yao, Y., Wang, L., & Zhang, H., 2024) and extending the dimension set discussed by Chen, J., & Zhang, C. (2024). Prior research also treats information delivery and content presentation as key drivers of purchase intention in live streaming contexts, including curated knowledge-based streaming and knowledge strategies (Chen, J., & Zhang, C., 2024; Lu, X., & Chen, H., 2025), as well as language content characteristics and anchor-generated content that shape intention formation (Sun H., & Zhao, Y. 2024; Wang, C. 2022). Therefore, Hypothesis 1 is proposed: Quality of knowledge transmission has a direct impact on consumers' purchase intentions.

2. Consumer perception and consumers' purchase intentions

Consumer perception reflects consumers' subjective evaluations of the live streaming experience, including perceived trust, perceived usefulness, and perceived ease of use; consistent with the Technology Acceptance Model, perceived usefulness and perceived ease of use shape intention to act through a system (Davis, F. D., 1989), and the Stimulus–Organism–Response logic positions such internal evaluations as direct drivers of behavioral responses (Pan, J. et al., 2024). In Hainan tourism live streaming, perceived trust is especially critical because duty-free purchases can involve high-value items and thus require confidence in authenticity and information credibility (Hainan Provincial Bureau of Statistics, 2025). Prior evidence also supports perceived usefulness as a mechanism linking live streaming marketing to purchase intentions (Wei, C., Zhang, Y., & Li, J., 2024), while trust cues are likewise associated with downstream purchase intentions (Zhang, Q., 2024). Therefore, Hypothesis 2 is proposed: Consumer perception has a direct impact on consumers' purchase intentions.

3. Live streamer professionalism and consumers' purchase intentions

Live streamer professionalism reflects consumers' perceptions of the streamer's competence and credibility, expressed through professional knowledge, expressive ability, and reputation; grounded in Social Influence Theory, expert power and credibility-based influence shape compliance and behavioral responses (French J. R. P., & Raven, B. H., 1959). In tourism live streaming, consumers rely on streamers to interpret product information and policy constraints under time pressure, so professionalism should strengthen purchase intentions. Prior studies link streamer characteristics to purchase intentions (Liu, L., 2024; Meng, Q., & Liu, H., 2024), and in duty-free contexts professional knowledge is associated with reduced purchase risk (Huang, Y., Chen, L., & Wang, J., 2023). Therefore, Hypothesis 3 is proposed: Live streamer professionalism has a direct impact on consumers' purchase intentions.

4. The mediating role of consumer perception and live streamer professionalism

Guided by the Stimulus–Organism–Response framework, external stimuli are expected to influence behavioral responses through internal organism states (Pan, J. et al., 2024); thus, knowledge transmission quality should first shape consumer perception by strengthening



perceived trust, perceived usefulness, and perceived ease of use, consistent with the Technology Acceptance Model where such perceptions are formed from information quality and accessibility (Davis, F. D. 1989), and supported by live streaming evidence highlighting perceived usefulness as a key mechanism linking live streaming approaches to purchase intentions (Wei, C. et al., 2024). This aligns with mediation logic that specifies indirect effects through intervening variables (Hayes, A. F., 2013), leading to Hypothesis 4: Quality of knowledge transmission has an indirect impact on consumers' purchase intentions through consumer perception. In parallel, knowledge transmission quality should also shape perceived live streamer professionalism because audiences infer expertise and credibility from observed communication performance, consistent with Social Influence Theory (French J. R. P., & Raven, B. H., 1959) and reinforced by research showing that information expression and live streaming discourse influence how communicators are evaluated (Dai, M. 2022; Li, Q., 2023); therefore, Hypothesis 5 is proposed: Quality of knowledge transmission has an indirect impact on consumers' purchase intentions through live streamer professionalism

Conceptual Framework

The conceptual framework is presented as the following “Conceptual Framework Diagram” (Figure 1), which visually illustrates the hypothesized relationships between knowledge transmission quality, live streamer professionalism, consumer perception, and consumers' purchase intentions, along with their respective sub-dimensions and hypothesized paths (H1-H5).

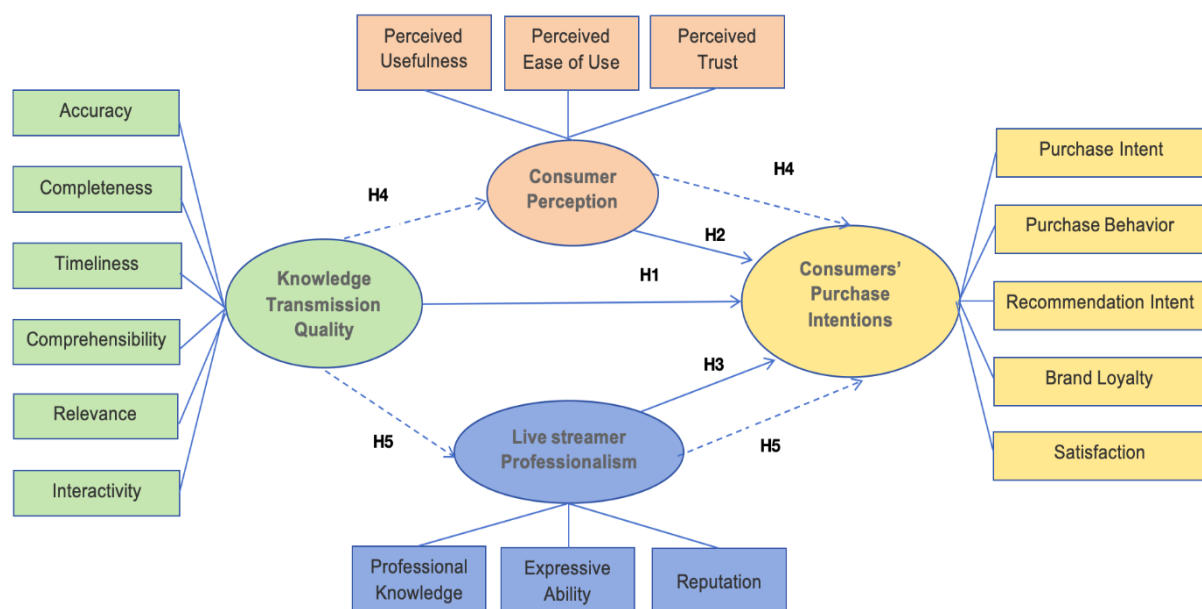


Figure 1 Conceptual Framework

Research scope

Scope of contents

The Impact of Knowledge Transmission Quality in Tourism Live Streaming E-commerce on Consumers' Purchase Intentions in Hainan Province, China had Scope of contents Knowledge transmission quality and consumers' purchase intentions, Consumer perception and consumers' purchase intentions, Live streamer professionalism and consumers' purchase intentions and The mediating role of consumer perception and live streamer professionalism

Scope of population

The population for this study comprised residents of Hainan Province, China, who engage in tourism live streaming e-commerce. A purposive screening approach was employed to select a valid sample based on three specific inclusion criteria to ensure data relevance and quality. First, respondents were required to be aged between 18 and 50 years, as this demographic accounts for 89% of Hainan's tourism live streaming viewers.

Research Methodology

This study employed a quantitative research methodology to examine the key factors influencing consumers' purchase intentions in the context of live streaming e-commerce within Hainan Province's tourism industry and to construct a conceptual model of consumer purchase intentions in live streaming e-commerce within Hainan Province's tourism industry.

Population and Sample

The population for this study comprised residents of Hainan Province, China, who engage in tourism live streaming e-commerce. A purposive screening approach was employed to select a valid sample based on three specific inclusion criteria to ensure data relevance and quality. First, respondents were required to be aged between 18 and 50 years, as this demographic accounts for 89% of Hainan's tourism live streaming viewers. Second, participants must have possessed at least six months of live streaming viewing experience. Third, they must have completed at least one purchase via live streaming. Screening questions, such as "Have you purchased Hainan duty-free products via live streaming?", were utilized to exclude unqualified respondents.

The sample size was determined based on the guidelines for Structural Equation Modeling (SEM) proposed by Hair, J. F. et al. (2017), which recommend a minimum observation-to-parameter ratio of 20:1. With 28 parameters in the model, the minimum required sample size was calculated at 560 respondents. To ensure this target was met, 600 questionnaires were distributed. After data cleaning and screening, 450 valid questionnaires were retained, resulting in an effective response rate of 75%.

The study used a structured questionnaire, with scales adapted from validated instruments published between 2023 and 2024 and tailored to Hainan's tourism live streaming context. Knowledge transmission quality was adapted from Chen, J., & Zhang, C.



(2024), and Xu, X. L. (2024); live streamer professionalism from Liu, L. (2024), and Meng Q., & Liu, H. (2024); consumer perception from Fan, M. et al. (2023), and Wei, C. et al. (2024), and consumers' purchase intentions from Sun, H., & Zhao, Y. (2024), and Chen, Y., & Chen, Z. (2022).

To ensure cross-cultural validity, the original English scales underwent a rigorous translation and back-translation process to produce the final Chinese questionnaire. Content validity was verified ensuring the contextualized items accurately reflected the local tourism environment (e.g., specific references to Li-Miao culture and duty-free policies). The reliability and validity of the measurement model were statistically confirmed, with Cronbach's alpha coefficients exceeding 0.7, Composite Reliability (CR) exceeding 0.8, and Average Variance Extracted (AVE) surpassing 0.5 for all constructs.

Data Collection

The questionnaires were distributed electronically to Hainan residents. The data collection process involved an initial screening phase where potential respondents answered mandatory qualification questions regarding their age, viewing experience, and purchase history. Only those meeting the criteria proceeded to the full survey. This systematic procedure ensured the integrity of the data and allows for the replication of the study in similar contexts.

Data Analysis

Data was analyzed using SPSS for descriptive statistics of the sample and key variables, and SmartPLS for SEM to evaluate the measurement model, test structural paths and hypotheses, and apply bootstrap sampling to examine the mediating effects of consumer perception and live streamer professionalism between knowledge transmission quality and purchase intentions.

Results

1. Preliminary Test: Internal consistency reliability and convergent validity were assessed using Cronbach's alpha, composite reliability, and average variance extracted. All constructs met thresholds with $\alpha > 0.7$, $CR > 0.8$, and $AVE > 0.5$. Discriminant validity was supported because $\sqrt{AVE}$ for knowledge transmission quality was 0.835, exceeding its correlation with live streamer professionalism of 0.647. Model fit was acceptable in PLS-SEM with $SRMR = 0.036$ (< 0.08) and $NFI = 0.940$ (> 0.90).

2. Inferential Analysis Hypothesis Testing: Hypotheses were tested using Structural Equation Modeling. The core endogenous outcome was consumers' purchase intentions. The model also estimated paths from knowledge transmission quality to the two mediators, consumer perception and live streamer professionalism, to support mediation testing for H4 and H5.



2.1 Direct Effects

Table 1 reports the SEM direct effects of knowledge transmission quality, consumer perception, and live streamer professionalism on consumers' purchase intentions. It also reports the direct effects of knowledge transmission quality on consumer perception and live streamer professionalism.

Table 1 Direct Effect Results

Path	β	SD	t-value	p-value	Result
Knowledge Transmission Quality $\rightarrow$ Consumers' Purchase Intentions	0.145	0.052	2.779	0.005	Significant
Consumer Perception $\rightarrow$ Consumers' Purchase Intentions	0.416	0.038	10.850	0.000	Significant
Live Streamer Professionalism $\rightarrow$ Consumers' Purchase Intentions	0.336	0.039	8.710	0.000	Significant
Knowledge Transmission Quality $\rightarrow$ Live Streamer Professionalism	0.312	0.042	7.429	0.000	Significant
Knowledge Transmission Quality $\rightarrow$ Consumer Perception	0.425	0.043	9.884	0.000	Significant

The result shows consumer perception has the strongest direct effect on purchase intentions ($\beta = 0.416$, $p < 0.001$), followed by live streamer professionalism ($\beta = 0.336$, $p < 0.001$) and knowledge transmission quality ($\beta = 0.145$, $p < 0.01$). Knowledge transmission quality also strongly predicts consumer perception ($\beta = 0.425$, $p < 0.001$) and live streamer professionalism ($\beta = 0.312$, $p < 0.001$). This pattern indicates knowledge transmission quality operates more through shaping consumer perception and professionalism than through the direct path to purchase intentions.

2.2 Indirect effects and mediation testing

Dual mediation was tested using 5,000 bootstrap samples to estimate indirect effects and 95% confidence intervals, as reported in Table 2.



Table 2 Mediating Effect Results (Bootstrap=5000)

Path	Indirect Effect	SE	t-value	p-value	95% CI Lower	95% CI Upper	Result
Knowledge Transmission Quality → Consumer Perception → Consumers' Purchase Intentions	0.270	0.029	9.354	0.000	0.218	0.325	Significant
Knowledge Transmission Quality → Live Streamer Professionalism → Consumers' Purchase Intentions	0.222	0.027	8.275	0.000	0.169	0.278	Significant
Total Indirect Effect	0.492	0.035	14.057	0.000	0.424	0.560	Significant
Total Effect (Knowledge Transmission Quality → Consumers' Purchase Intentions)	0.637	0.041	15.537	0.000	0.557	0.717	Significant

Table 2 shows that both mediation paths are significant because the 95% confidence intervals do not include zero, confirming that knowledge transmission quality indirectly influences consumers' purchase intentions through consumer perception and live streamer professionalism. The indirect effect via consumer perception is stronger (0.270) than via live streamer professionalism (0.222), and the total indirect effect is 0.492, which accounts for 77.2% of the total effect (0.492/0.637), indicating that the influence of knowledge transmission quality on purchase intentions operates mainly through these indirect mechanisms rather than the direct path.

2.3 Key Sub-Dimensions

To identify the most influential sub-dimensions of knowledge transmission quality, live streamer professionalism, and consumer perception, this study calculated the standardized path coefficients (β) of each sub-dimension and ranked them. The results are shown in Table 3, which provides guidance for targeted optimization of variables in Hainan's tourism live streaming.



Table 3 Influence Ranking of Sub-Dimensions (Standardized β)

Variable	Sub-dimension	β	Rank
Knowledge Transmission Quality	Completeness	0.301	1
	Timeliness	0.267	2
	Relevance	0.258	3
Live Streamer Professionalism	Professional Knowledge	0.389	1
	Expressive Ability	0.327	2
	Reputation	0.284	3
Consumer Perception	Perceived Trust	0.428	1
	Perceived Usefulness	0.382	2
	Perceived Ease of Use	0.318	3

Table 3 shows that within knowledge transmission quality, Completeness ranks first ($\beta = 0.301$), followed by Timeliness ($\beta = 0.267$) and Relevance ($\beta = 0.258$), indicating that consumers prioritize integrated, up-to-date, and need-matched tourism information. Within live streamer professionalism, Professional Knowledge is most influential ($\beta = 0.389$), exceeding Expressive Ability ($\beta = 0.327$) and Reputation ($\beta = 0.284$), suggesting that demonstrated expertise matters most. Within consumer perception, Perceived Trust has the strongest influence ($\beta = 0.428$), followed by Perceived Usefulness ($\beta = 0.382$) and Perceived Ease of Use ($\beta = 0.318$), highlighting trust as the core perception component linked to purchase intentions.

In summary, the model shows acceptable fit (SRMR = 0.036; NFI = 0.940) and significant direct effects of knowledge transmission quality, consumer perception, and live streamer professionalism on purchase intentions. Dual mediation is supported, with the consumer perception pathway stronger than the live streamer professionalism pathway (0.270 > 0.222), and the key sub-dimensions are Completeness, Professional Knowledge, and Perceived Trust. The Hainan-specific model integrates duty-free policies and Li-Miao culture, extending SOR theory in tourism live streaming and offering actionable guidance for local operators and digital tourism development.

Conclusion, Discussions, Suggestions

Conclusion

This study explored the relationship among knowledge transmission quality, live streamer professionalism, consumer perception, and consumers' purchase intentions in Hainan's tourism live streaming e-commerce. The main conclusions are as follows: 1) The theoretical model fits well with empirical data (SRMR = 0.036, NFI = 0.940), confirming that



knowledge transmission quality, consumer perception, and live streamer professionalism all have significant direct positive effects on consumers' purchase intentions; 2) Consumer perception and live streamer professionalism play significant dual mediating roles, and the effect of consumer perception is stronger ($0.270 > 0.222$); 3) The most influential sub-dimensions are "Completeness" of knowledge transmission quality, "Professional Knowledge" of live streamer professionalism, and "Perceived Trust" of consumer perception; and 4) The Hainan-specific model integrates duty-free policies and Li-Miao culture, expanding the application of SOR theory in tourism live streaming. Academically, this study improves the construct of knowledge transmission quality and dual mediating mechanisms in tourism scenarios; practically, it provides targeted optimization strategies for Hainan's tourism live streaming operators, supporting the province's digital tourism development.

Discussions

The structural model demonstrates a robust fit with the empirical data, confirming that the proposed theoretical framework effectively captures the dynamics of Hainan's tourism live streaming e-commerce. The findings regarding the five hypotheses are discussed below.

Knowledge Transmission Quality and Consumers' Purchase Intentions Hypothesis 1 is supported. Knowledge transmission quality exerts a significant direct positive impact on purchase intentions ($\beta=0.145$, $p<0.01$). This confirms that in tourism live streaming, high-quality information possesses an "immediate value" that triggers impulsive buying, aligning with Lu, X., & Chen, H. (2025). However, this finding contrasts with Xu, X. L. (2024), who overlooked this direct mechanism in agricultural streaming. Crucially, sub-dimension analysis reveals that Completeness ($\beta=0.301$) outweighs Accuracy, refining Chen, J., & Zhang, Q. (2024) framework. In the Hainan context, fragmented accurate data is insufficient; consumers demand a holistic integration of duty-free policies and cultural context to support decision-making (Nonaka, I., 1994).

Consumer Perception and Consumers' Purchase Intentions

Hypothesis 2 is supported. Consumer perception is the strongest direct predictor of purchase intentions ($\beta=0.416$, $p<0.001$). Consistent with the Technology Acceptance Model (Davis, F. D. 1989; Wei, C. et al. (2024), the "Organism" state is the primary determinant of behavior. Specifically, the dominance of Perceived Trust corroborates Fan, M. et al. (2023), and Chen, J., & Zhang, Q. (2024), who argue that in high-value online markets, trust cues are the definitive prerequisite for transactions. Given the complexity of Hainan's duty-free market, subjective validation of authenticity overrides mere platform utility.

Live Streamer Professionalism and Consumers' Purchase Intentions

Hypothesis 3 is supported. Live streamer professionalism significantly drives purchase intentions ($\beta=0.336$, $p<0.001$). Grounded in Social Influence Theory, this confirms that streamer competence functions as expert power (French, J. R. P., & Raven, B. H., 1959).



The results refine Huang, Y. et al. (2023) by demonstrating that Professional Knowledge ($\beta=0.389$) is more influential than Reputation ($\beta=0.284$). Unlike general entertainment streaming (Liu, L., 2024), Hainan tourism requires streamers to act as authoritative interpreters of policy; thus, demonstrated expertise reduces risk more effectively than fame.

The Mediating Role of Consumer Perception

Hypothesis 4 is supported. Consumer perception mediates the relationship between knowledge transmission quality and purchase intentions (Indirect Effect = 0.270). As the strongest mediating path, this validates the SOR framework (Pan, J. et al., 2024): objective stimuli (knowledge) must be internalized as subjective “trust” and “usefulness” to drive response. This extends Ren, Y., & Zhang, L. (2022), showing that information completeness fosters continuous intent specifically by enhancing the psychological security of the shopping environment.

The Mediating Role of Live Streamer Professionalism

Hypothesis 5 is supported. Live streamer professionalism mediates the relationship between knowledge transmission quality and purchase intentions

This result establishes a dual-channel organism mechanism. Beyond personal perception, high-quality knowledge transmission serves as a heuristic signal for the streamer’s competence. This supports Li, Q. (2023), and Wang, C. (2022), who argued that information expression methods directly shape audience evaluations of the anchor. When streamers deliver accurate and culturally relevant content (e.g., Li-Miao history), they validate their “Professional Knowledge,” which subsequently enhances purchase intentions. While this indirect effect is slightly weaker than that of consumer perception, it confirms that in knowledge-intensive sectors like tourism, “content proves competence,” creating a persuasion pathway essential for overcoming the intangible nature of digital tourism products.

Suggestions

1. For Practitioners

To translate the study’s findings into economic value, practitioners encompassing both live streaming operators and policymakers must synergize efforts to optimize the critical antecedents of purchase intention. Operators should address the “Timeliness” and “Completeness” of knowledge transmission by developing automated dashboards synchronized with Hainan’s Duty-Free Management Platform while simultaneously professionalizing human capital through a “Hainan Tourism Live Streamer Certification Program” that emphasizes duty-free policy interpretation and Li-Miao cultural proficiency. These operational efforts must be underpinned by robust policy frameworks, where the government establishes “Information Quality Guidelines” to standardize content accuracy and allocates funds for “Li-Miao Cultural Digitalization Projects” to provide authoritative content assets. Furthermore, to fortify “Perceived Trust” the model’s strongest predictor operators



must institutionalize transparency via real-time third-party inspection reports, while regulators should enforce market integrity through a “Duty-Free Live Streaming Information Review Platform” to eliminate false claims and safeguard the systemic credibility of the marketplace.

2. For Future Research

Future scholarships should expand the theoretical boundaries of this model by addressing sampling limitations and exploring temporal dynamics. Academics are encouraged to broaden the sampling frame to include mainland Chinese tourists—Hainan’s primary source market—to investigate cross-group heterogeneity and determine if non-residents exhibit distinct sensitivities to variables such as “policy accuracy.” Additionally, a longitudinal research design is essential to verify the model’s temporal stability, particularly tracking the longitudinal effects of knowledge transmission quality before and after the anticipated 2026 adjustment to Hainan’s duty-free regulations. Finally, researchers should enrich the theoretical framework by introducing moderating variables, such as streamer taxonomy (e.g., head vs. niche streamers) or product involvement levels, to identify the specific boundary conditions under which the dual mediating mechanisms of professionalism and perception are amplified or attenuated.

Knowledge of Research

Based on the quantitative results of 450 questionnaires (SEM path coefficients, sub-dimension rankings) and qualitative findings from 30 informants, the core knowledge of this study can be synthesized into a three-layer conceptual model, which is consistent with the conceptual framework diagram in Figure 1. This model integrates variable definitions, path mechanisms, and Hainan characteristics, providing a systematic framework for understanding the relationship between knowledge transmission quality and consumers' purchase intentions in Hainan's tourism live streaming.

Model Explanation

- Variable Definition and Core Sub-Dimensions: Clarify the core sub-dimensions of each variable (derived from Table 3): The core of knowledge transmission quality is “Completeness” (integrated policy/culture/product information), the core of live streamer professionalism is “Professional Knowledge” (mastery of Hainan duty-free/culture), the core of consumer perception is “Perceived Trust” (information authenticity), and the core of consumers' purchase intentions is “Purchase Behavior” (actual purchase frequency), providing clear optimization targets for operators.

- Quantified Path Mechanism: Visualize the intensity of direct and indirect effects (derived from Tables 1-2): Direct paths (consumer perception $\rightarrow$ consumers' purchase intentions: $\beta = 0.416 >$ live streamer professionalism $\rightarrow$ consumers' purchase intentions: $\beta=0.336 >$ knowledge transmission quality $\rightarrow$ consumers' purchase intentions: $\beta=0.145$); Mediating paths (knowledge transmission quality $\rightarrow$ consumer perception $\rightarrow$ consumers'



purchase intentions: 0.270 > knowledge transmission quality $\rightarrow$ live streamer professionalism $\rightarrow$ consumers' purchase intentions: 0.222), helping operators allocate resources rationally.

• Hainan-Specific Insights: Integrate local characteristics: Policy connection (the “Timeliness” of knowledge transmission quality is related to duty-free inventory updates) and cultural connection (the “Completeness” of knowledge transmission quality includes Li-Miao culture), ensuring the model is applicable to Hainan's unique scenario. Show Figure 2 below

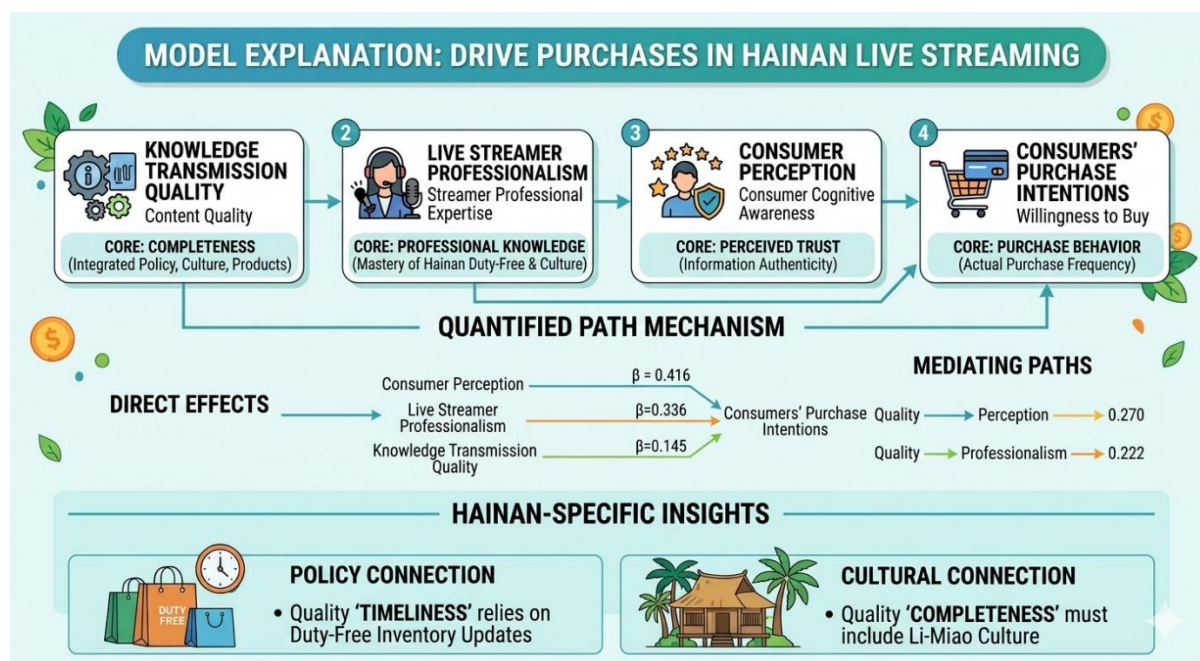


Figure 2 Knowledge of Research

References

- Chen, J., & Zhang, C. (2024). Strategies for enhancing consumers' purchase intentions in agricultural product live streaming. *Journal of Commercial Economics Research*, 10, 81-86.
- Chen, Y., & Chen, Z. (2022). Understanding consumers' purchase intention and gift-giving in live streaming commerce: Findings from SEM and fsQCA. *International Journal of Consumer Studies*, 46(3), 589-607.
- China E-Commerce Research Center. (2025). *2024 China live streaming e-commerce market report*. Hangzhou: China E-Commerce Research Center.
- China Internet Network Information Center (CNNIC). (2025). *The 55th statistical report on internet development in China*. Beijing: CNNIC.
- Dai, M. (2022). An analysis of vocabulary selection in e-commerce live streaming discourse. *Journal of Pragmatics*, 195, 105-118.

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Fan, M., Tian, J., & Li, Y. (2023). Research on the influence of “short video + live streaming” marketing model on consumers’ purchase intentions: Perceived value as a mediator. *Journal of Commercial Economics*, 12(4), 38-47.
- French, J. R. P., & Raven, B. H. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power* (pp. 150-167). University of Michigan Press.
- Hainan Provincial Bureau of Statistics. (2025). *Operation of Hainan’s tourism and consumer market in 2024*. Haikou: Hainan Provincial Bureau of Statistics.
- Hainan Provincial Government. (2025). *Three-year action plan for building Hainan international tourism consumption center (2025-2027)*. Haikou: Hainan Provincial Government.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. (2nd ed.). Sage Publications.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Huang, Y., Chen, L., & Wang, J. (2023). The interaction effect of anchor type and product innovation on purchase intention in e-commerce live streaming. *Journal of Business Research*, 41(5), 88-105.
- Li, Q. (2023). Analysis and optimization research on information expression methods in live streaming. *Journal of Computer-Mediated Communication*, 28(3), 167-185.
- Liu, L. (2024). Research on the influence of farmer live streaming context elements and streamer characteristics on consumers’ purchase intentions. *Journal of Rural Studies*, 3(1), 78-89.
- Lu, X., & Chen, H. (2025). The impact of knowledge + curated selection live-streaming model on consumers’ purchase intentions. *Journal of Retail & Distribution Management*, 53(2), 145-162.
- Meng, Q., & Liu, H. (2024). A study on the influence of characteristics of goods live streamers on consumers’ purchase intentions. *Journal of Marketing Research*, 16(3), 59-76.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14-37.
- Pan, J., Li, D., & Wang, S. (2024). The application of Moore's online learning interactions model in learning outcomes: The SOR paradigm perspective. *European Journal of Education*, 1(2), 1-13.
- Ren, Y., & Zhang, L. (2022). Analysis of the effect of e-commerce live information interaction on consumers’ continuous purchase intention. *Journal of Electronic Commerce Research*, 23(4), 289-306.



- Sun, H., & Zhao, Y. (2024). Research on the influence of anchor-generated content on consumers' purchase intentions in e-commerce live broadcast rooms. *Journal of Electronic Commerce*, 20(4), 67-84.
- Wang, C. (2022). Research on the influence of anchor's language content characteristics on consumers' purchase intention in live streaming context. *Journal of Consumer Psychology*, 32(1), 98-115.
- Wei, C., Zhang, Y., & Li, J. (2024). Live streaming marketing methods and consumers' purchase intentions: The mediating role of perceived usefulness. *Journal of Consumer Behavior*, 23(2), 189-205.
- Xu, X. L. (2024). Research on the phenomenon of agricultural products live streaming in e-commerce under the background of digital economy. *Journal of Electronic Commerce Reviews*, 13(3), 4293-4299.
- Yao, Y., Wang, L., & Zhang, H. (2024). Influencing factors and mechanisms of consumer purchase intentions in specialty agricultural product live streaming. *Journal of Rural Studies*, 8(2), 112-128.
- Zhang, Q. (2024). The relationship between information cues and consumer trust in live streaming commerce. *Journal of Marketing Management*, 40(1-2), 112-135.

