An Empirical Analysis of Livestreaming E-Commerce on Gen Z Consumer Purchase Intentions in China and Western Markets

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ABSTRACT

This study comparatively examines how livestreaming e-commerce attributes influence the purchase intentions of Generation Z (Gen Z) consumers in China and a pooled Western sample drawn from the United States and the United Kingdom. The conceptual model integrates the Technology Acceptance Model (TAM), Uses and Gratifications (U&G) Theory, Social Presence Theory, and Source Credibility Theory to explain the roles of streamer credibility, real-time interactivity, entertainment value, and perceived risk. Survey data were collected from 842 Gen Z respondents (China, n = 421; pooled US/UK sample, n = 421) and analyzed using multi-group structural equation modeling (SEM). The reported structural results show that streamer credibility and real-time interactivity have larger positive coefficients in the Chinese sample, whereas entertainment value has the largest positive coefficient in the pooled US/UK sample. Perceived risk is negatively associated with purchase intention in both groups, with a significantly stronger negative relationship in the pooled US/UK sample. Because the design is cross-sectional and relies on self-reported purchase intention, the findings are interpreted as associations rather than evidence of causal or broad cultural mechanisms. The study contributes a comparative framework for adapting livestreaming commerce strategies across distinct market settings.

Keywords: Livestreaming E-Commerce; Generation Z; Purchase Intention; Streamer Credibility; Interactivity; Entertainment Value; Perceived Risk; China; United States; United Kingdom

INTRODUCTION

Livestreaming e-commerce combines real-time video, social interaction, product demonstration, and digital purchasing functions within a single consumer experience. The format developed rapidly in China through platforms such as Taobao Live and Douyin and has subsequently been adopted in Western digital-commerce environments through platforms including TikTok Shop, Instagram, and Amazon Live. Gen Z consumers are particularly relevant to this development because their media consumption and shopping practices are closely connected to interactive and social digital environments.

Prior research has examined livestreaming commerce through constructs such as trust, social presence, interactivity, perceived value, and technology acceptance. However, direct empirical comparisons across national market settings remain less common. This study therefore compares China with a pooled Western sample composed primarily of respondents from the United States and the United Kingdom. The term “Western markets” in this manuscript refers specifically to this pooled US/UK sample and should not be interpreted as representative of all Western countries. The United States and the United Kingdom were combined for the planned multi-group comparison because they constituted the available Western sampling frame; however, their internal heterogeneity is recognized as a limitation.

The study addresses the following question: Do streamer credibility, real-time interactivity, entertainment value, and perceived risk show different relationships with purchase intention among Gen Z consumers in China and the pooled US/UK sample? By focusing on observable model relationships rather than attributing differences directly to culture, institutional trust, privacy awareness, or infrastructure, the analysis provides a more cautious basis for cross-market interpretation.

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THEORETICAL FRAMEWORK AND HYPOTHESES

The model uses four complementary theoretical perspectives, each assigned a distinct explanatory role. TAM provides the broader technology-adoption logic that digital commerce participation depends on users' evaluations of the usefulness and ease of engaging with a technology-enabled shopping environment (Davis, 1989; Gefen et al., 2003). U&G Theory explains the hedonic and gratification-seeking dimension of livestream viewing, particularly entertainment value (Katz et al., 1973). Social Presence Theory explains how synchronous interaction can create a stronger sense of interpersonal immediacy and connection in mediated environments (Short et al., 1976). Source Credibility Theory explains why perceptions of a streamer's expertise and trustworthiness can reduce uncertainty and strengthen persuasive influence (Ohanian, 1990). These perspectives are therefore treated as complementary rather than interchangeable: TAM frames adoption, U&G explains entertainment gratification, Social Presence Theory explains interactive social experience, and Source Credibility Theory explains trust in the communicator.

2.1 Streamer Credibility

Streamer credibility refers to the perceived expertise and trustworthiness of the livestream host. Source Credibility Theory suggests that credible communicators can reduce information uncertainty and increase acceptance of product-related messages (Ohanian, 1990). In livestreaming commerce, credibility may therefore increase consumers' willingness to purchase.

H1a: Streamer credibility positively influences the purchase intentions of Chinese Gen Z consumers.

H1b: Streamer credibility positively influences the purchase intentions of Gen Z consumers in the pooled US/UK sample.

2.2 Real-Time Interactivity

Real-time interactivity refers to bidirectional communication through live chat, polls, questions, and immediate responses. Social Presence Theory proposes that communication cues that increase immediacy can strengthen the perceived presence of other people in mediated interaction. In a livestreaming setting, greater interactivity may therefore increase engagement and purchase intention.

H2a: Real-time interactivity positively influences the purchase intentions of Chinese Gen Z consumers.

H2b: Real-time interactivity positively influences the purchase intentions of Gen Z consumers in the pooled US/UK sample.

2.3 Entertainment Value

U&G Theory treats media use as goal-directed and motivated by sought gratifications, including enjoyment and entertainment (Katz et al., 1973). Livestreaming combines commercial content with entertainment features such as humor, gamification, demonstrations, and audience participation. Higher entertainment value is therefore expected to be positively associated with purchase intention.

H3a: Entertainment value positively influences the purchase intentions of Chinese Gen Z consumers.

H3b: Entertainment value positively influences the purchase intentions of Gen Z consumers in the pooled US/UK sample.

2.4 Perceived Risk

Perceived risk captures concerns about transaction security, privacy, financial loss, and product-quality uncertainty (Jacoby & Kaplan, 1972). In technology-enabled shopping, greater perceived risk can reduce willingness to transact. The study therefore expects a negative association with purchase intention in both samples and tests whether that association differs across groups.

H4a: Perceived risk negatively influences the purchase intentions of Chinese Gen Z consumers.

H4b: Perceived risk negatively influences the purchase intentions of Gen Z consumers in the pooled US/UK sample.

H5: The negative relationship between perceived risk and purchase intention is significantly stronger in the pooled US/UK sample than in the Chinese sample.

METHODOLOGY

3.1 Research Design, Data Collection, and Sample

A cross-sectional quantitative design was used. Primary data were collected through a structured online survey administered between October and December 2025. Eligible respondents were Gen Z consumers aged 18–28 at the time of data collection who had viewed an e-commerce livestream during the preceding 30 days. The study reports 842 valid responses, divided equally between China (n = 421) and the pooled United States/United Kingdom sample (n = 421). Chinese respondents identified Douyin, Taobao Live, and Xiaohongshu as primary platforms, while respondents in the pooled US/UK sample identified TikTok Shop, Instagram Shopping, and Twitch.

The available manuscript does not report the separate number of US and UK respondents or itemized demographic distributions such as sex, exact age bands, education, or livestream-shopping frequency. These statistics should be inserted from the original survey dataset before journal resubmission because they are necessary for a complete assessment of group comparability. Accordingly, the present revision avoids claiming demographic equivalence beyond the reported equal group sizes and eligibility criteria.

Sampling characteristic	China	Pooled US/UK sample
Valid responses	421	421
Age eligibility	18–28 years	18–28 years
Recent-use eligibility	Viewed an e-commerce livestream within previous 30 days	Viewed an e-commerce livestream within previous 30 days
Primary reported platforms	Douyin; Taobao Live; Xiaohongshu	TikTok Shop; Instagram Shopping; Twitch
Country-specific split	Not applicable	NR in source manuscript—insert US and UK counts from dataset
Detailed demographics	NR in source manuscript—insert from dataset	NR in source manuscript—insert from dataset

3.2 Measurement Instrument

All latent constructs were measured with multi-item five-point Likert scales (1 = Strongly Disagree, 5 = Strongly Agree) adapted to the livestreaming context. Streamer Credibility (SC) used four items adapted from Ohanian (1990); Real-Time Interactivity (INT) used four items adapted from Liu (2003); Entertainment Value (ENT) used three items adapted from Sweeney and Soutar (2001); Perceived Risk (PR) used four items adapted from Jacoby and Kaplan (1972); and Purchase Intention (PI) used three items adapted from Zeithaml et al. (1996). The instrument was translated into Simplified Chinese and back-translated into English to support cross-linguistic equivalence and face validity.

3.3 Data Analysis

Confirmatory factor analysis (CFA) was used to evaluate the measurement model for each group, followed by multi-group SEM to estimate the structural relationships. Reliability was evaluated using Cronbach's alpha and composite reliability (CR); convergent validity was evaluated using standardized factor loadings and average variance extracted (AVE); and discriminant validity was assessed using the Fornell–Larcker criterion. Structural-model reporting includes standardized path coefficients and p values from the source manuscript. The reviewer also requested standard errors or confidence intervals, R^2 values, effect sizes, and complete group-comparison statistics. Exact values for these additional statistics are not contained in the source manuscript and therefore

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cannot be reconstructed without the original SEM output; they are explicitly identified below for completion from the dataset/output rather than fabricated.

RESULTS

4.1 Measurement Model Evaluation

The source manuscript states that all Cronbach's alpha and CR values exceeded 0.70, all AVE values exceeded 0.50, and the Fornell–Larcker criterion was satisfied for both groups. These statements support reliability, convergent validity, and discriminant validity at the threshold level. However, the reviewer correctly requested the underlying item-level and construct-level statistics. Table 2 is therefore structured in the required reporting format. Because the exact CFA output is not present in the submitted source document, numerical cells are marked NR and must be populated directly from the original CFA output before resubmission.

Construct	Items	Std. loadings – China	α – China	CR – China	AVE – China	Std. loadings – US/UK	α – US/UK	CR – US/UK	AVE – US/UK
Streamer Credibility (SC)	4	NR	> .70*	> .70*	> .50*	NR	> .70*	> .70*	> .50*
Real-Time Interactivity (INT)	4	NR	> .70*	> .70*	> .50*	NR	> .70*	> .70*	> .50*
Entertainment Value (ENT)	3	NR	> .70*	> .70*	> .50*	NR	> .70*	> .70*	> .50*
Perceived Risk (PR)	4	NR	> .70*	> .70*	> .50*	NR	> .70*	> .70*	> .50*
Purchase Intention (PI)	3	NR	> .70*	> .70*	> .50*	NR	> .70*	> .70*	> .50*

*Threshold-level result reported in the source manuscript. NR = exact statistic not reported in the source manuscript and must be inserted from the original CFA output.

For discriminant validity, the source manuscript reports that the square root of AVE for each construct exceeded its correlations with other constructs. A full Fornell–Larcker matrix for each group should be inserted from the CFA/SEM output before resubmission. This revision does not generate correlation values that were not reported in the source material.

4.2 Structural Model and Hypotheses Testing

The reported model-fit indices were $\chi^2/df = 1.94$, RMSEA = 0.041, CFI = 0.962, and TLI = 0.957. The standardized path coefficients and significance levels reported in the source manuscript are reproduced in Table 3. To meet the reviewer's request fully, standard errors or confidence intervals, R^2 values, and effect-size statistics should be added from the original SEM output. These values are not available in the source manuscript and are therefore not estimated or invented in this revision.

Hypothesis / path	β China	p China	β pooled US/UK	p pooled US/UK	Result
H1: SC → PI	0.42	< .001	0.21	< .01	Supported in both groups
H2: INT → PI	0.38	< .001	0.18	< .05	Supported in both groups
H3: ENT → PI	0.24	< .01	0.46	< .001	Supported in both groups
H4: PR → PI	−0.11	< .05	−0.34	< .001	Supported in both groups

Additional structural statistics requested by the reviewer: standard errors or 95% confidence intervals for each path, R^2 for Purchase Intention in each group, and effect-size measures where appropriate. These must be exported from the original SEM analysis and inserted before resubmission.

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4.3 Structural Group Comparison

For H5, the source manuscript reports a chi-square difference test in which the Perceived Risk → Purchase Intention path was constrained to equality across groups. The constraint produced $\Delta\chi^2(1) = 14.82$, $p < .001$, indicating that the path differs significantly between the two samples. The standardized coefficient was −0.11 in China and −0.34 in the pooled US/UK sample. On the basis of this reported test, H5 is supported. This result establishes a between-group difference in the modeled relationship; it does not by itself establish that culture, privacy norms, institutional trust, or platform infrastructure caused the difference.

DISCUSSION

The results indicate different patterns of association between livestreaming attributes and purchase intention across the two samples. In China, Streamer Credibility ($\beta = 0.42$) and Real-Time Interactivity ($\beta = 0.38$) had the largest reported positive coefficients. In the pooled US/UK sample, Entertainment Value had the largest positive coefficient ($\beta = 0.46$). Perceived Risk was negatively associated with purchase intention in both groups, with a larger negative coefficient in the pooled US/UK sample ($\beta = -0.34$) than in China ($\beta = -0.11$).

These patterns are consistent with the theoretical roles assigned to source credibility, social presence, entertainment gratification, and perceived risk. Nevertheless, the present survey did not directly measure national culture, institutional trust, privacy awareness, or platform infrastructure as explanatory mediators of the observed group differences. Such mechanisms should therefore be treated as possible interpretations for future research rather than established explanations of the present findings. Likewise, because the data are cross-sectional, the coefficients represent modeled associations and should not be interpreted as definitive causal effects.

The pooled treatment of the United States and the United Kingdom also requires caution. Although the two countries formed the available Western sampling frame, they are not assumed to be homogeneous. Future studies should test the US and UK separately, report country-specific sample characteristics, and assess measurement invariance before drawing stronger country- or culture-level conclusions.

PRACTICAL IMPLICATIONS

For brands operating in China, the reported coefficients suggest that credible livestream hosts and strong real-time interaction deserve particular attention. For brands operating in the sampled US/UK settings, entertaining content and risk-reduction features appear especially relevant. These implications should be applied as market-specific hypotheses for testing rather than universal prescriptions. Platform design choices such as clearer transaction information, transparent data-handling practices, and streamlined checkout may be evaluated as potential ways to reduce perceived risk, while interactive and entertainment features may be optimized according to observed audience response.

LIMITATIONS AND FUTURE RESEARCH

Several limitations qualify the findings. First, purchase intention was self-reported and may not correspond directly to actual purchasing behavior. Second, the online sampling approach may underrepresent Gen Z consumers who use livestreaming commerce less frequently or who have limited access to the sampled platforms. Third, the Western comparison combines respondents from the United States and the United Kingdom; country-specific sample sizes and detailed demographic distributions were not reported in the source manuscript, limiting assessment of within-group heterogeneity and comparability. Fourth, the cross-sectional design does not establish temporal or causal relationships. Fifth, explanatory constructs such as cultural orientation, institutional trust, privacy awareness, and infrastructure quality were not directly measured and therefore cannot be used as confirmed causal explanations for group differences. Future research should use country-specific sampling, behavioral purchase measures, longitudinal or experimental designs, explicit measures of proposed cultural and institutional mechanisms, and formal tests of measurement invariance across groups.

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CONCLUSION

This study compares the relationships of streamer credibility, real-time interactivity, entertainment value, and perceived risk with Gen Z purchase intention in China and a pooled US/UK sample. The reported SEM results show stronger coefficients for streamer credibility and interactivity in China, a stronger coefficient for entertainment value in the pooled US/UK sample, and a significantly stronger negative perceived-risk relationship in the pooled US/UK sample. The revised interpretation is deliberately limited to the observed samples and modeled relationships. The findings provide a basis for further country-specific and mechanism-focused research on livestreaming e-commerce while offering practical direction for testing localized digital-commerce strategies.

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