

A Causal Model of the Factors Influencing Consumers' Purchasing Tourist Products on E-commerce Community Platforms

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ABSTRACT

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Amid the accelerating growth of social e-commerce, consumer decision-making in tourism consumption is increasingly shaped by platform-based interactions and content engagement. This study investigates the psychological and structural mechanisms that influence consumers' purchases of tourism products on community platforms such as TikTok, Xiaohongshu, and WeChat. A structured questionnaire targeting adult users with tourism-related platform experience was distributed using purposive and convenience sampling, resulting in 615 valid responses. The data were analyzed using confirmatory factor analysis and structural equation modeling. Results show that technology acceptance, electronic service quality, and dual-process cognition significantly influence both consumer satisfaction and platform e-commerce engagement. Notably, consumer satisfaction plays a partial mediating role in these relationships, with the indirect effect from dual-process cognition to platform engagement being the strongest. Electronic service quality exhibited the highest total effect on platform engagement, and satisfaction emerged as a key predictor of consumer behavioral outcomes. These findings offer a validated empirical framework for future studies exploring digital consumer behavior in socially immersive tourism contexts.

Keywords: Social E-commerce, Tourism Consumption, Technology Acceptance, Service Quality, Consumer Satisfaction

1.Introduction

In the era of digital transformation, social e-commerce has emerged as a powerful driver of consumer behavior, integrating social interaction, content sharing, and online purchasing into a seamless digital experience. With platforms such as TikTok, Xiaohongshu, and WeChat reshaping how products are marketed and consumed, this phenomenon is increasingly influencing industries that rely on experiential engagement—none more so than tourism. As of 2023, China's social e-commerce market exceeded 3.8 trillion yuan in transaction volume, with tourism-related content contributing significantly to platform engagement. TikTok alone recorded over 660 million tourism-related interactions and video clicks globally, with tourism content receiving more than 25.5 billion likes in China (Feng & Wang, 2020; Liu, 2024).

Tourism products, encompassing services such as accommodation, transportation, travel packages, and cultural experiences, are particularly well-suited for dissemination on social media platforms due to their visual appeal and experiential nature (Martínez García de Leaniz et al., 2024). However, the integration of tourism consumption with social e-commerce remains under-theorized, and practical challenges abound. Despite governmental efforts to stimulate domestic tourism through initiatives like the "Internet Plus Tourism Action Plan" and the post-pandemic recovery, the expected surge in consumer engagement has not fully materialized. Surveys indicate that while 24% of Chinese urban depositors expressed increased willingness to spend on travel, economic constraints continue to hinder actual expenditure, revealing a disconnect between intention and behavior (Qian, 2024).

Moreover, local governments' promotional efforts via digital platforms have yielded uneven results, and the tourism industry has yet to fully leverage emerging technologies such as big data analytics or real-time personalized marketing to match consumers' evolving expectations. Social e-commerce platforms—especially TikTok—possess untapped potential to reshape tourism consumption, but their influence mechanisms on consumer decision-making remain inadequately understood (Cho et al., 2020; Chodak, 2024; Stylos et al., 2021). This mismatch between market potential and academic insight underscores the urgency of investigating the structural and psychological pathways that drive platform-based tourism product purchases.

Accordingly, this study aims to explore the influencing mechanisms behind consumers' decisions to purchase tourism products on e-commerce community platforms, particularly under the paradigm of social e-commerce. The significance of the study lies not only in addressing a timely practical problem but also in contributing to the theoretical synthesis of multi-dimensional frameworks such as the Technology Acceptance Model (TAM), e-service quality, and dual-process theory.

The specific research objectives of this paper are as follows:

(1) To explore how e-service quality, technology acceptance model (TAM), and dual-process theory jointly influence consumers' participation in e-commerce platforms, and to clarify the role of each factor in platform usage intention and behavior.

(2) To analyze the mediating role of customer satisfaction between e-service quality, technology acceptance factors and platform participation behavior, and verify its bridge role in the user's psychological process..

(3) To construct a comprehensive theoretical model that integrates variables such as e-service quality, TAM, dual-process theory, and customer satisfaction to systematically explain the key drivers and paths that influence consumers' purchase behavior of tourism products on e-commerce community platform.

This paper is structured as follows. Chapter 2 conducts a literature review and develops the research hypotheses based on relevant theoretical frameworks. Chapter 3 outlines the research methodology, including data collection, measurement, and analytical approaches. Chapter 4 presents the empirical findings and validates the proposed model using statistical analysis. Chapter 5 discusses the theoretical and practical implications of the results, acknowledges the study's limitations, and offers suggestions for future research.

2.Literature

This study builds on an integrated theoretical framework composed of the Technology Acceptance Model (TAM) (Davis, 1989), the Electronic Service Quality (e-SQ) model (Parasuraman et al., 1988), and the Dual-Process Model of Intention (Kahneman, 2012), with consumer satisfaction conceptualized as a mediating variable (Chen, 2012). The TAM emphasizes the roles of perceived usefulness and perceived ease of use in shaping consumers' technology adoption behavior, and has been widely validated in the context of e-commerce and online tourism platforms (Hossain et al., 2023; Tang & Jiang, 2024). The e-SQ model captures consumers' evaluations of online service performance across multiple dimensions, such as reliability, responsiveness, and assurance, and has demonstrated strong predictive power for online satisfaction and loyalty (Ladhari, 2010; Nandankar et al., 2023). Meanwhile, the Dual-Process Model explains how both rational planning and impulsive behavior jointly affect consumer decision-making—a mechanism particularly relevant in socially driven, content-rich e-commerce environments (Grayot, 2020; Stylos, 2022).

The integration of these models responds to recent calls for a multi-theoretical approach to better explain platform-based consumer behavior. By combining cognitive, technological, and experiential dimensions, this study aims to construct a comprehensive framework capable of revealing the complex mechanism through which consumers decide to purchase tourism products via social e-commerce platforms such as TikTok, Xiaohongshu, and WeChat. This approach not only fills the

gap in fragmented research but also offers strategic insights for platform optimization and digital tourism marketing.

The Technology Acceptance Model (TAM), originally developed by Davis (1989), has been extensively employed to predict user behavior in technology-mediated environments. Central to this model are two variables: perceived usefulness, which reflects the degree to which users believe that using a specific system enhances their task performance, and perceived ease of use, which captures the extent to which a system is perceived as effortless to operate. Numerous studies have validated TAM in conventional e-commerce and tourism contexts, confirming that user-friendly and functionally beneficial platforms significantly increase consumer engagement and adoption (Hossain et al., 2023; Kumar et al., 2024). Similarly, the Electronic Service Quality (e-SQ) framework provides another explanatory lens, emphasizing service dimensions such as reliability, responsiveness, system design, and security, all of which contribute to users' overall evaluation of platform experience (Lim et al., 2022; Nandankar et al., 2023). High service quality has been repeatedly linked to stronger behavioral intentions in digital consumption environments, particularly in sectors like online tourism booking and hospitality (Li et al., 2017).

Moreover, the Dual-Process Model of Intention offers a complementary cognitive explanation, positing that decision-making arises from the interaction of two parallel systems: System 1, which governs rapid, intuitive responses, and System 2, which enables slower, reasoned analysis (Kahneman, 2012). This model has been increasingly applied to tourism behavior, revealing that spontaneous impulses (e.g., triggered by visuals or limited-time offers) and deliberate evaluation (e.g., based on peer reviews or product comparisons) often co-exist in shaping consumer choices (Paul & Roy, 2023; Stylos, 2022). However, these three explanatory models—TAM, e-SQ, and the Dual-Process framework—have rarely been tested in the unique context of social e-commerce communities, where content-driven interactions, peer engagement, and algorithmic exposure fundamentally reshape the consumer journey. Particularly in platforms like TikTok or Xiaohongshu, tourism product consumption is no longer merely functional or information-based but is increasingly embedded in immersive, affective, and socially constructed experiences. The explanatory capacity of these models under such socially-mediated and content-rich environments remains largely underexplored.

Therefore, this study proposes the following hypotheses:

H1: The technology acceptance model positively influences the Platform E-commerce.

H2: The electronic service quality positively influences the Platform E-commerce.

H3: The dual-process positively influences the Platform E-commerce.

Consumer satisfaction has long been conceptualized as a key evaluative outcome in digital technology use, particularly within the framework of the Technology Acceptance Model (TAM). According to Davis (1989), perceived usefulness and perceived ease of use are core cognitive beliefs that shape users' attitudes toward technology, and these beliefs have been empirically linked to satisfaction across a range of digital services (Liang et al., 2009). In traditional e-commerce contexts, studies have consistently confirmed that platforms perceived as helpful and effortless tend to evoke stronger satisfaction due to the reduction of functional uncertainty and cognitive effort (Ruiz-Alba et al., 2022; Tang et al., 2023). However, social e-commerce communities—like TikTok—emphasize interactional richness, short-form media, and experiential content, which may alter how users perceive utility and ease (Zhao & Wagner, 2024). Within this socially immersive context, the classic TAM-satisfaction pathway remains under-explored, warranting further examination of whether these perceptions still translate into satisfaction in tourism consumption decisions.

In parallel, electronic service quality (e-SQ) and cognitive-affective decision models offer additional explanatory power for understanding satisfaction formation. The e-SQ model emphasizes dimensions such as responsiveness, reliability, and interface design, all of which shape consumers' evaluations of service performance and trust (Oliveira et al., 2023; Rodríguez et al., 2020). While robust evidence supports e-SQ's impact on satisfaction in hotel and OTA websites (Stevens et al., 2018), little is known about how these service attributes operate in socially driven, user-content-heavy environments like TikTok tourism. At the same time, the Dual-Process Model of Intention suggests that both intuitive responses (System 1) and deliberate reasoning (System 2) influence satisfaction—especially in scenarios that combine aesthetic experience with rational comparison, as is common in social media tourism contexts (Kahneman, 2012; Stylos, 2022; Zhang & Sundar, 2019). Yet, few studies have directly examined how this dual-cognitive mechanism translates into user satisfaction in platform-based tourism consumption.

Based on these considerations, the following hypotheses are proposed:

H4: The technology acceptance model positively influences the consumer satisfaction.

H5: The electronic service quality positively influences the consumer satisfaction.

H6: The dual-process positively influences the consumer satisfaction.

Consumer satisfaction has been widely recognized as a pivotal determinant of behavioral outcomes in e-commerce environments. It reflects a consumer's affective evaluation of whether their expectations have been met or exceeded, influencing both attitudinal loyalty and actual behavioral engagement (Gajewska et al., 2020; Gulfraz et al., 2022). In the context of platform e-commerce—particularly those embedded in social e-commerce ecosystems such as TikTok—satisfaction plays a bridging role

between the service experience and consumers' continued use and purchasing behavior. Empirical studies have demonstrated that when users report high levels of satisfaction with usability, service responsiveness, and product relevance, they are significantly more likely to revisit the platform, recommend it to peers, and develop long-term platform loyalty (Amblee & Bui, 2011; Thakur, 2019). Furthermore, satisfied users often contribute user-generated content and positive word-of-mouth, reinforcing the platform's credibility and community dynamics. Despite such extensive validation in traditional e-commerce settings, there remains a need to explore whether these relationships hold in more dynamic, community-oriented platforms where entertainment, social interaction, and instant gratification co-exist with transactional functions.

Thus, the following hypothesis is proposed:

H7: The consumer satisfaction positively influences the Platform E-commerce.

While consumer satisfaction has been shown to exert direct influence on platform engagement and purchasing behavior, increasing attention has been paid to its *mediating role* in shaping how upstream factors—such as technology acceptance, service quality, and cognitive processing—translate into behavioral outcomes (Qing et al., 2023; Tam et al., 2020). Drawing from the Technology Acceptance Model (TAM), previous research suggests that perceived usefulness and ease of use are not only predictors of adoption intent, but also antecedents of consumer satisfaction (Amin et al., 2014; Hess et al., 2014). In other words, platforms that are perceived as efficient and user-friendly create more favorable user experiences, which in turn increase satisfaction and subsequent platform engagement. Similarly, the Electronic Service Quality (e-SQ) framework posits that service performance dimensions—such as responsiveness, reliability, and information quality—contribute to positive emotional responses and trust, both of which culminate in satisfaction (Felix & Rembulan, 2023; Rodríguez et al., 2020). These findings suggest that satisfaction functions as a psychological conduit through which the perceived functional and emotional value of the platform is internalized and acted upon by consumers.

Moreover, the Dual-Process Theory offers a cognitive perspective by illustrating how satisfaction may emerge from both heuristic (System 1) and analytical (System 2) processing during the consumer decision journey (Evans, 2010; Stylos et al., 2021). Emotional triggers—such as visually appealing layouts, influencer endorsements, and time-sensitive promotions—may generate immediate satisfaction via intuitive processing. Conversely, deliberate reasoning based on product evaluation, price comparison, and risk assessment also contributes to satisfaction when consumers feel confident in their decisions (Featherman et al., 2021; Leonidou et al., 2022). While these theoretical models have been validated independently, the mediating role of satisfaction as a central explanatory mechanism linking these antecedents to consumer behavior on platform-based social e-commerce systems remains underexplored. Hence, this study integrates these strands by proposing three

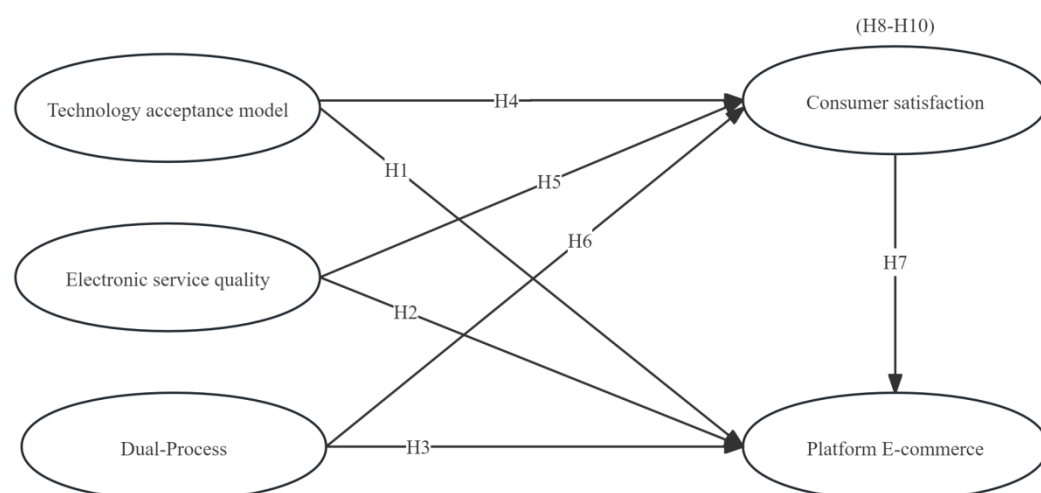
mediating paths, whereby consumer satisfaction transforms input factors into platform e-commerce engagement.

Therefore, the following hypothesis is proposed:

H8: Consumer satisfaction mediates the relationship between the technology acceptance model and the Platform E-commerce.

H9: Consumer satisfaction mediates the relationship between the electronic service quality and the Platform E-commerce.

H10: Consumer satisfaction mediates the relationship between the dual-process and the Platform E-commerce.



The theoretical framework of this paper is shown as follows:

Figure 1. Theoretical framework of this study

3. Methodology

This study employs a quantitative research method using structured questionnaires to systematically examine the key factors influencing consumers' behavior in purchasing tourism products via social e-commerce platforms. This approach enables the collection of standardized, quantifiable data and supports the identification of causal relationships between variables. It is particularly suitable for testing theoretical assumptions derived from the Technology Acceptance Model (TAM), Electronic Service Quality (e-SQ), and Dual-Process Theory. By collecting large-scale questionnaire data and applying Structural Equation Modeling (SEM), the study aims to generate generalizable insights into consumer behavior in the tourism e-commerce context.

The target population comprises consumers actively engaged with tourism-related content and transactions on three major Chinese social e-commerce platforms: TikTok (Douyin), Xiaohongshu (RED), and WeChat Mini Programs. These platforms are selected for their strong influence on travel-related social commerce, as they serve as primary channels for young consumers to discover, evaluate, and purchase tourism products. Eligible respondents meet the following criteria: (1) aged 18 years or older; (2) have searched for or purchased tourism products on at least one of these platforms within the past year; and (3) are capable of completing the questionnaire independently.

The study adopts a combination of purposive and convenience sampling. Initially, participants were targeted through social media influencers, travel communities, and WeChat groups to ensure relevance to the research context. The questionnaire was then distributed via Questionnaire Star, a widely used Chinese online survey tool. Data collection was conducted between February and March 2025. A total of 652 responses were received, and after removing incomplete, inconsistent, or abnormally short submissions, 615 valid responses remained. This sample size meets the statistical requirement for SEM analysis, as recommended by Memon et al. (2020).

The questionnaire consists of five main sections, including demographic information and four core measurement constructs:

Basic Information: This section gathers demographic and background data, including gender, age, education, occupation, frequency of platform use, and past experience with purchasing tourism products. It uses a mix of single-choice and multiple-choice questions.

Perceived Usefulness and Ease of Use (TAM): This section measures consumers' perceptions of the usefulness and ease of use of social e-commerce platforms for tourism product consumption. It adapts a scale originally developed by Salamah et al. (2022) for mobile commerce, revised to reflect the travel product context on platforms like TikTok, Xiaohongshu, and WeChat. A total of 10 items (TA1–TA10) are included.

Electronic Service Quality (e-SQ): This construct evaluates users' perceptions of service quality across visual design, responsiveness, safety, and customer support. The items are adapted from Kant et al. (2017) and revised to reflect the characteristics of social e-commerce tourism services. The scale includes 20 items grouped under five sub-dimensions: Tangibles, Assurance, Empathy, Reliability, and Responsiveness (ES1–ES20).

Consumer Satisfaction: This section assesses satisfaction with tourism-related transactions on social e-commerce platforms. Based on the scale by Salamah et al. (2022), it includes two sub-dimensions: Overall Satisfaction and Decision Satisfaction. The revised version includes 4 items (CS1–CS4), which reflect overall user experience and the perceived wisdom of their purchasing decisions.

Purchase Intention (Dual-Process): This construct is informed by the dual-path decision-making model proposed by Chou et al. (2014), comprising two sub-dimensions: Behavioral Expectation (Planning) and Behavioral Willingness (Action). It includes 7 items (PC1–PC7) designed to measure both deliberate and intuitive buying tendencies in the context of travel product purchases on e-commerce platforms.

All items use a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree) to ensure consistent measurement across variables. The questionnaire underwent expert review and pilot testing prior to distribution to enhance clarity and content validity.

Before the formal data collection, a pre-test was conducted with 104 valid responses from users of Douyin, Xiaohongshu, and WeChat to evaluate the reliability and validity of the survey instrument. The results demonstrated high internal consistency, with all Cronbach's α values exceeding 0.85, indicating strong reliability. Construct validity was also confirmed through a Kaiser-Meyer-Olkin (KMO) value of 0.889 and a significant Bartlett's Test of Sphericity ($p < 0.001$), affirming the data's suitability for factor analysis. Exploratory factor analysis further revealed clear factor structures with strong item loadings and minimal cross-loadings. These findings confirm that the measurement model is both reliable and valid, providing a solid foundation for the subsequent large-scale empirical investigation.

4. Results

4.1 Sample basic information

Table 1 presents the essential demographic characteristics of the respondents, providing a solid foundation for understanding consumer profiles in the context of tourism-related purchases on social e-commerce platforms. The gender distribution is relatively balanced, with 46.0% male and 54.0% female respondents, ensuring representation from both genders. The age distribution is similarly diverse: 21.5% of participants are under 30 years old, 26.0% are aged 30–40, 26.5% fall within the 40–50 range, and another 26.0% are over 50. This spread captures a broad spectrum of life stages and generational perspectives, which is particularly relevant for analyzing differentiated digital consumption behaviors. Regarding household income, 10.6% reported earning less than ¥100,000 annually, while a majority fell into middle- and high-income brackets—28.6% earn between ¥100,000 and ¥200,000, 30.1% between ¥200,000 and ¥300,000, and 30.7% exceed ¥300,000. Educational attainment is notably high, with 32.8% below undergraduate level, 35.9% holding a master's degree, and 31.2% possessing a doctoral degree. This level of education is indicative of a digitally literate population capable of engaging with complex e-commerce platforms and making informed tourism consumption decisions.

The behavioral data also reveal important insights into how respondents interact with tourism products on social media e-commerce platforms. As shown in Table 1, a significant proportion of participants reported purchasing various types of tourism-related services. For example, 52.0% had purchased transportation services, 51.1% food and beverages, 54.1% customized tourism services, and 57.4% business tourism packages. Meanwhile, items such as tourism activities (38.7%), tour guide services (40.8%), and shopping and souvenirs (38.9%) showed relatively lower purchase rates, suggesting selective consumer engagement depending on product type. Additionally, the data show multi-platform usage behavior, with 32.5% of respondents frequently using Tiktok, 29.8% using Xiaohongshu, and 37.7% using WeChat Video Channels. These figures underscore the diverse pathways through which consumers discover and purchase tourism products, highlighting the central role of social media in shaping tourism-related decision-making. Such platform-specific engagement patterns reinforce the significance of tailoring digital marketing strategies to fit the unique features and user cultures of each platform in the tourism e-commerce environment.

Table 1. Essential Information

		Frequency	Percent
Gender	male	283	46.0
	female	332	54.0
Age	<30	132	21.5
	30-40	160	26.0
	40-50	163	26.5
	>50	160	26.0
	<100000 ¥	65	10.6
Your household income	100000 ¥ -200000 ¥	176	28.6
	200000 ¥ -300000 ¥	185	30.1
	>300000 ¥	189	30.7
Your educational background	<Undergraduate	202	32.8
	master	221	35.9
	doctor	192	31.2

Please select the tourist products you bought in	Transportation services	Yes	313	50.9
		No		
	Accommodation services		302	49.1
	Food and Beverages	Yes	314	51.1
		No	301	48.9
	Tourist attractions			
	Tourism activities	Yes	286	46.5
	Tourism routes and itinerary arrangements	No	329	53.5
	Tour Guide Service	Yes	299	48.6
	Travel insurance	No	316	51.4
	Shopping and specialties	Yes	333	54.1
		No		
	Customized tourism services		282	45.9
	Cultural Experience	Yes	316	51.4
		No	299	48.6
	Tourism education			
	Vacation package	Yes	353	57.4
	Business tourism	No	262	42.6
	Tourism consulting and information services	Yes	320	52.0
		No		
			295	48.0
	Transportation services			
	Accommodation	Yes	296	48.1

Tiktok and tick (Multiple Selection)	services	No		
	Food and Beverages		319	51.9
	Tourist attractions	Yes	238	38.7
	Tourism activities	No	377	61.3
	Tourism routes and itinerary arrangements	Yes	251	40.8
		No	364	59.2
	Tour Guide Service			
	Travel insurance	Yes	239	38.9
	Shopping and specialties	No	376	61.1
	Customized tourism services	Yes	297	48.3
		No		
	Cultural Experience		318	51.7
	Tourism education	Yes	262	42.6
	Vacation package	No	353	57.4
	Business tourism	Yes	279	45.4
		No	336	54.6
Social media names you use		Tiktok	200	32.5
		Xiaohongshu	183	29.8
		WeChat Video No.	232	37.7

4.2 Reliability analysis

Table 2 presents the results of the reliability analysis conducted on the key constructs used in this study, assessed through Cronbach's alpha coefficients. All five latent variables—Technology Acceptance Model (TAM), Electronic Service Quality (e-SQ), Consumer Satisfaction, Dual-Process, and Platform E-commerce—exhibited high levels of internal consistency, with Cronbach's α values well above the conventional threshold of 0.70 (Jiang et al., 2024). Specifically, TAM, measured with

10 items, achieved a reliability coefficient of 0.922, indicating strong coherence in measuring consumers' perceptions of usefulness and ease of use on social e-commerce platforms.

Electronic Service Quality, comprising 20 items, demonstrated exceptional internal consistency with a Cronbach's α of 0.960, underscoring the scale's robustness in capturing multidimensional service aspects such as responsiveness, assurance, empathy, reliability, and tangibles. The Consumer Satisfaction scale, measured with 4 items, yielded a reliability score of 0.832, reflecting solid internal alignment in assessing both overall and decision-based satisfaction. Similarly, the Dual-Process construct, which captures both intuitive and analytical consumer decision mechanisms, reported a Cronbach's α of 0.895, confirming the reliability of the cognitive-behavioral dimensions. Finally, the Platform E-commerce scale, consisting of 6 items covering open-source, SaaS, and headless commerce dimensions, achieved a coefficient of 0.884, validating the instrument's reliability in evaluating functional perceptions of digital commerce infrastructure.

Collectively, these results affirm the reliability of the survey instruments employed, ensuring that the constructs used in this research are measured with internal consistency. This methodological robustness provides a strong empirical foundation for subsequent structural modeling and hypothesis testing, and it reinforces the validity of findings on consumer behaviors in the context of tourism product purchases via social e-commerce platforms.

Table 2. Reliability Statistics

Study variables	Number of questions	Cronbach's α
Technology acceptance model	10	0.922
Electronic service quality	20	0.960
Consumer satisfaction	4	0.832
Dual-Process	7	0.895
Platform E-commerce	6	0.884

4.3 Validity test

The results of the validity test are presented in Table 3, which includes both the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The KMO value of 0.971 is considered excellent and far exceeds the commonly accepted threshold of 0.60 (Tang & Li, 2024), indicating that the data are highly suitable for factor analysis. This exceptionally high KMO statistic reflects the presence of compact patterns of correlations among the items and affirms that the sample size is sufficient to extract reliable and interpretable factors for the underlying constructs. Furthermore, Bartlett's Test of Sphericity yielded a chi-square value of 15482.095 with 820

degrees of freedom, and a significance level of $p < 0.001$. The test result is statistically significant, demonstrating that the correlation matrix is not an identity matrix and that sufficient inter-item correlations exist to justify the application of exploratory and confirmatory factor analysis. Together, these two indicators confirm the construct validity of the measurement model and provide strong empirical support for the appropriateness of the data structure.

These findings validate the adequacy of the survey instrument in measuring latent constructs such as perceived usefulness, service quality, satisfaction, and behavioral intention within the context of social e-commerce tourism platforms. The high sampling adequacy and significant inter-item correlations ensure a robust foundation for further structural equation modeling and hypothesis testing in subsequent stages of the study.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.971
Bartlett's Test of Sphericity	Approx. Chi-Square	15482.095
	df	820
	Sig.	.000

4.4 Measurement model and fit metrics

Figure 2 illustrates the confirmatory factor analysis (CFA) model employed to assess the validity and reliability of the latent constructs measured in this study. The diagram presents standardized factor loadings for each observed variable (indicator) and the interrelationships among the five core latent variables: Technology Acceptance Model, Electronic Service Quality, Consumer Satisfaction, Dual-Process, and Platform E-commerce.

All factor loadings exceed the recommended threshold of 0.70 (Hair et al., 2020), suggesting that the measurement items exhibit strong convergent validity and are robust indicators of their respective constructs. For instance, the loadings for the Technology Acceptance Model range from 0.717 to 0.770, indicating a consistently strong association between indicators such as perceived usefulness (PU1–PU5) and ease of use (PE1–PE4) with the latent factor. Similarly, the Electronic Service Quality construct shows stable loadings from 0.707 to 0.785 across various service quality dimensions (assurance, empathy, reliability, responsiveness, and tangibility), confirming its multidimensional robustness. The model also reveals moderate to strong inter-factor correlations, reflecting the interconnected nature of technology, service, cognitive processing, and satisfaction in shaping platform-based consumer behaviors. Notably, Electronic Service Quality shows a high correlation (0.657) with Consumer Satisfaction, supporting theoretical expectations that perceived service performance is a critical determinant of user satisfaction. Likewise, Dual-Process and Consumer

Satisfaction exhibit a correlation of 0.527, aligning with the theoretical assumption that both intuitive and analytical decision pathways contribute to satisfaction formation.

This measurement model demonstrates strong construct validity and reliability. The tightly clustered loadings and meaningful inter-construct relationships validate the survey structure and offer empirical support for the hypothesized structural relationships to be tested in the SEM phase of the analysis.

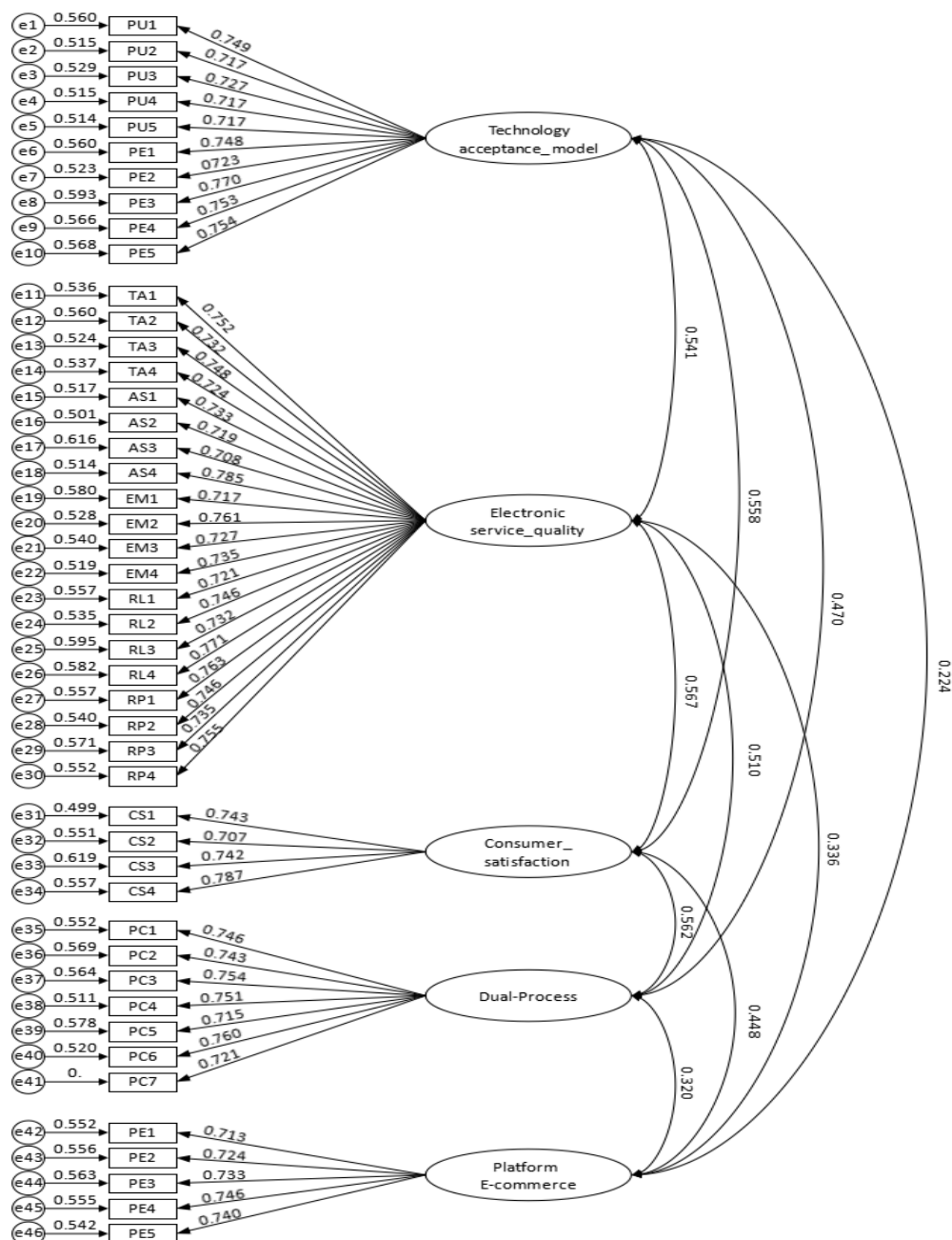


Figure 2. Measurement model

Table 4 presents the fit indices for the measurement model, offering strong empirical evidence of its adequacy and robustness. All reported fit statistics meet or surpass commonly accepted thresholds (Hair et al., 2020), indicating that the model fits the data well and supports the validity of the underlying constructs.

The chi-square to degrees of freedom ratio (χ^2/df) is 1.518, which is well below the recommended threshold of 3, suggesting minimal discrepancy between the observed and estimated covariance matrices. This low ratio reflects an excellent overall model fit. The Root Mean Square Error of Approximation (RMSEA) value of 0.029 is far below the acceptable upper limit of 0.08, indicating a close fit of the model to the data with minimal error per degree of freedom. RMSEA values below 0.05 are often interpreted as a sign of very good fit, further confirming the robustness of the measurement model. Additionally, the Goodness-of-Fit Index (GFI) and Adjusted Goodness-of-Fit Index (AGFI) are 0.917 and 0.908, respectively—both exceeding the 0.90 benchmark, which denotes a satisfactory level of explained variance in the model. These values suggest that the model structure accounts for a substantial portion of the covariance among the observed variables. Further supporting this conclusion are the Normed Fit Index (NFI = 0.926), Tucker-Lewis Index (TLI = 0.972), and Comparative Fit Index (CFI = 0.973), all of which surpass the 0.90 threshold. Particularly, the CFI and TLI values approaching 1.0 highlight a near-perfect fit and confirm that the hypothesized measurement model significantly improves over a null model.

Collectively, these fit metrics validate the overall adequacy of the measurement model and provide a strong foundation for the subsequent structural equation modeling (SEM) to test hypothesized relationships among the latent variables in the context of platform-based tourism product purchases.

Table 4. Measure model fit metrics

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	TLI	CFI
Reference standards	<3	<0.08	>0.9	>0.9	>0.9	>0.9	>0.9
Result	1.518	0.029	0.917	0.908	0.926	0.972	0.973

4.5 Convergent validity

Table 5 presents the results of the convergent validity analysis, which assesses the degree to which the items that are intended to measure the same construct are actually related. This is evaluated through three key indicators: standardized factor loadings, composite reliability (CR), and average variance extracted (AVE), following the criteria recommended by Fornell and Larcker (1981).

All standardized factor loadings across the five latent constructs exceed the threshold value of 0.70 or closely approximate it, indicating that each indicator contributes significantly to its corresponding latent variable. This is consistent with the expectation that strong loadings reflect a high level of shared variance among items within the same construct.

The Composite Reliability (CR) values for all constructs are above 0.84, with the Technology Acceptance Model and Electronic Service Quality reaching 0.924 and 0.960 respectively—indicating excellent internal consistency reliability. These results surpass the recommended CR threshold of 0.70, affirming that the indicators consistently represent their respective latent variables (Hair et al., 2020).

Similarly, the Average Variance Extracted (AVE) values for all constructs are above the benchmark of 0.50, which indicates that the constructs explain more than half of the variance of their indicators on average. Specifically, Technology Acceptance Model and Electronic Service Quality have AVE values of 0.550 and 0.546, while Consumer Satisfaction, Dual-Process, and Platform E-commerce yield AVE values of 0.574, 0.537, and 0.543 respectively. These values confirm the presence of adequate convergent validity across all measured constructs.

Overall, the data in Table 5 demonstrate robust convergent validity, indicating that the measurement model reliably captures the underlying theoretical constructs within the context of platform-based tourism product consumption. This serves as a solid foundation for subsequent analyses of the structural relationships among these constructs.

Table 5. Convergence Validity

Latent variables	Observation indicators	Factor loading	CR	AVE
Technology acceptance model	PU1	0.717	0.924	0.550
	PU2	0.717		
	PU3	0.748		
	PU4	0.723		
	PU5	0.770		
	PE1	0.753		
	PE2	0.754		
	PE3	0.752		
	PE4	0.732		
	PE5	0.748		

Electronic service quality	TA1	0.724	0.960	0.546
	TA2	0.733		
	TA3	0.719		
	TA4	0.708		
	AS1	0.785		
	AS2	0.717		
	AS3	0.761		
	AS4	0.727		
	EM1	0.735		
	EM2	0.721		
	EM3	0.746		
	EM4	0.732		
	RL1	0.771		
	RL2	0.763		
	RL3	0.746		
	RL4	0.735		
Consumer satisfaction	RP1	0.755	0.844	0.574
	RP2	0.743		
	RP3	0.707		
	RP4	0.742		
	CS1	0.787		
	CS2	0.746		
	CS3	0.743		
	CS4	0.754		
Dual-Process	PC1	0.751	0.890	0.537
	PC2	0.715		

	PC3	0.760		
	PC4	0.721		
	PC5	0.717		
	PC6	0.717		
	PC7	0.748		
	PE1	0.725		
	PE2	0.732		
	PE3	0.712		
Platform E-commerce	PE4	0.705	0.857	0.543
	PE5	0.781		
	PC6	0.727		

4.6 Discriminant validity

Table 6 presents the results of the discriminant validity analysis, which evaluates the extent to which a given construct is truly distinct from other constructs in the measurement model. Following Fornell and Larcker (1981)'s criterion, discriminant validity is established when the square root of the Average Variance Extracted (AVE) for each construct (reported on the diagonal) exceeds the corresponding inter-construct correlations (off-diagonal elements) in the same row and column.

The diagonal values represent the square roots of AVE for each latent construct—Technology Acceptance Model (0.742), Electronic Service Quality (0.739), Consumer Satisfaction (0.758), Dual-Process (0.733), and Platform E-commerce (0.747). Each of these values is higher than any of the correlations between that construct and others, thereby confirming that each latent variable shares more variance with its own indicators than with those of other constructs. For instance, the correlation between Technology Acceptance Model and Electronic Service Quality is 0.541 ($p < 0.001$), which is notably lower than the square root of AVE for either construct (0.742 and 0.739 respectively). Similar patterns are evident across all construct comparisons. These differences consistently demonstrate that the constructs are empirically distinct, supporting the model's discriminant validity.

In sum, the results of the discriminant validity test confirm that the measurement model distinguishes well between theoretically separate constructs. This reinforces the robustness of the model and ensures that the observed structural relationships in the subsequent SEM analysis are not confounded by construct redundancy.

Table 6. Discriminant validity test

Latent variables	1	2	3	4	5
Technology acceptance model	0.742				
Electronic service quality	0.541 ***	0.739			
Consumer satisfaction	0.558 ***	0.567 ***	0.758		
Dual-Process	0.470 ***	0.510 ***	0.562 ***	0.733	
Platform E-commerce	0.492 ***	0.503 ***	0.553 ***	0.591 ***	0.747

Note: The diagonal is the square root of the corresponding dimension AVE

***: $p < 0.001$

4.7 Common method bias

To ensure the credibility of the survey-based quantitative findings, a Harman's single-factor test was performed to assess the presence of common method bias (CMB), which can arise when data for both independent and dependent variables are obtained from the same source. Table 7 summarizes the results of the exploratory factor analysis (EFA), which extracted multiple components based on the total variance explained.

In the Initial Eigenvalues column, the first unrotated factor yielded an eigenvalue of 16.157, explaining 39.408% of the total variance. This value is significantly below the conservative threshold of 50%, commonly used to signal the presence of CMB. The subsequent components also contributed meaningfully to the variance: the second factor explained an additional 9.414%, the third 6.890%, and the fourth 3.726%, cumulatively accounting for 59.438% of the total variance before rotation. In the Rotated Sums of Squared Loadings—which provide a clearer picture of the factor structure after varimax rotation—the first factor explained 27.121%, and the cumulative variance explained by the first four factors was 59.438%. This dispersion across several factors indicates that the observed variance is not dominated by a single latent factor.

Collectively, these results confirm that common method variance is not a major concern in this study. The total variance explained by the first factor is well below the critical 50% threshold in both

unrotated and rotated solutions. This suggests that the observed relationships among constructs in this research—such as the influence of technology acceptance, electronic service quality, and dual-process mechanisms on consumer satisfaction and e-commerce platform engagement—are not significantly inflated by measurement artifacts. Therefore, the data can be considered robust and suitable for further structural equation modeling analysis.

Table 7. Common variance bias test results

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	16.157	39.408	39.408	16.157	39.408	39.408	11.120	27.121	27.121
2	3.860	9.414	48.822	3.860	9.414	48.822	6.166	15.039	42.160
3	2.825	6.890	55.711	2.825	6.890	55.711	4.523	11.031	53.191
4	1.528	3.726	59.438	1.528	3.726	59.438	2.561	6.246	59.438

4.8 Model fit metrics for the structural equation model

Table 8 provides a comprehensive assessment of the structural model's overall goodness-of-fit through seven commonly accepted fit indices, demonstrating the robustness and empirical adequacy of the model developed to explain consumer purchasing behavior on social e-commerce platforms. The chi-square to degrees of freedom ratio (χ^2/df) is 1.518, which is well below the generally accepted threshold of 3.0 (Hair et al., 2020), indicating that the model exhibits a good fit between the hypothesized structure and the observed data.

The Root Mean Square Error of Approximation (RMSEA) is 0.029, which is significantly lower than the upper limit of 0.08, and even below the more stringent threshold of 0.05, thus suggesting that the model has an excellent approximation of fit in the population (Cudeck, 2000). The Goodness-of-Fit Index (GFI) and the Adjusted Goodness-of-Fit Index (AGFI) are reported as 0.917 and 0.909 respectively. Both exceed the conventional cutoff of 0.90, supporting the model's ability to reproduce the sample covariance matrix effectively. Furthermore, the Normed Fit Index (NFI) is 0.926, also surpassing the minimum requirement of 0.90, suggesting that the model improves

substantially over a null or independence model. Incremental fit measures are particularly strong. The Tucker-Lewis Index (TLI) and the Comparative Fit Index (CFI) are recorded at 0.972 and 0.973, respectively—both far above the 0.90 benchmark and approaching the ideal threshold of 0.95, indicating that the proposed model fits the data significantly better than alternative models and accounts well for model complexity.

In summary, all indices collectively affirm that the structural equation model achieves a high level of statistical fit. These findings validate the model's internal structure, supporting the hypothesized relationships between latent constructs—namely, Technology Acceptance Model, Electronic Service Quality, Dual-Process cognition, Consumer Satisfaction, and Platform E-commerce engagement—within the empirical context of tourism-related consumer behavior on platforms such as TikTok, Xiaohongshu, and WeChat.

Table 8. Model fit metrics

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	TLI	CFI
Reference standards	<3	<0.08	>0.9	>0.9	>0.9	>0.9	>0.9
Result	1.518	0.029	0.917	0.909	0.926	0.972	0.973

4.9 Path analysis for direct effects

Table 9 presents the results of the path analysis within the structural equation model, providing empirical validation for the direct hypothesized relationships among the core constructs of the study. All seven proposed direct paths (H1 to H7) are statistically significant, with p-values below 0.01, and most at the $p < 0.001$ level (denoted by ***), thereby offering robust support for the theoretical framework underpinning consumer behavior in social e-commerce environments.

Starting with H1, the path from Technology Acceptance (TA) to Platform E-commerce (PE) is significant ($\beta = 0.151$, C.R. = 3.058, $p = 0.002$), suggesting that consumers who perceive platforms as useful and easy to use are more inclined to engage with tourism-related e-commerce services. This reinforces the relevance of the Technology Acceptance Model in predicting adoption behavior in digital tourism contexts. For H2, the direct effect of Electronic Service Quality (ES) on Platform E-commerce is also confirmed ($\beta = 0.355$, C.R. = 7.216, $p < 0.001$), indicating that service quality factors—such as responsiveness, reliability, and usability—substantially influence consumer platform engagement. This finding is aligned with previous service quality literature (Rodríguez et al., 2020). In H3, the influence of Dual-Process cognition (PC) on Platform E-commerce reveals the strongest direct effect among all paths ($\beta = 0.375$, C.R. = 7.694, $p < 0.001$), highlighting that both intuitive (System 1) and deliberative (System 2) thought processes critically shape consumers' behavioral responses and

platform usage decisions. Hypotheses H4 to H6 examine predictors of Consumer Satisfaction (CS). The effect of Technology Acceptance on Consumer Satisfaction is significant ($\beta = 0.347$, C.R. = 6.131, $p < 0.001$), supporting the notion that platforms perceived as useful and user-friendly enhance consumer satisfaction. Similarly, Electronic Service Quality positively predicts satisfaction ($\beta = 0.232$, C.R. = 4.682, $p < 0.001$), underscoring the role of service reliability and system quality in shaping consumer experiences. Additionally, Dual-Process cognition has a notable impact on satisfaction ($\beta = 0.290$, C.R. = 5.673, $p < 0.001$), suggesting that when consumers perceive the purchasing experience as both intuitive and logically sound, their satisfaction increases. Finally, H7 confirms the mediating role of Consumer Satisfaction in influencing Platform E-commerce engagement ($\beta = 0.430$, C.R. = 7.804, $p < 0.001$). This strong effect emphasizes that satisfied users are more likely to engage repeatedly and deeply with e-commerce platforms when purchasing tourism products, thereby validating satisfaction as a pivotal mechanism driving platform loyalty and use.

Table 9. Structural equation model path test

Hypothesis	Path	Estimate	β	S.E.	C.R.	P	Results
H1	TA→PE	0.147	0.151	0.048	3.058	0.002	Accepted
H2	ES→PE	0.343	0.355	0.048	7.216	***	Accepted
H3	PC→PE	0.394	0.375	0.051	7.694	***	Accepted
H4	TA→CS	0.348	0.347	0.057	6.131	***	Accepted
H5	ES→CS	0.244	0.232	0.052	4.682	***	Accepted
H6	PC→CS	0.278	0.290	0.049	5.673	***	Accepted
H7	CS→PE	0.414	0.430	0.053	7.804	***	Accepted

Note: TA: Technology acceptance model; ES: Electronic service quality; CS: Consumer satisfaction; PC: Dual-Process; PE: Platform E-commerce

***: $p < 0.001$

Figure 3 illustrates the structural equation model developed to investigate the factors influencing consumer engagement with platform e-commerce in the context of tourism product purchases. The model comprises five latent constructs: Technology Acceptance Model (TAM), Electronic Service Quality (ESQ), Dual-Process, Consumer Satisfaction, and Platform E-commerce. Each latent construct is measured through multiple observed variables, all of which demonstrate strong standardized factor loadings, confirming the model's measurement reliability. For instance, TAM is measured by PU (loading = 0.749) and PE (0.711); ESQ by TA (0.536), AS (0.752), EM (0.735), RL (0.719), and RP (0.754); and Dual-Process by BE (0.751) and BW (0.754). In terms of structural relationships, the

Technology Acceptance Model ($\beta = 0.347$), Electronic Service Quality ($\beta = 0.232$), and Dual-Process ($\beta = 0.290$) all exert significant direct effects on Consumer Satisfaction. These three constructs also demonstrate direct effects on Platform E-commerce, with respective path coefficients of $\beta = 0.151$ (TAM), $\beta = 0.290$ (ESQ), and $\beta = 0.375$ (Dual-Process). Crucially, Consumer Satisfaction emerges as a mediating variable, exerting a notable positive influence on Platform E-commerce behavior ($\beta = 0.430$). This indicates that satisfaction plays a central role in transforming consumers' technological perceptions, service quality evaluations, and dual-processing experiences into actual engagement with tourism e-commerce platforms.

All factor loadings for outcome variables are strong as well—for example, OS (0.753) and DS (0.717) for Consumer Satisfaction; PS (0.753), SA (0.717), and HC (0.737) for Platform E-commerce—further supporting the validity of the model. In sum, this model provides empirical evidence for the integrated influence of cognitive (TAM), experiential (ESQ), and psychological (Dual-Process) mechanisms on tourism consumers' e-commerce behaviors, with Consumer Satisfaction serving as a pivotal mediator within the decision-making process.

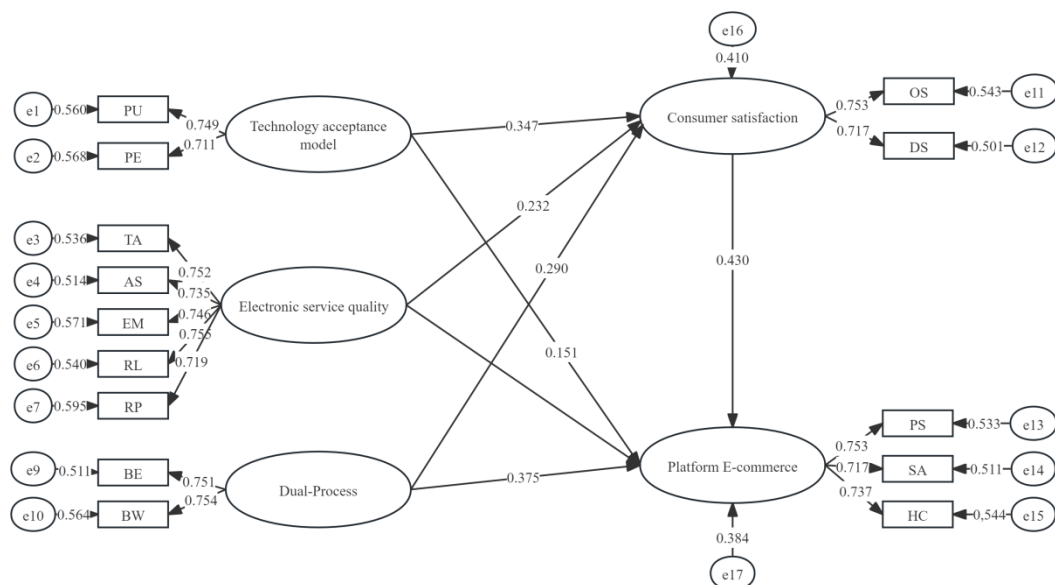


Figure 3. Path Diagram for the structural model

4.10 Path analysis for indirect effects

Table 10 reports the results of the mediation effect analysis using the bootstrap method, which was employed to evaluate the indirect pathways among the constructs within the structural model. The findings reveal statistically significant mediating effects of consumer satisfaction in all three hypothesized paths. Specifically, for Hypothesis 8 (H8), the indirect path from Technology Acceptance Model (TA) through Consumer Satisfaction (CS) to Platform E-commerce (PE) yielded an effect size of

0.119 with a standard error (SE) of 0.031, and a bias-corrected 95% confidence interval ranging from 0.064 to 0.187. This indicates a significant mediating role of CS in the relationship between TA and PE. Similarly, Hypothesis 9 (H9) tested the mediating effect of CS between Electronic Service Quality (ES) and PE, showing an effect size of 0.137 (SE = 0.038), with a confidence interval of 0.073 to 0.227, thereby confirming its significance. For Hypothesis 10 (H10), the mediation path from Dual-Process (PC) through CS to PE presented the strongest effect among the three, with an effect size of 0.157 (SE = 0.043) and a confidence interval between 0.078 and 0.246. All confidence intervals exclude zero, indicating robust mediation effects at the $p < 0.05$ level. Collectively, these results affirm the central role of consumer satisfaction as a psychological mechanism that translates perceptions of technology, service quality, and decision-making styles into actual engagement with platform e-commerce in the tourism context.

Table 10. Mediation effect bootstrap test

Hypothesis	Mediation path	Effect size	SE	Bias-Corrected 95%CI		Results
H8	TA→CS→PE	0.119	0.031	0.064	0.187	Accepted
H9	ES→CS→PE	0.137	0.038	0.073	0.227	Accepted
H10	PC→CS→PE	0.157	0.043	0.078	0.246	Accepted

Note: TA: Technology acceptance model; ES: Electronic service quality; CS: Consumer satisfaction; PC: Dual-Process; PE: Platform E-commerce

4.11 Total Effects

Table 11 presents the total effects derived from the structural equation modeling, encompassing both direct and indirect influences of the antecedent constructs on consumer satisfaction (CS) and platform e-commerce engagement (PE). The results demonstrate that Electronic Service Quality (ES) exerts the strongest total effect on Consumer Satisfaction, with an effect size of 0.394 (SE = 0.068, 95% CI [0.258, 0.525]), followed closely by the Technology Acceptance Model (TA) ($\beta = 0.343$, SE = 0.06) and the Dual-Process (PC) ($\beta = 0.332$, SE = 0.061). These findings reinforce the centrality of service quality, perceived usefulness/ease of use, and decision-processing modes in enhancing consumers' overall satisfaction on social e-commerce tourism platforms. Regarding Platform E-commerce as the outcome variable, all antecedents exhibit significant total effects, with ES again leading ($\beta = 0.381$, SE = 0.068, 95% CI [0.241, 0.518]), followed by PC ($\beta = 0.3631$, SE = 0.062) and TA ($\beta = 0.266$, SE = 0.065). Notably, Consumer Satisfaction itself has a substantial total effect on PE ($\beta = 0.348$, SE = 0.072), highlighting its critical mediating and predictive role in driving engagement. All confidence intervals exclude zero, confirming the statistical significance of the effects at the $p < 0.05$ level. These

cumulative insights underscore the importance of integrating technological perceptions, service quality dimensions, and cognitive-emotional mechanisms to foster user engagement in tourism-oriented e-commerce environments.

Table 11. Total Effects

Effect path	Effect size	SE	Bias-Corrected	
			95%CI	
TA→CS	0.343	0.06	0.218	0.459
ES→CS	0.394	0.068	0.258	0.525
PC→CS	0.332	0.061	0.272	0.534
TA→PE	0.266	0.065	0.145	0.403
ES→PE	0.381	0.068	0.241	0.518
PC→PE	0.3631	0.062	0.267	0.534
CS→PE	0.348	0.072	0.195	0.481

Note: TA: Technology acceptance model; PE: Perceived the ease of use; ES: Electronic service quality; CS: Consumer satisfaction; PC: Dual-Process; PE: Platform E-commerce

Discussion and conclusion

5.1 Theoretical Implications

This study offers a significant theoretical advancement by proposing and empirically validating a multi-layered causal model that explains how consumers decide to purchase tourism products on social e-commerce platforms. Integrating the Technology Acceptance Model (TAM), Electronic Service Quality (e-SQ), and Dual-Process Theory into a unified framework, and positioning consumer satisfaction as a central mediating mechanism, this research deepens our understanding of how technological perceptions, service evaluations, and psychological processing jointly shape platform engagement in tourism-related consumption.

A central theoretical contribution lies in the contextual reconfiguration of the TAM. While previous studies have primarily applied TAM in utilitarian systems such as mobile banking or traditional online travel agencies (Chen & Tsai, 2019; Wani et al., 2017), this research shows that perceptions of usefulness and ease of use remain crucial even in socially immersive, content-saturated environments like TikTok and Xiaohongshu. These platforms foreground entertainment, peer

engagement, and visual stimulation—features not typically emphasized in TAM literature. Yet, this study demonstrates that the TAM framework still holds predictive power when consumer engagement is framed not solely as task completion, but as a socially embedded and emotionally charged experience. In this way, the study extends TAM’s theoretical reach into the domain of affective, interaction-driven tourism consumption.

Equally important is the study’s refinement of the e-SQ framework. Traditional service quality models often emphasize system reliability, security, and interface performance (Seth et al., 2005; Xu et al., 2013), but this research reveals that in social e-commerce settings, perceived service quality must also account for user expectations around responsiveness, empathy, and platform-driven interaction. These dimensions become particularly salient in tourism, where consumers seek reassurance, personalization, and emotional resonance. By confirming that service quality exerts both direct and satisfaction-mediated effects on consumer behavior, the study enhances the explanatory depth of e-SQ in socially contextualized digital environments.

Moreover, this research contributes a novel application of Dual-Process Theory to digital tourism, a context in which intuitive browsing and deliberate evaluation often occur simultaneously. Existing studies have rarely captured how these two cognitive systems interact in social e-commerce ecosystems (Song et al., 2019; Sussan & Acs, 2017). By validating the dual-process pathway as a determinant of both satisfaction and behavioral outcomes, the study demonstrates that consumer decisions on platforms like Douyin and Xiaohongshu are not merely impulsive or planned—they are dynamically negotiated through a cognitive-emotional interplay shaped by social content, platform cues, and real-time feedback loops. This insight advances the theoretical conversation on how consumers process information in rapidly evolving, visually driven commerce settings.

By integrating these perspectives, the study does more than juxtapose existing theories—it synthesizes them into a cohesive explanatory model tailored for tourism consumption in the platform economy. In contrast to earlier research that treats technology adoption, service evaluation, or cognitive processing in isolation, this work articulates a mediated structure in which consumer satisfaction functions as the psychological conduit linking upstream perceptions with downstream actions. This not only enriches the conceptual clarity around satisfaction as a bridging variable but also offers a scalable theoretical blueprint for future research on tourism behavior within algorithmically curated and socially interactive environments.

5.2 Practical Implications

This study provides empirical evidence for the complex mechanisms underlying consumers’ engagement with tourism-related products on social e-commerce platforms. By integrating the Technology Acceptance Model (TAM), Electronic Service Quality (e-SQ), and Dual-Process Theory

into a unified explanatory framework, the findings not only validate the significance of technological and service perceptions but also emphasize the mediating role of consumer satisfaction in linking cognitive evaluation with actual purchasing behavior. Such insights are particularly relevant in the context of content-driven platforms like TikTok and Xiaohongshu, where tourism products are experienced and assessed within socially constructed, emotionally rich digital environments.

For platform developers and social e-commerce operators, these results suggest that enhancing user engagement requires more than technical optimization. While ease of use and perceived usefulness remain foundational for attracting and retaining users, the data indicate that satisfaction emerges not merely from rational evaluation but also from affective and experiential dimensions. This calls for design strategies that integrate personalized recommendation systems with emotionally engaging content formats—such as interactive short videos or algorithmically curated travel stories—that simultaneously trigger System 1 (intuitive) responses and enable System 2 (deliberative) reflections. Platforms should thus move toward hybrid interaction models that accommodate both spontaneous and reasoned user journeys.

Tourism product suppliers and digital marketers may also derive actionable implications from this study. Since consumer satisfaction mediates the effects of service quality and cognitive pathways on purchase behavior, maintaining a high standard of responsiveness, reliability, and empathy becomes essential—not only for conversion but also for fostering platform-based loyalty. This implies that service providers must focus not only on pre-sale communication and visual presentation but also on post-sale follow-up and feedback responsiveness. The co-creation of value—through, for instance, real-time interaction during livestreamed sales or through curated user-generated content—can further amplify both informational trust and emotional connection, which are critical in the current social commerce environment.

At the level of public governance and destination management, the findings point to new opportunities for digital-era tourism planning. Given that consumers' satisfaction-driven engagement is influenced by both platform infrastructure and content dynamics, local governments and tourism bureaus should consider forming collaborative ecosystems with e-commerce platforms to enhance regional brand narratives and service transparency. Digital policy interventions—such as quality certification of tourism merchants on platforms or incentivized content creation by verified users—can help standardize service experiences and reinforce trust. Moreover, the empirical model presented here provides a theoretical basis for developing data-informed strategies that align local tourism development with evolving patterns of consumer behavior in online environments.

5.3 Conclusion

This study constructed and empirically validated a comprehensive structural model to explore the factors influencing consumers' purchase of tourism products on e-commerce community platforms. Anchored in the integration of the Technology Acceptance Model (TAM), Electronic Service Quality (e-SQ), and Dual-Process Theory, the research revealed the joint effects of perceived usefulness, service performance, and dual-path cognition on platform-based consumer behavior. Based on 615 valid responses from users of TikTok, Xiaohongshu, and WeChat, the results confirmed both direct and indirect effects of these antecedents, with consumer satisfaction serving as a key mediating mechanism that bridges cognitive evaluations and behavioral intentions.

Theoretically, this study contributes to the literature by bridging traditionally separate models—TAM, e-SQ, and Dual-Process Theory—within a content-rich, socially mediated digital consumption context. By embedding consumer satisfaction as a mediating construct, it offers a more nuanced understanding of how cognitive, experiential, and emotional factors interact to shape e-commerce behavior in tourism. Practically, the study provides actionable insights for platform designers, service providers, and policymakers, emphasizing the need for integrated strategies that combine technical usability, high service standards, and emotionally engaging content to foster deeper consumer-platform interaction.

Despite these contributions, several limitations should be acknowledged. First, the study employed a cross-sectional design, which constrains causal inference regarding the temporal development of user behavior. Second, while the sample covered multiple platforms and user groups, it remains geographically concentrated within China, limiting the generalizability of findings to other cultural or market settings. Third, the self-reported nature of the data may be influenced by social desirability bias. Future research could adopt longitudinal designs to capture behavioral evolution, apply multi-group comparisons to assess cultural variability, and incorporate experimental or behavioral tracking methods to enhance data accuracy. Expanding the model to include algorithmic influences, peer interactions, or platform trust could further enrich the explanatory power of the framework in dynamic digital commerce environments.

Appendix 1

Construct	Dimension	Revised Items	Source
Service quality	ES1.Tangibles	TA1.Materials available on the platform are visually appealing.	Kant et al. (2017)
		TA2.Influencers and sellers present themselves	

	professionally.
	TA3.The platform uses the latest technology.
	TA4.The platform has clean, attractive, and user-friendly interfaces.
ES2.Assurance	AS1.The platform ensures fast delivery of services.
	AS2.I always feel safe during online transactions on this platform.
	AS3.The customer service representatives are very courteous while interacting with customers.
	AS4.I am confident that the platform will never share my personal information with anyone else.
ES3.Empathy	EM1.Individual attention is given by the platform to every customer.
	EM2.The platform has a strong customer relationship team.
	EM3.The platform focuses on the requirements of individual customers.
	EM4.The problem-handling team provides convenient operating hours to its customers.
ES4.Reliability	RL1.Long queues or wait times for services are eliminated by the

		platform's efficiency.	
		RL2.The platform's representatives are always willing to help.	
		RL3.The platform has an effective complaint-handling process.	
		RL4.The platform's representatives are well trained for delivering services and solving queries.	
ES5.Responsiveness	RP1.The platform delivers services within the promised time limit.		
	RP2.The platform is sincere in solving problems.		
	RP3.The platform has an error-free transaction system.		
	RP4.The platform provides accurate services as promised.		
Consumer satisfaction	Overall Satisfaction	CS1. I am completely satisfied with the performance of this e-commerce platform for purchasing tourism products.	Salamah et al. (2022)
		CS2. I am pleased with my overall experience of using this e-commerce platform for tourism-related services.	
	Decision Satisfaction	CS3. My decision to use this e-commerce platform for tourism products was a wise choice.	
		CS4. I believe that using this	

		e-commerce platform for my tourism needs was the right decision.	
Dual-Process	PC1.Behavioral expectation (Planning)	PC1. I often buy travel products from e-commerce platforms.	
		PC2.I find the process of buying travel products on e-commerce platforms both easy and convenient.	
		PC3.I trust the e-commerce platform and feel confident buying travel products from it.	
		PC4.I believe that buying travel products from e-commerce platforms offers me value for money.	Chou et al. (2014)
	PC2.Behavioral willingness (Action)	PC5. E-commerce platforms are my first choice for buying travel products.	
		PC6. I am happy to buy travel products from e-commerce platforms.	
		PC7. I may buy travel products from e-commerce platforms in the future.	
Platform E-commerce	Open Source	PE1. I believe that open-source e-commerce platforms provide significant flexibility and customization for purchasing tourism products.	Montoya-Weiss et al. (2003)
	(PS)	PE2. Open-source e-commerce platforms enable greater control	

	over features and functionalities for my tourism needs.
SaaS (SA)	PE3. SaaS-based e-commerce platforms are easy to use and provide a seamless experience for purchasing tourism products.
	PE4. SaaS e-commerce platforms provide efficient and cost-effective solutions for purchasing tourism-related services.
	PE5. Headless commerce e-commerce platforms offer advanced flexibility in designing the user experience for tourism product purchases.
Headless Commerce (HC)	PE6. Headless commerce platforms offer a high level of customization for integrating various technologies that enhance the tourism shopping experience.

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