

The Impact of Consumer Trust on Purchase Intention: The Mediating Role of Perceived Value

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Abstract: With the rapid development of the mobile Internet, short-video e-commerce platforms have become important for online shopping, and Douyin has shown robust growth thanks to its large user base and transaction scale. However, uneven product quality and insufficient consumer trust restrict its sustainable development. Based on the SOR (Stimulus-Organism-Response) theory, this study takes Douyin as the research object, constructs a model of how consumer trust influences purchase intention, and introduces perceived value as a mediating variable to explore the paths of four dimensions of consumer trust (security mechanism, platform popularity, product information quality, service quality) on purchase intention. An empirical study was conducted with 326 valid questionnaires via reliability and validity analysis, regression analysis and Bootstrap mediating effect test. The results show that all four dimensions of consumer trust have a significant positive impact on perceived value and purchase intention, and perceived value plays a partial mediating role between them. This study enriches the application of the SOR theory in short-video e-commerce, and provides theoretical and practical references for Douyin and similar platforms to optimize the trust system and boost consumers' purchase intention.

Keywords: Consumer Trust; Purchase Intention; Perceived Value; Douyin Platform; SOR Theory.

1. Introduction

The rapid development of the mobile internet has brought profound changes to consumers' lifestyles and shopping habits. According to a report by CNNIC, China had 1.079 billion internet users (a penetration rate of 76.4%) and 1.076 billion mobile internet users by June 2023. Meanwhile, online shopping users and retail sales have kept rising, with the latter hitting 7.16 trillion yuan in the first half of 2023 [1], a year-on-year increase of 13.1%. Among e-commerce platforms, Douyin has attracted numerous entrepreneurs and enterprises with its low entry threshold and huge profit potential, and its massive daily active users have made it a major player in the e-commerce sector.

Yet structural issues have hindered Douyin's sustainable development amid its rapid expansion: uneven product quality due to lax entry reviews, which has led some merchants to engage in false advertising and shoddy substitution, undermining consumer trust in commodities through information asymmetry; and insufficient consumer trust, reflected in weak perceptions of security mechanisms, unstable service quality and poor reputation management, which ultimately heightens consumers' risk perception, dampens purchase motivation and restricts the platform's development further through negative word-of-mouth.

Academic research on trust issues in short-video e-commerce still has gaps: previous studies have mostly focused on traditional or live-streaming e-commerce rather than Douyin's general shopping scenarios, with no unified division of trust dimensions and contradictory conclusions on trust's impact on purchase intention. Additionally, most research has centered on live-streaming marketing, lacking systematic analysis. Based on this, this study focuses on Douyin and puts forward the core questions: In the context of short-video e-commerce, how do the four dimensions of consumer trust (security mechanism, platform popularity, product information quality, and service quality) affect purchase intention? Does perceived value play a mediating

role? Specifically, they include: Do the four trust dimensions have a positive impact on perceived value and purchase intention? Does perceived value have a positive impact on purchase intention? Does perceived value play a partial mediating role?

2. Theoretical Foundation and Model Hypotheses

2.1. Consumer Trust and Purchase Intention

Early scholars such as Koufaris et al. (2004) identified platform reputation, privacy protection, payment security, service willingness and consumer trust propensity as factors influencing consumer trust [2]. In terms of trust dimensions, McKnight et al. (2002) argued that trust encompasses benevolence, ability, honesty and predictable behavior [3]. Tan et al. (2004) proposed that consumer trust includes three dimensions: trust propensity, interpersonal trust, and institutional trust [4]; in terms of the impact of trust on transaction risk [5], scholars such as Jin (2021) and Lan & Song (2023) [6][7] confirmed through research that consumer trust can reduce transaction risk and thereby affect purchase intention. Based on these classifications, this study divides consumer trust into four dimensions: security mechanism, platform popularity, product information quality and service quality. Derived from social psychology, purchase intention refers to the subjective probability of consumers engaging in specific purchase behaviors. Hassanein et al. (2007), Luo Jianyan and Chen Rui (2023) [8][9] found from the perspective of consumer experience that positive feelings such as pleasure can stimulate purchase intention. Proposed by Mehrabian and Russell (1974), the SOR (Stimulus-Organism-Response) theory holds that external environmental stimuli (S) shape individuals' internal cognition and emotions (O), which in turn determine their behavioral responses (R) [10].

Consumer trust is a key factor in the success of online transactions, and its improvement exerts a positive impact on

purchase intention. Consumers' trust in merchants on the platform can effectively boost their transaction willingness and thus drive purchases (Guan Qi, 2022 [11]). Accordingly, the following hypothesis is proposed:

H1: On the Douyin platform, consumer trust has a positive impact on consumers' purchase intention.

The virtual nature of online transactions exposes consumers to potential risks such as payment fraud and information leakage (Malhotra, 2004 [5]), and a sound security mechanism can directly alleviate their concerns about transaction uncertainty. Jin (2021) [6] confirmed that enhanced trust from security mechanisms significantly weakens the inhibitory effect of risk aversion on purchase decisions, ultimately boosting purchase intention. Thus, Hypothesis H1a is proposed:

H1a: On Douyin, the security mechanism exerts a positive impact on consumers' purchase intention.

Platform popularity, a comprehensive evaluation of consumers' brand and social recognition of a platform reflected in its market penetration, user scale and public reputation (Koo D M, 2010) [12], makes Douyin a mainstream choice for mass consumption. Consumers develop herd mentality from the perception that most people trust the platform, translating their recognition of Douyin into purchase intention for its commodities.

H1b: On Douyin, platform popularity exerts a positive impact on consumers' purchase intention.

Product information quality, referring to the accuracy, completeness and timeliness of commodity descriptions, parameter explanations and real-shot materials presented on the platform, is the core basis for consumers to evaluate commodity value. Chen et al. (2015) [13] found that accurate matching of product information with consumer needs strengthens their emotional trust in commodities, leading to the subjective judgment of being worth buying. H1c: On Douyin, product information quality exerts a positive impact on consumers' purchase intention.

Service quality denotes the service level provided by the platform throughout the transaction process; high-quality services enhance consumers' pleasure and recognition. Hassanein et al. (2007) [8] indicated that such pleasure evolves into benevolent trust in the platform (i.e., believing the platform safeguards consumers' interests), and elevates purchase intention for commodities through the emotional transfer effect.

H1d: On Douyin, service quality exerts a positive impact on consumers' purchase intention.

2.2. Consumer Trust and Perceived Value

Low perceived security and privacy protection on e-commerce platforms hinders consumer purchases (Liu & Juan, 2024 [15]), indicating a close link between security mechanisms and perceived value. Platform popularity attracts customers for merchants and boosts consumers' perceived value in shopping (Koo et al., 2010 [12]); higher information quality of products or services on e-commerce platforms elevates consumers' perceived information quality, thereby influencing their purchase intention (Golalizaden et al., 2023 [14]). Scholars have also explored the correlation between perceived value and factors such as merchant attitude, service quality and service guarantees (Liu, 2019 [15]), and improved service quality is proven to increase consumers' perceived value (Li & Jiang, 2023 [16]). Thus, the following hypotheses are proposed:

H2: On Douyin, consumer trust has a positive impact on consumers' perceived value.

H2a: On Douyin, the security mechanism has a positive impact on consumers' perceived value.

H2b: On Douyin, platform popularity has a positive impact on consumers' perceived value.

H2c: On Douyin, product information quality has a positive impact on consumers' perceived value.

H2d: On Douyin, service quality has a positive impact on consumers' perceived value.

2.3. Perceived Value and Consumers' Purchase Intention

Wang (2018) [17] argued that successful shopping experiences boost consumers' platform satisfaction and repurchase intention, meaning perceived value exerts a positive effect on purchase intention. Thus, the following hypotheses are proposed:

H3: On Douyin, perceived value has a positive impact on consumers' purchase intention.

H4: Perceived value plays a mediating role between consumer trust and consumers' purchase intention.

In summary, the research model of this paper is proposed as follows:

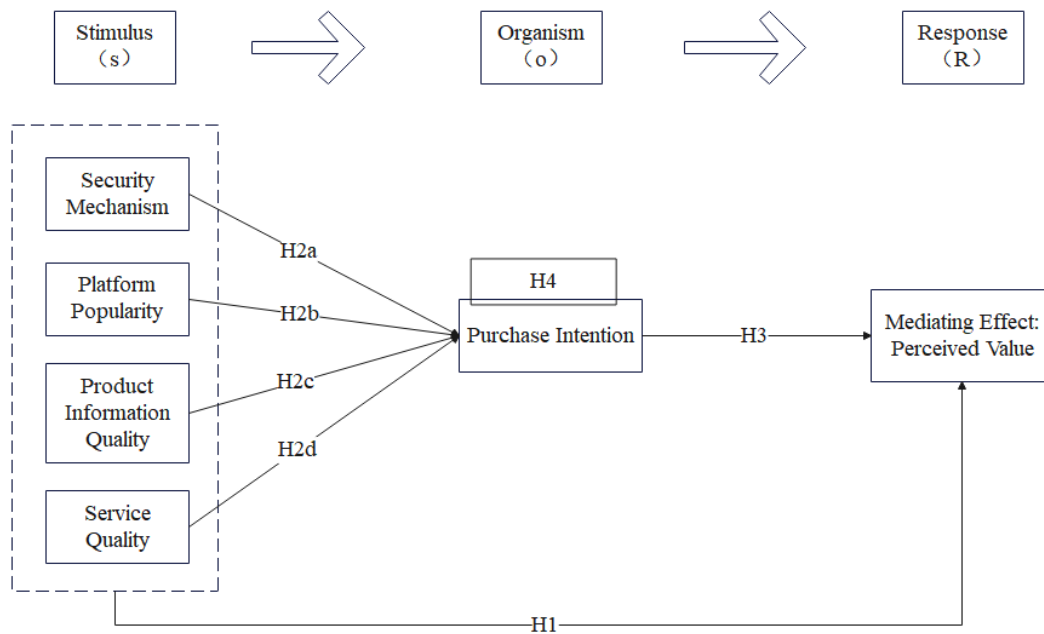


Figure 1. Research Model

3. Research Design and Data Analysis

3.1. Research Process

This study collected data via a questionnaire survey, which consisted of three parts: basic consumer information (gender, age, monthly disposable income, Douyin shopping frequency

and experience); variable measurement items, where scales for consumer trust, perceived value and purchase intention were designed based on existing research and theories and scored on a 5-point Likert scale (1=strongly disagree, 5 = strongly agree); and open-ended questions to elicit consumers' opinions on the problems of shopping on Douyin for further feedback.

Table 1. Variable Measurement Items

Translated Variable	Code	Items
Security Mechanism	SEC1	Douyin platform has information protection and will not arbitrarily leak privacy.
	SEC2	Douyin platform will increase relevant big data recommendations based on my browsing history.
	SEC3	Douyin platform will ensure the security of transactions.
	SEC4	The transaction system of Douyin platform is secure.
	SEC5	I am willing to use my personal bank card on Douyin platform.
Platform Popularity	PL1	I think Douyin platform has high popularity and is trustworthy.
	PL2	I think Douyin platform has high integrity.
	PL3	I think Douyin platform has a good reputation.
Product Information Quality	PR1	The product information and pictures displayed on Douyin platform are relatively true.
	PR2	The information quality on Douyin platform is of great help to my purchase decision.
	PR3	The online reviews displayed on Douyin platform reflect the quality of the products.
	PR4	Douyin platform provides correct information about the products I need.
Service Quality	SER1	Douyin platform has a relatively complete after-sales service, making returns and exchanges convenient.
	SER2	The service attitude of Douyin platform is good, and the answers are thoughtful and considerate.
	SER3	The service speed of Douyin platform is satisfactory, and it can solve my problems in a timely manner.
Perceived Value	PE1	I think Douyin platform will meet consumers' needs.
	PE2	I think the prices of products on Douyin platform are relatively favorable.
	PE3	Based on my past shopping experience on Douyin platform, I think the experience is good and I will purchase again.
	PE4	There are bloggers and brands I trust on Douyin platform, and their recommendations will make me purchase.
Purchase Intention	PU1	I am very willing to purchase products on Douyin platform.
	PU2	I will recommend this platform to my friends around me.
	PU3	I will come to this platform again when purchasing similar or other products next time.

The study surveyed consumers with shopping experience on Douyin via online questionnaire platforms, with the survey lasting three weeks. A total of 383 questionnaires were

collected, and 326 valid ones were obtained after excluding invalid responses, yielding an effective rate of 85%. Descriptive statistics of the sample showed that 65% were

female, 57.4% aged 18-25, and 39.9% with a monthly disposable income of 1,001-2,000 yuan. These characteristics align with Douyin's core user base, demonstrating the sample's representativeness.

3.2. Data Analysis

Based on the pre-survey, variables with confirmatory factor

loadings below 0.5 were eliminated. Thus, items SEC2, PR2, PR3 and PE2 were removed from the formal questionnaire, after which confirmatory factor analysis was conducted via AMOS. As shown in the table, all variables had AVE values above 0.5 and CR values above 0.7, indicating good convergent validity of the model in line with standards.

Table 2. Confirmatory Factor Analysis

Variable Name	Items	Factor Loading	AVE	CR
Security Mechanism	SEC1	0.729	0.515	0.810
	SEC3	0.714		
	SEC4	0.729		
	SEC5	0.699		
Platform Popularity	PL1	0.747	0.578	0.804
	PL2	0.779		
	PL3	0.754		
Product Information Quality	PR1	0.749	0.591	0.743
	PR4	0.789		
Service Quality	SER1	0.693	0.518	0.763
	SER2	0.752		
	SER3	0.712		
Perceived Value	PE1	0.733	0.550	0.710
	PE3	0.750		
Purchase Intention	PU1	0.782	0.609	0.824
	PU2	0.777		
	PU3	0.782		

3.2.1. Regression Analysis Results

Table 3. Regression Analysis of Consumer Trust on Purchase Intention

VARIABLES	(1) PU	(2) PU
SEC	0.308*** (5.15)	0.329*** (5.49)
PL	0.312*** (5.46)	0.288*** (5.05)
PR	0.062** (1.34)	0.092** (1.91)
SER	0.222*** (3.92)	0.203*** (3.52)
Sex		0.119* (1.85)
Age		-0.045 (-1.58)
Money		-0.084** (-2.45)
Time		0.045 (1.50)
Exp		0.026 (0.77)
Constant	0.463*** (2.97)	0.448** (1.99)
Observations	326	326
R-squared	0.626	0.649

Hierarchical regression analysis was adopted, with purchase intention as the dependent variable and dimensions of consumer trust as independent variables. Results showed that both with and without control variables, security mechanism ($\beta=0.329$, $p<0.01$), platform popularity ($\beta=0.288$, $p<0.01$), product information quality ($\beta=0.092$, $p<0.05$) and service quality ($\beta=0.203$, $p<0.01$) all had a significant positive impact on purchase intention, validating Hypotheses H1, H1a, H1b, H1c and H1d.

Further regression analyses revealed that security mechanism ($\beta=0.250$, $p<0.01$), platform popularity ($\beta=0.145$, $p<0.01$), product information quality ($\beta=0.090$, $p<0.1$) and service quality ($\beta=0.336$, $p<0.01$) positively influenced perceived value; the four dimensions also had a positive impact on purchase intention ($\beta=0.231$, $p<0.01$; $\beta=0.231$, $p<0.01$; $\beta=0.056$, $p<0.1$; $\beta=0.072$, $p<0.1$ respectively); perceived value ($\beta=0.390$, $p<0.01$) exerted a positive effect on purchase intention. Accordingly, Hypotheses H2, H2a, H2c, H2d and H3 were verified.

Table 4. Regression Analysis of Consumer Trust, Perceived Value and Purchase Intention

	(1)	(2)	(3)	(4)
VARIABLES	PE	PE	PU	PU
SEC	0.238***	0.250***	0.211***	0.231***
	(4.15)	(4.27)	(3.72)	(4.06)
PL	0.160***	0.145***	0.246***	0.231***
	(2.93)	(2.61)	(4.62)	(4.34)
PR	0.096**	0.090*	0.023**	0.056*
	(2.17)	(1.92)	(0.53)	(1.26)
SER	0.323***	0.336***	0.090*	0.072*
	(5.97)	(5.96)	(1.63)	(1.28)
Sex		-0.043		0.136**
		(-0.68)		(2.28)
Age		-0.053*		-0.025
		(-1.89)		(-0.92)
Money		-0.041		-0.068**
		(-1.23)		(-2.13)
Time		0.039		0.030
		(1.32)		(1.07)
Exp		0.011		0.021
		(0.35)		(0.69)
PE			0.409***	0.390***
			(7.62)	(7.31)
Constant	0.900***	1.105***	0.095	0.017
	(6.03)	(5.02)	(0.63)	(0.08)
Observations	326	326	326	326
R-squared	0.593	0.602	0.684	0.700

3.2.2. Test of the Mediating Effect of Perceived Value

The Bootstrap method was used to test the mediating effect of perceived value. Results indicated a significant positive mediating effect of perceived value in the influence of security mechanism, platform popularity, product information quality and service quality on purchase intention, confirming Hypothesis H4. Among them, service quality had the largest total effect (0.1189) and direct effect (0.0652), showing its relatively strong impact on the mediating effect of perceived value.

Table 5. Mediating Effect of Perceived Value in the Impact of Security Mechanism on Purchase Intention

	Direct effect	Indirect effect	Total effect
	Effect size [Bootstrapping 95% CI]		
SEC→PE	.0598	.0530	.1128
→PU	[.3088, .5432]	[.2275, .4356]	[.5363, .9788]

Table 6. Mediating Effect of Perceived Value in the Impact of Platform Popularity on Purchase Intention

	Direct effect	Indirect effect	Total effect
	Effect size [Bootstrapping 95% CI]		
PL→PE	.0586	.0485	.1071
→PU	[.2913, .5210]	[.2271, .4174]	[.5184, .9384]

Table 7. Mediating Effect of Perceived Value in the Impact of Product Information Quality on Purchase Intention

	Direct effect	Indirect effect	Total effect
	Effect size [Bootstrapping 95% CI]		
PR→PE	.0530	.0477	.1007
→PU	[.1411, .3488]	[.2497, .4365]	[.3908, .7853]

Table 8. Mediating Effect of Perceived Value in the Impact of Service Quality on Purchase Intention

	Direct effect	Indirect effect	Total effect
	Effect size [Bootstrapping 95% CI]		
SER→PE	.0652	.0537	.1189
→PU	[.1836, .4390]	[.3062, .5168]	[.4898, .9558]

4. Research Conclusions and Discussion

4.1. Research Conclusions

Based on the SOR theory and taking Douyin as the research object, this study explores the influence mechanism of consumer trust on purchase intention and draws the following conclusions: the four dimensions of consumer trust (security mechanism, platform popularity, product information quality and service quality) all exert a positive impact on perceived value; consumer trust has a positive effect on purchase intention, with perceived value playing a partial mediating role in this relationship; perceived value also has a positive impact on purchase intention.

4.2. Theoretical Contributions

Enriching the application scenarios of the SOR theory in e-commerce. Existing studies mostly apply the SOR theory to traditional shelf-based e-commerce, with poor adaptability to short-video e-commerce and failure to explore the core stimulus role of trust in the Douyin context. [18] Combining the content-based and social characteristics of Douyin, this study constructs the transmission path of consumer trust (S) → perceived value (O) → purchase intention (R), which verifies the applicability of the SOR theory in short-video e-commerce and supplements the functional rules of trust-based stimulus.

Improving the theoretical framework of e-commerce consumer behavior research. Previous studies mostly explore the direct correlations between variables in isolation, leading to a fragmented theoretical framework. This study integrates the SOR theory, trust theory and perceived value theory to construct a systematic model, clarifies the hierarchical relationships among variables, fills the gap of the cross-application of multiple theories in short-video e-commerce, and enhances the systematicness and completeness of the research framework for e-commerce consumer behavior.

Expanding the measurement and research perspective of e-commerce consumer trust. The division of consumer trust dimensions in traditional e-commerce research is difficult to adapt to short-video e-commerce, and the empirical conclusions lack universality. This study summarizes the four trust dimensions in the Douyin context, verifies the reliability and validity of the scale and the actual impact of each dimension through empirical tests, provides a trust measurement tool adapted to short-video e-commerce, and promotes the in-depth research on e-commerce consumer trust in segmented scenarios.

4.3. Managerial Implications

E-commerce Platforms: Douyin should strengthen transaction and data security mechanisms and elevate its brand popularity and image; strictly review product information to ensure authenticity; optimize end-to-end service quality, improve the after-sales system, and enhance user experience and loyalty.

Government Introduce supportive policies such as tax incentives and financial aid to foster a sound development environment for e-commerce; strengthen platform supervision, improve complaint handling mechanisms to safeguard consumer rights and interests; and organize e-commerce-related training to enhance practitioners' compliance awareness and professional capabilities.

Merchants Uphold product quality to build a favorable reputation; improve service response efficiency and optimize after-sales services; leverage Douyin's strengths to showcase product and brand advantages, attach importance to consumer feedback, and continuously refine products and services to boost core competitiveness.

4.4. Research Limitations and Future Prospects

Limitations: The sample is limited in scale, geographic and age coverage, leading to insufficient representativeness; the research is only conducted on Douyin, so the generalizability of conclusions remains to be verified; the trust dimensions are self-summarized, which entails certain subjectivity.

Future Prospects: Expand the sample coverage to improve the research universality; extend the research to other e-commerce platforms for comparative analysis; combine qualitative research to optimize the measurement method of trust dimensions and develop an authoritative and universal scale; introduce variables such as consumers' personal characteristics and social culture to explore their interactive effects and construct a more refined research model.

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