Research Article

Empirical analysis of the impact of second-hand trading platform characteristics and product attributes on consumer trust, perceived risk, satisfaction, and reuse intention in China

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ABSTRACT

This study, anchored in psychological theory, employs a questionnaire survey to investigate the perspectives of 695 users on a leading second-hand trading platform in China. The research aims to delineate how platform and product attributes influence consumer psychology, specifically focusing on trust, perceived risk, satisfaction, and the propensity for reuse. The findings suggest that platform attributes (e.g., system quality, user-friendliness, and convenience) and product attributes (e.g., rarity, cost-effectiveness, and desirability) significantly shape consumer psychology by bolstering trust and attenuating perceived risk. Furthermore, within the consumer's psychological framework, trust and perceived risk are found to positively influence satisfaction, which in turn impacts the intention to reuse. To align more closely with consumer psychology and to foster greater trust while reducing risk perception, platform operators should prioritize streamlining the user interface, enhancing system reliability, ensuring the transparency of product information, and capitalizing on user reviews for the continuous management of second-hand items. Additionally, they should amplify marketing and personalized recommendation strategies, as well as refine customer satisfaction surveys, feedback systems, and customer support services. Future research should expand the scope of investigation, combine quantitative and qualitative research methods, and track the evolution of consumer psychological attitudes over time. It should also aim to develop more comprehensive research models by incorporating a broader spectrum of individual and societal variables.

Keywords: Second-hand Trading Platforms; Second-hand Products; Consumer Psychology; Trust; Perceived Risk

1. Introduction

The rise of the sharing economy has been highlighted as an alternative to addressing global economic stagnation and resource depletion. This economic model garnered significant attention in its early stages due to its convenience and economic efficiency[1]. The size of China's sharing economy market is projected to reach 11,312.3 billion yuan by 2024, with the growth of second-hand and idle goods markets driving this development. Consumers are increasingly utilizing second-hand trading platforms due to the economic benefits of purchasing pre-owned goods and the convenience of online transactions, resulting in significant shifts in consumer behavior.

China's second-hand trading market has rapidly expanded alongside the swift growth of e-commerce, with major platforms such as Xianyu and Zhuanzhuan accounting for 90.9% of the total market share[2].

In the first half of 2022, the number of users engaged in second-hand e-commerce reached 243 million, a figure anticipated to grow to 263 million by the end of the year. Additionally, the transaction volume is expected to increase by 20% year-on-year, reaching 480.24 billion yuan.

Existing studies have noted a lack of in-depth exploration into the motivations behind online shopping for second-hand goods, while also identifying some differences between online and offline shopping motivations[3]. Consequently, this study aims to empirically analyze the impact of second-hand trading platform characteristics and the attributes of second-hand goods on consumer trust, perceived risk, satisfaction, and reuse intention. To achieve this, a survey was conducted with 695 users of second-hand trading platforms in China. The collected data were analyzed using SPSS 26.0 and AMOS 26.0, and an empirical analysis was performed to validate the research model and hypotheses.

2. Theoretical background

2.1. Second-hand trading and the sharing economy

Second-hand trading has evolved from an irregular, offline mode of sales into a rapidly growing market facilitated by digital platforms. In particular, the development of mobile second-hand trading applications has contributed to positive shifts in consumer perceptions by offering affordable yet high-quality second-hand products. The size of China's second-hand trading market reached approximately 480 billion yuan in 2022, and it is projected to grow to 540 billion yuan by 2023. These platforms promote resource recycling and support the circular economy by enabling the active exchange of a diverse range of products. Additionally, some studies suggest that online second-hand trading shares characteristics with e-commerce, such as convenience and accessibility[4].

2.2. Characteristics of second-hand trading platforms

Second-hand trading platforms, which have emerged alongside advancements in digital technology and the internet marketplace, provide a space where users can easily trade pre-owned goods. These platforms facilitate peer-to-peer (P2P) transactions and contribute to enhancing transparency and trust. Key features of such platforms include system quality, ease of use, and convenience, all of which play crucial roles in building trust and improving user experience.

System Quality: System quality refers to the reliability, stability, and performance of the platform's technical infrastructure. High system quality ensures that the platform is accessible, responsive, and free from technical glitches. This includes features such as fast loading times, secure payment gateways, and robust search functionalities. For example, a platform with a high system quality will have a user interface that loads quickly and accurately displays product information, enhancing the overall user experience[5].

Ease of Use: Ease of use encompasses the simplicity and intuitiveness of the platform's design and navigation. A user-friendly platform is easy to navigate, with clear instructions and a logical layout. This includes features such as easy registration processes, straightforward product listing procedures, and simple checkout processes. For example, a platform with high ease of use will allow users to quickly find and purchase items without encountering complex or confusing steps[6].

Convenience: Convenience refers to the accessibility and availability of the platform. A convenient platform is available 24/7, can be accessed from multiple devices (such as smartphones, tablets, and computers), and offers a wide range of payment options. This includes features such as mobile apps, one-

click purchasing, and the ability to save items for later purchase. For example, a platform with high convenience will allow users to browse and purchase items on-the-go using their mobile devices[7].

2.3. Characteristics of second-hand goods

Second-hand goods, as pre-owned items reintroduced into the market, are primarily valued for their cost-efficiency. One of their key attributes is scarcity, which can significantly enhance their value when supply is limited. Additionally, affordability allows consumers to purchase high-quality items at lower prices.

Scarcity: Scarcity refers to the limited availability of a product in the market. Scarce items are often highly sought after and can command higher prices due to their rarity. For example, a limited edition collectible item or a discontinued product can have a high scarcity value, making it more attractive to consumers[8].

Economic Value: Economic value, as previously discussed, can be understood from multiple dimensions, including inherent value, cost-efficiency, scarcity value, perceived value, and environmental value. Each of these dimensions contributes to the overall economic value of a second-hand product, influencing consumer perceptions and purchase decisions[9].

Attractiveness: Attractiveness refers to the appeal of a product to consumers. This can include factors such as the product's appearance, brand reputation, and the condition of the item. An attractive product is more likely to capture the attention of consumers and influence their purchasing decisions. For example, a well-maintained, high-quality brand-name item in excellent condition will be more attractive to consumers than a similar item in poor condition[10].

2.4. Psychological theories

The study is grounded in psychological theories that explain consumer behavior in the context of second-hand trading platforms. Key theories include:

Cognitive Dissonance Theory: This theory, proposed by Festinger (1957), suggests that consumers experience psychological discomfort when their beliefs and actions are inconsistent. In the context of second-hand trading, consumers may feel dissonance if they perceive a high level of risk but still engage in transactions. To reduce this dissonance, they may seek more information or rely on trust cues provided by the platform.

Expectancy-Value Theory: According to this theory, consumers make decisions based on the expected outcomes and the value they place on those outcomes[11]. In second-hand trading, consumers weigh the expected benefits (e.g., cost savings, product quality) against the perceived risks (e.g., product defects, transaction fraud). Trust and perceived risk are key factors that influence the expected value of the transaction.

Theory of Planned Behavior: Ajzen[12] proposed that behavior is influenced by behavioral intention, which is determinedby attitude, subjective norm, and perceived behavioral control. In the context of second-hand trading, consumers' intention to reuse a platform is influenced by their attitude toward the platform, social norms regarding second-hand trading, and their perceived ability to control the transaction process.

These psychological theories provide a framework for understanding how platform and product attributes influence consumer trust, perceived risk, satisfaction, and reuse intention. By integrating these theories, the study aims to provide a comprehensive analysis of consumer behavior in the second-hand trading market.

3. Research hypotheses

3.1. Research model

This study develops a research model to examine the effects of second-hand trading platform characteristics and second-hand product characteristics on consumer trust, perceived risk, satisfaction, and intention to reuse. The model identifies platform characteristics—such as system quality, ease of use, and convenience—and product characteristics—such as scarcity, cost-efficiency, and attractiveness—as independent variables. Trust and perceived risk are designated as mediating variables, while satisfaction and intention to reuse serve as dependent variables.

Based on previous studies, this research model aims to elucidate the causal relationships between key factors in the user experience of second-hand trading platforms and consumer behavior. The model is grounded in consumer psychology, as it seeks to understand how psychological constructs like trust and perceived risk mediate the relationship between platform and product characteristics and consumer intentions.
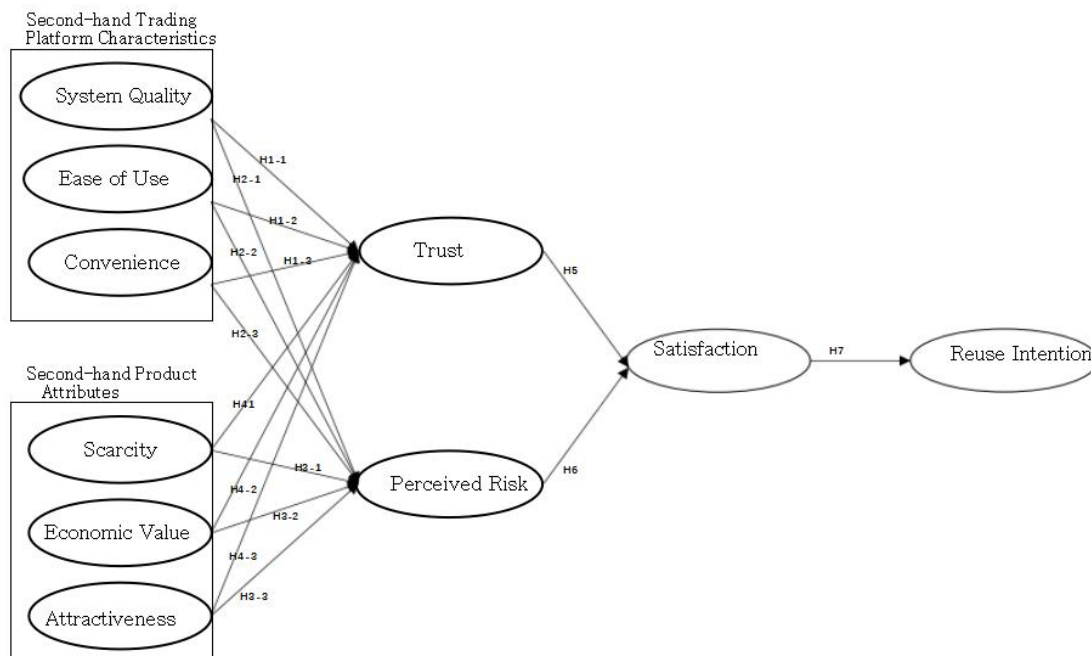

Figure 1. Research model.

3.2. Research hypotheses

3.2.1. The relationship between second-hand trading platform characteristics and trust

According to the study by Kim and Yun[5], system quality plays a crucial role in enhancing consumer trust in the platform. Lee[6] reported that ease of use is an important factor in trust formation, while Mou and Choi[13] pointed out that convenience positively influences trust. From a consumer psychology perspective, these platform characteristics are essential in shaping consumers' initial impressions and expectations, which are foundational to the development of trust.

Hypothesis 1: The characteristics of the second-hand trading platform have a positive impact on consumer trust.

Hypothesis 1-1: System quality has a positive impact on consumer trust.

Hypothesis 1-2: Ease of use has a positive impact on consumer trust.

Hypothesis 1-3: Convenience has a positive impact on consumer trust.

3.2.2. The Relationship between second-hand trading platform characteristics and perceived risk

Kim[3] argued that as system quality increases, consumer perceived risk decreases. Lee[14] suggested that system quality and ease of use are important factors in reducing perceived risk, while Euro[15] expressed that the convenience of the platform contributes to the reduction of perceived risk. These relationships are underpinned by consumer psychology, as the perceived ability of the platform to meet their needs and provide a secure transaction environment is central to risk perception.

Hypothesis 2: The characteristics of the second-hand trading platform have a negative impact on consumer perceived risk.

Hypothesis 2-1: System quality has a negative impact on consumer perceived risk.

Hypothesis 2-2: Ease of use has a negative impact on consumer perceived risk.

Hypothesis 2-3: Convenience has a negative impact on consumer perceived risk.

3.2.3. The Relationship between second-hand product characteristics and trust

According to the study by Oh and Lee[8], the limitation of product quantity positively influences trust formation. Zeng and Chang[9] also emphasized that economic value positively influences user trust. Nguyen Thi Ha Phuong[16] reported that the economic value of a service affects user satisfaction through trust as a mediator. These product characteristics tap into consumers' psychological needs for value, scarcity, and aesthetic appeal, which are integral to the formation of trust.

Hypothesis 3: The characteristics of second-hand products have a positive impact on consumer trust.

Hypothesis 3-1: Scarcity has a positive impact on consumer trust.

Hypothesis 3-2: Economic value has a positive impact on consumer trust.

Hypothesis 3-3: Attractiveness has a positive impact on consumer trust.

3.2.4 The relationship between second-hand product characteristics and perceived risk

According to Park[17], products with limited quantities reduce the perceived risk among users. Park and Han[18] reported that time-limited promotions contribute to reducing users' perceived risk. These relationships highlight the psychological impact of product scarcity and value on consumers' risk perceptions, as these attributes can signal reliability and urgency, which are key factors in risk assessment.

Hypothesis 4: The characteristics of second-hand products have a negative impact on consumer perceived risk.

Hypothesis 4-1: Scarcity has a negative impact on consumer perceived risk.

Hypothesis 4-2: Economic value has a negative impact on consumer perceived risk.

Hypothesis 4-3: Attractiveness has a negative impact on consumer perceived risk.

3.2.5. The relationship between trust and satisfaction

Studies have shown that services with high trustworthiness enhance user satisfaction. This indicates that when users trust a service, their satisfaction tends to increase. Lee[19] found that as users rate the reliability of a service higher, their satisfaction also increases. Trust is a pivotal psychological state that directly influences satisfaction, as it reflects consumers' confidence in the platform's ability to meet their needs and deliver positive outcomes.

Hypothesis 5: Consumer trust has a positive impact on satisfaction.

3.2.6. The relationship between perceived risk and satisfaction

Ryu[20] stated that as perceived risk increases, user satisfaction decreases. This means that when users perceive a higher level of risk, their satisfaction with the service is likely to decline. Similarly, Ha[21] confirmed the negative impact of perceived risk on user satisfaction. Perceived risk is inversely related to satisfaction, as it represents the psychological barriers that can hinder consumers from achieving positive experiences and outcomes.

Hypothesis 6: Consumer perceived risk has a negative impact on satisfaction.

3.2.7. The relationship between satisfaction and reuse intent

The relationship between satisfaction and reuse intention has been a significant topic of research. Son[22] found that as user satisfaction increases, their intention to reuse also rises. Furthermore, Jeon[23] reported that satisfaction has a significant influence on reuse intention. Satisfaction is a key determinant of reuse intention, as it captures the psychological state of contentment that motivates consumers to continue using a platform.

Hypothesis 7: Consumer satisfaction has a positive impact on reuse intention.

3.3. Research methodology

This study conducted an online survey in January 2024 to explore the psychological nuances of how characteristics of second-hand trading platforms and product attributes influence consumer trust, perceived risk, satisfaction, and intentions to reuse. From a total of 723 completed questionnaires, 695 valid responses were collected, providing a substantial dataset for analysis. The survey, informed by theoretical frameworks and literature-derived research variables, comprised 56 items designed to probe the psychological constructs underlying consumer behavior within the realm of second-hand transactions.

To ascertain the demographic profiles of respondents and validate the reliability of our measurement instruments, Cronbach's alpha coefficients were calculated. Exploratory Factor Analysis (EFA) was utilized to assess construct validity, ensuring that the variables corresponded with theoretical predictions. Subsequently, Confirmatory Factor Analysis (CFA) and correlation analysis were employed to evaluate the convergent and discriminant validity among variables, thereby reinforcing the psychometric robustness of our research.

Structural Equation Modeling (SEM), a sophisticated multivariate analytical technique, was applied to test the hypotheses. This approach is adept at examining the intricate interplay between various psychological constructs and their influence on consumer behavior. SEM facilitated the identification of direct effects and potential mediating and moderating effects, offering a comprehensive framework for understanding the complex psychological processes inherent in second-hand transactions.

The model fit was rigorously assessed using statistical indices such as the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI). These indices are instrumental in gauging the accuracy with which the proposed model represents the population covariance matrix.

The research design aims to elucidate the psychological impacts of second-hand trading platforms and product characteristics on consumer trust, perceived risk, satisfaction, and reuse intention. Insights from this study are expected to contribute to the development of strategic recommendations designed to enhance consumer trust, alleviate perceived risks, boost satisfaction, and ultimately, augment the likelihood of reuse

of second-hand trading platforms. By deeply understanding these psychological factors, platform operators can more effectively tailor their services to align with consumer needs and expectations.

4. Empirical analysis

4.1. Demographic characteristics

This study conducted a survey with 695 users of second-hand trading platforms in China. The analysis revealed that 52.5% of the participants were male, while 47.5% were female. In terms of marital status, 65.8% were married, and 34.2% were unmarried. The age range of respondents spanned from teenagers to individuals over 60, with the largest group being in their 20s, comprising 19.4% of the sample. Regarding educational background, the highest proportion of respondents had completed university education. As for occupation, students and company employees represented the largest groups. These demographic characteristics provide valuable insights into the usage patterns of second-hand trading platforms and their psychological profiles, which can influence their preferences and behaviors on these platforms.

Table 1 summarizes the demographic characteristics of the survey participants in this study.

Table 1. Demographic characteristics.

Category		Frequency (people)	Percentage (%)
Gender	Male	365	52.5
	Female	330	47.5
Marital Status	Married	457	65.8
	Unmarried	238	34.2
Age	Teenagers	143	20.6
	Twenties	135	19.4
	Thirties	143	20.6
	Forties	136	19.6
	Fifties	102	14.7
	Sixties and above	36	5.1
Education	High School Graduate	232	33.4
	2-3 Year College	192	27.6
	4-Year University	179	25.8
	Graduate School	92	13.2
Occupation	Student	204	29.4
	Civil Servant	28	4.0
	Company Employee	160	23.0
	Professional	102	14.6
	Self-employed	128	18.4
	Housewife	18	2.6
	Others	55	8.0
Total		695	100

4.2. Validity and reliability analysis

In this study, reliability and validity of the measurement items were assessed through reliability analysis and exploratory factor analysis. The reliability analysis revealed that the Cronbach's α coefficient was at least 0.799, indicating that all measurement items exceeded the 0.6 threshold, demonstrating sufficient reliability. In the exploratory factor analysis for validity verification, 10 factors were extracted, explaining 67.879% of the total variance, confirming that the measurement tool effectively reflects the concepts. The KMO measure was 0.901, indicating that the selected variables were suitable for factor analysis, and Bartlett's test of sphericity yielded a significant result ($\chi^2 = 8{,}176.327$, df = 763, p = .000), further confirming the adequacy of the factor analysis. Therefore, the measurement tools used in this study are considered to possess high reliability and validity, making them appropriate for measuring the research variables and understanding the psychological constructs of consumer trust, perceived risk, satisfaction, and reuse intention.

Table 2 summarizes the results of the reliability and validity checks for the measurement tools used in this study.

Table 2. Reliability and validity.

factor	Perceived Risk	Trust	Ease of Use	Attractiveness	System Quality	Satisfaction	Convenience	Reuse Intention	Scarcity	Economic Value	Commonality	Trust
Perceived Risk6	.750										.785	
Perceived Risk4	.742										.736	.879
Perceived Risk1	.725										.642	
Perceived Risk2	.701										.641	
Perceived Risk3	.675										.619	
Trust1		.709									.708	
Trust2		.708									.696	.846
Trust3		.704									.695	
Trust4		.699									.605	
Trust5		.652									.582	
Trust6		.643									.577	
Ease of Use1			.869								.691	
Ease of Use2			.859								.668	.881
Ease of Use3			.823								.626	
Ease of Use4			.776								.606	
Ease of Use5			.759								.605	
Attractiveness6				.736							.778	
Attractiveness5				.734							.760	.862
Attractiveness4				.725							.698	
Attractiveness2				.724							.677	
Attractiveness1				.701							.634	
System Quality2					.837						.751	
System Quality1					.834						.719	.869
System Quality3					.807						.662	
System Quality5					.798						.609	
System Quality4					.794						.603	
Satisfaction1						.720					.732	
Satisfaction2						.682					.709	.795
Satisfaction3						.671					.668	
Satisfaction4						.658					.648	
Satisfaction5						.654					.644	
Convenience1							.778				.669	
Convenience3							.769				.642	.903
Convenience4							.729				.609	
Convenience5							.703				.574	
Reuse Intention4								.876			.747	
Reuse Intention6								.873			.680	
Reuse Intention3								.858			.645	.878
Reuse Intention2								.823			.606	
Reuse Intention1								.804			.568	
Reuse Intention5								.798			.558	

factor	Perceived Risk	Trust	Ease of Use	Attractiveness	System Quality	Satisfaction	Convenience	Reuse Intention	Scarcity	Economic Value	Commonality	Trust
Scarcity3									.795		.722	
Scarcity4									.782		.704	.813
Scarcity5									.765		.662	
Scarcity1									.703		.606	
Scarcity6									.702		.570	
Scarcity2									.795		.568	
Economic Value1										.801	.694	
Economic Value2										.794	.659	.799
Economic Value4										.787	.650	
Economic Value5										.771	.636	
Economic Value6										.769	.593	
eigen-value	12.136	2.199	2.048	1.990	1.812	1.792	1.733	1.705	1.645	1.488		
Explained Variance%	35.927	7.886	7.662	7.381	6.774	6.663	5.998	5.895	5.019	4.933		
Cumulative Percentage%	35.927	43.142	49.678	50.074	56.883	59.752	61.686	63.355	64.974	67.879		

Table 2. (*Continued*)

The Kaiser-Meyer-Olkin measure of sampling adequacy is .901. Bartlett's test of sphericity yields a chi-square of 8,176.327 with 763 degrees of freedom, and the significance level is .000.

4.3. Correlation analysis

In this study, confirmatory factor analysis (CFA) was conducted to verify the convergent validity of the factors, and a correlation analysis was performed to assess the discriminant validity between the factors. Using the correlation coefficients obtained from AMOS analysis, the interrelationships between the variables were examined. The correlation coefficients range from -1 to +1, and the closer the absolute value is to 1, the stronger the correlation is interpreted to be. A correlation coefficient with an absolute value between 0.2 and 0.4 indicates a low correlation, between 0.4 and 0.7 indicates a moderate correlation, and between 0.7 and 0.9 indicates a high correlation. If the correlation exceeds 0.7, the possibility of multicollinearity should be considered. Discriminant validity refers to the distinctiveness between components, which is considered achieved if the square root of the average variance extracted (AVE) is greater than the correlation coefficient between factors. The analysis results indicated that all correlation coefficients were lower than the square root of AVE, and all items were statistically significant. Therefore, the model used in this study has been validated for reliability and validity, making it suitable for hypothesis testing in subsequent research and for understanding the psychological mechanisms underlying consumer behavior on second-hand trading platforms.

Table 3 summarizes the results of the correlation analysis.

Table 3. Correlation analysis.

Item	System Quality	Ease of Use	Convenience	Scarcity	Economic Value	Attractiveness	Trust	Perceived Risk	Satisfaction	Reuse Intention
System Quality	.643 (.802)									
Ease of Use	.428***	.661 (.813)								
Convenience	.397***	.378***	.599 (.774)							
Scarcity	.403***	.447***	.277***	.622 (.789)						
Economic Value	.399***	.385***	.449***	.427***	.607 (.779)					
Attractiveness	.386***	.377***	.474***	.522***	.477***	.645 (.803)				

Item	System Quality	Ease of Use	Convenience	Scarcity	Economic Value	Attractiveness	Trust	Perceived Risk	Satisfaction	Reuse Intention
Trust	.441***	.492***	.388***	.515***	.381***	.472***	.631 (.794)			
Perceived Risk	.385***	.399***	.327***	.498***	.552***	.388***	.329***	.669 (.818)		
Satisfaction	.414***	.444***	.418***	.386***	.538***	.522***	.518***	.444***	.619 (.787)	
Reuse Intention	.402***	.410***	.401***	332***	.591***	.489***	.472***	.329***	.525***	.672 (.820)

Table 3. (*Continued*)

The values on the diagonal are the Average Variance Extracted (AVE) values, and the values within the parentheses are the square roots of the AVE values. $p<0.1$, ** $p<0.05$, *** $p<0.01$

4.4. Confirmatory factor analysis (CFA)

In this study, confirmatory factor analysis (CFA) was conducted to verify the unidimensionality of the measurement variables. The results of the CFA showed that the composite reliability (CR) for all observed variables was above 0.7, and the average variance extracted (AVE) was above 0.5, demonstrating the internal consistency and validity of the measurement tools. This ensures the fit of the research model and the reliability of the results, which are crucial for accurately capturing the psychological aspects of consumer trust, perceived risk, satisfaction, and reuse intention.

Table 4 summarizes the results of the confirmatory factor analysis.

Table 4. Confirmatory factor analysis.

Conceptual Variables	Varables	Estimate	S.Estimate	S.E.	t	CR	AVE
System Quality	SQ1	1.000	.707	-	-	.866	.643
	SQ2	.826	.745	.057	23.008		
	SQ3	.828	.747	.057	23.886		
	SQ4	.832	.740	.053	21.768		
	SQ5	.794	.724	.058	20.697		
Ease of Use	EU1	1.000	.786	-	-	.894	.661
	EU2	.785	.663	.047	22.098		
	EU3	.743	.626	.046	20.285		
	EU4	.703	.602	.047	20.003		
	EU5	.799	.701	.044	23.206		
Convenience	CU1	1.000	.771	-	-	.835	.599
	CU3	.779	.668	.055	23.066		
	CU4	.747	.637	.057	20.682		
	CU5	.796	.674	.054	23.889		
Scarcity	SC1	1.000	.807	-	-	.801	.622
	SC2	.768	.685	.044	23.562		
	SC3	.734	.631	.044	20.277		
	SC4	.703	.612	.046	20.015		
	SC5	.749	.645	.043	22.385		
	SC6	.728	.618	.045	21.627		
Economic Value	AF1	1.000	.739	-	-	.826	.607
	AF2	.818	.732	.049	22.012		
	AF4	.807	.711	.051	21.588		
	AF5	.843	.744	.051	23.629		
	AF6	.769	.704	.055	20.528		
Attractiveness	AT1	1.000	.772	-	-	.799	.645
	AT2	.822	.737	.052	23.128		
	AT4	.791	.712	.052	21.478		
	AT5	.815	.728	.047	22.267		
	AT6	.789	.709	.053	20.887		

Conceptual Variables	Varables	Estimate	S.Estimate	S.E.	t	CR	AVE
Trust	RE1	1.000	.786	-	-	.752	.631
	RE2	.778	.697	.035	24.123		
	RE3	.752	.655	.041	22.283		
	RE4	.719	.626	.041	20.222		
	RE5	.754	.667	.042	22.379		
	RE6	.731	.647	.037	21.952		
Perceived Risk	PR1	1.000	.711	-	-	.738	.669
	PR2	.735	.626	.038	20.436		
	PR3	.779	.658	.038	23.512		
	PR4	.721	.642	.041	21.527		
	PR6	.767	.655	.045	22.121		
Satisfaction	SA1	1.000	.706	-	-	.771	.619
	SA2	.808	.685	.044	24.463		
	SA3	.794	.622	.043	21.996		
	SA4	.771	.607	.041	21.857		
	SA5	.813	.694	.044	24.545		
Reuse Intention	RI1	1.000	.744	-	-	.726	.672
	RI2	.822	.683	.033	21.879		
	RI3	.793	.646	.044	20.868		
	RI4	.778	.621	.044	20.703		
	RI5	.787	.638	.039	20.789		
	RI6	.811	.678	.033	21.776		

Table 4. (*Continued*)

4.5. Hypothesis testing

This study formulated hypotheses to structurally test the impact of the characteristics of Chinese second-hand transaction platforms and second-hand products on consumer trust, perceived risk, satisfaction, and repurchase intention. An exploratory factor analysis conducted on users of Chinese second-hand transaction platforms refined the scales, and confirmatory factor analysis and correlation analysis were employed to verify the convergent and discriminant validity of the latent variables. As a result, the measurement model demonstrated the validity and reliability of the construct concepts, indicating that further statistical verification of the relationships between latent variables is necessary. The results of the hypothesis testing are shown in **Table 5,** and the path coefficients from the structural equation model analysis are illustrated in **Figure 2**.

Table 5. Hypothesis testing results.

Hypothesis	Path			Parameter Estimate	Standardized Coefficient	S. E.	t	p	Accepted Acceptance
H1	Second-hand Trading Platform Characteristics	→	Trust						Accepted
H1-1	System Quality	→	Trust	.376	.286	.062	7.232	.000***	Accepted
H1-2	사용 용이성	→	Trust	.505	.465	.055	8.918	.000***	Accepted
H1-3	Convenience	→	Trust	.467	.428	.059	9.102	.000***	Accepted
H2	Second-hand Trading Platform Characteristics	→	Perceived Risk						Accepted
H2-1	System Quality	→	Perceived Risk	.328	-.264	.057	-9.825	.000***	Accepted
H2-2	Reuse Intention	→	Perceived Risk	.481	-.433	.067	-7.399	.000***	Accepted
H2-3	Convenience	→	Perceived Risk	.442	-.417	.048	-10.088	.000***	Accepted
H3	Second-hand Product Attributes	→	Trust						Accepted
H3-1	Scarcity	→	Trust	.399	.305	.062	7.392	.000***	Accepted
H3-2	Economic Value	→	Trust	.272	.255	.066	11.142	.000***	Accepted
H3-3	Attractiveness	→	Trust	.483	.435	.038	12.128	.000***	Accepted

Hypothesis	Path			Parameter Estimate	Standardized Coefficient	S. E.	t	p	Accepted Acceptance
H4	Second-hand Product Attributes	→	Perceived Risk						Accepted
H4-1	Scarcity	→	Perceived Risk	.385	-.292	.053	-8.886	.000***	Accepted
H4-2	Economic Value	→	Perceived Risk	.301	-.271	.044	-7.039	.000***	Accepted
H4-3	Attractiveness	→	Perceived Risk	.368	-.279	.068	-9.003	.000***	Accepted
H5	Trust	→	Satisfaction	.519	.478	.051	7.117	.000***	Accepted
H6	Perceived Risk	→	Satisfaction	.491	-.432	.058	-9.099	.000***	Accepted
H7	Satisfaction	→ Reuse Intention		.547	.507	0.41	11.978	.000***	Accepted

Table 4. (*Continued*)

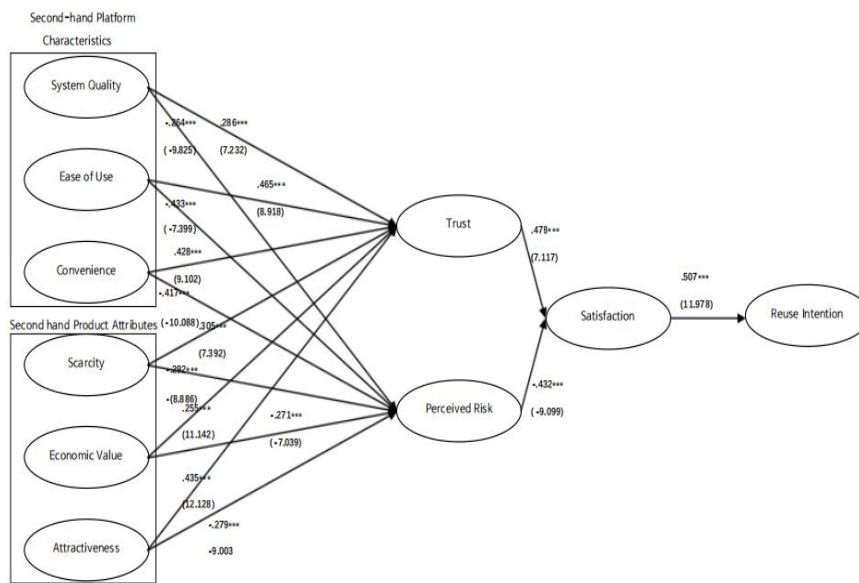** p<0.1, ** p<.05, *** p<0.01*

Figure 2. Research model.

This study examined the impact of second-hand transaction platform characteristics and second-hand product characteristics on consumer trust, perceived risk, satisfaction, and repurchase intention. The main findings are as follows:

Hypothesis 1: The characteristics of second-hand transaction platforms positively influence consumer trust. (Accepted)

Hypothesis 2: The characteristics of second-hand transaction platforms negatively influence consumer perceived risk. (Accepted)

Hypothesis 3: The characteristics of second-hand products positively influence consumer trust. (Accepted)

Hypothesis 4: The characteristics of second-hand products negatively influence consumer perceived risk. (Accepted)

Hypothesis 5: Consumer trust positively influences satisfaction. (Accepted)

Hypothesis 6: Consumer perceived risk negatively influences satisfaction. (Accepted)

Hypothesis 7: Consumer satisfaction positively influences repurchase intention. (Accepted)

The results of the hypothesis testing suggest that operators of second-hand transaction platforms can develop strategies to improve consumer experience and enhance consumer trust. However, the limitations of the study include the restricted sample and cross-sectional nature of the data. Future research should utilize longitudinal data and a broader sample to generalize these results and explore the sustainability of second-hand transaction platforms. Such additional studies are expected to make significant contributions to a deeper understanding of the development of second-hand transaction platforms and changes in consumer behavior.

5. Conclusion and future research directions

This study aimed to enhance the understanding of consumer trust, perceived risk, satisfaction, and repurchase intention among users of Chinese second-hand transaction platforms through an online survey. The survey, conducted in January 2024, received a total of 723 responses, of which 695 were valid. The survey included questions on consumers' demographic characteristics and their experiences with using second-hand transaction platforms and purchasing second-hand products. Based on the theoretical background and previous studies, a set of 56 items was designed, covering aspects such as system quality, ease of use, convenience, scarcity, economy, attractiveness, trust, perceived risk, satisfaction, and repurchase intention. Respondents answered using a 5-point Likert scale.

The collected survey data were analyzed using SPSS 26.0 and AMOS 26.0. To evaluate the reliability of the measurement tools, Cronbach's alpha was calculated, and exploratory factor analysis (EFA) was performed to assess construct validity. Confirmatory factor analysis (CFA) was conducted to examine convergent and discriminant validity between the variables, and structural equation modeling (SEM) was used to test the hypotheses and evaluate the model fit using statistical indices such as RMSEA, CFI, and TLI.

The findings contribute to the development of strategies for second-hand transaction platform operators to improve consumer experience and strengthen consumer trust. However, the study is limited by the sample size and the cross-sectional nature of the data. Future research should use longitudinal data and a broader sample to generalize these results and explore the sustainability of second-hand transaction platforms. Such future studies are expected to provide deeper insights into the development of second-hand platforms and changes in consumer behavior, as well as the psychological factors that drive these changes.

Conflict of interest

The authors declare no conflict of interest.

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