

# The Mediating Role of Consumer Perception in the Impact of Consumer Trust on Purchase Intentions in China

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## ABSTRACT

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This study aimed to explore the mediating role of consumer perception in the process of consumer trust influencing purchase intention. With the rapid development of e-commerce, trust has been widely regarded as one of the core factors driving consumers purchase intention. Based on this background, this study constructs a theoretical model mediating consumer perception, and deeply analyzes the complex relationship between consumer trust, consumer perception and purchase intention.

Using a stratified random sampling method to ensure sample representativeness, 522 valid sample data were drawn from survey reports of active consumers across multiple mainstream e-commerce platforms. After data collection, the reliability and validity test, direct path analysis and mediation effect were tested by structural equation model (SEM).

The empirical results show that consumer trust has a significant positive influence on purchase intention, and that consumer perception plays a significant intermediary role between trust and purchase intention. This result reveals that in the context of e-commerce, the establishment and enhancement of trust can not only directly enhance consumers purchase intention, but also indirectly promote purchase decisions by optimizing consumer perception; the study also found that improving consumer perception experience is a key way to increase consumer trust and promote purchase behavior.

This study still has some limitations. The data sources are mainly focused on specific e-commerce platforms, which may affect the universality of the research results; this study does not thoroughly analyze the impact of platform characteristics on trust and perception, which needs to be further explored in future studies; since this study is based on cross-sectional data, longitudinal data can be used to infer causality more accurately.

In conclusion, by systematically analyzing the relationship between consumer trust, perception and purchase intention, this study provides valuable theoretical enlightenment and practical suggestions for academia and practice, and provides a new perspective and path for e-commerce enterprises to optimize trust management strategies.

**Keywords:** consumer trust, consumer perception, purchase intention, e-commerce.

## 1 Introduction

With the rapid development of global e-commerce, online transactions have gradually become the main way for consumers to obtain goods and services. In the e-commerce environment, information asymmetry, merchant integrity problems and the difficulty of intuitively verifying commodity quality make consumer trust become the key variable to promote purchasing behavior. In recent years, research have shown that consumer trust can not only enhance consumers stickiness to the platform, but also significantly enhance consumers purchase willingness and loyalty. In the Chinese market, the surge in e-commerce emphasizes the importance of trust, as Chinas e-commerce platforms still have some challenges in terms of information transparency and seller behavior norms. Therefore, it is of certain theoretical value and practical guiding significance to understand how consumer trust affects the purchase intention in the context of Chinese e-commerce.

Consumer perception plays the role of a "bridge" between trust and purchase intention. Studies in recent years have pointed out that after consumers perceive the value and quality of the platform or seller, the transmission effect of trust will be more obvious, thus increasing their purchase intention. Based on the S-O-R model (Stimulus-Organism-Response model), trust, as the stimulus source, can indirectly influence the final behavior (purchase intention) through the internal state of consumers (such as perceived value, perceived risk, etc.) (WuY, 2023). Under this framework, consumer perception can not only enhance the effect of trust, but also reduce the uncertainty in the purchase decision process, so as to effectively promote consumers purchase behavior. Perceived value and perceived quality have been verified to be important factors affecting consumer trust, while perceived risk can weaken the positive impact of trust on purchase intention to a certain extent (Harrigan M, 2021).

In Chinas e-commerce market, the interaction between consumer trust and perception is particularly important. In recent years, research have found that consumers trust in e-commerce platforms is influenced by various factors, including the brand image of the platform, credit score of merchants and transaction safeguards (Wang J, 2022); consumer perception plays a key role in these influencing factors, and the improvement of perceived quality and perceived value can not only enhance consumer trust, but also directly promote the purchase intention.

Based on the above background, this study constructed a theoretical model with consumer perception as the mediating variable to explore the relationship between trust, perception and purchase intention.

In conclusion, the innovation of this study is to incorporate consumer perception into the research framework of consumer trust and purchase intention, fills the research gap in the existing literature on the trust transmission mechanism, and provides new theoretical and empirical support for optimizing the strategy of trust management in Chinese e-commerce platforms.

## 2 Literature review and hypotheses

### 2.1 Consumer Trust and Purchase Intention

Consumer trust is widely regarded as an important factor affecting consumers willingness to buy, especially in the e-commerce environment with information asymmetry (YuW, 2021). Trust can be understood as consumers expectation and dependence on the positive behavior of platforms or merchants in the face of uncertainty (Bhattacharya S, 2023). On e-commerce platforms, consumer trust is mainly reflected in their trust in the security of the platform, the accuracy of product information and the credibility of merchants.

LiuP (2021) research suggests that when consumers build sufficient trust in a platform or merchant, they prefer to buy products or services on the platform. This phenomenon is particularly evident in repeated purchase behavior, as trust building usually needs to be consolidated through multiple good consumption experiences. An empirical study on Chinese consumers shows that consumer trust significantly improves the purchase intention, especially on platforms with strong brand image and good user evaluation, and trust can more directly promote consumers to complete the purchase decision (Firman A, 2021).

Agusiady R (2024) Research found that e-commerce platforms can significantly enhance the trust of consumers by providing measures such as return protection, privacy protection and transaction insurance. This increase in trust will reduce consumers perception of risk and make them more decisive in purchasing decisions. Therefore, if the e-commerce platform can enhance its measures in information transparency and transaction guarantee, it will help to improve their consumers purchase intention in the fierce market competition.

There are diversified factors affecting consumer trust, and the influence of different factors on purchase intention is different. Therefore, to study the relationship between consumer trust and purchase intention, we need to consider the multidimensional nature of trust and the complex dynamic factors behind it.

To sum up, consumer trust plays a crucial role in promoting purchasing intention, and e-commerce platforms should be committed to building and consolidating consumer trust to enhance purchasing intention and customer loyalty.

H1: Consumer trust has a positive impact on the purchase intention of Chinese consumers.

## 2.2 Definition and influencing factors of consumer trust

Consumer trust is widely regarded as an important factor affecting consumer behavior in the e-commerce field, and its definition covers consumers trust in merchants or platforms in terms of information transparency, reliability and security. Trust is usually described as the positive expectation of the seller or the platform under incomplete information conditions, that is, consumers believe that the platform or the merchant will uphold good faith and provide them with real product information and reliable services (Qalati S A, 2021). According to Wasaya A (2021), trust is a key variable driving repeated buying behavior and improving platform loyalty, especially in online transactions without face-to-face interaction.

In recent years, scholars have proposed a multi-dimensional trust composition, including structured trust, relational trust, and cognitive trust. Among them, structural trust mainly comes from the guarantee mechanism of the platform, such as transaction insurance, return policy and information security measures. These mechanisms can effectively reduce consumers perception of transaction risk, thus enhancing their trust in the platform. Relationship trust is based on the interactive experience between consumers and merchants or the platform. Long-term good interaction can significantly enhance the trust of consumers to merchants. Cognitive trust is usually based on consumers reliability judgment of merchants or platform information, including user evaluation, brand image and market reputation (QiX, 2021).

Recent studies have also highlighted the influence of individual consumer characteristics on trust, age, consumption habits, and risk preference. Amarullah D (2022) found that young consumers are generally more receptive to innovative technologies and more dependent on platforms, so their trust is also more easily influenced by external factors.

To sum up, consumer trust, as an important variable in e-commerce transactions, is influenced by multiple factors, which jointly build consumers sense of trust in the platform and merchants. And the specific mechanisms and their interactions of different factors in the trust-building process can be further explored in future studies.

H2: Structural trust has a positive impact on the buying intention of Chinese consumers.

H3: Structural trust has a positive impact on the buying intention of Chinese consumers.

H4: Structural trust has a positive impact on the buying intention of Chinese consumers.

## 2.3 Mediator mechanism of consumer perception

In recent years, the mediating role of consumer perception in the relationship between trust and purchase intention has gradually attracted attention. Consumer perception is often defined as the overall consumer perception of a product or service, including dimensions such as perceived value, perceived quality, and perceived risk. These perceived factors not only affect the consumers overall impression of the platform, but also play the role of a "transmitter" in the relationship between trust and purchase intention. Based on the S-O-R model, trust as an external stimulus can indirectly influence consumer behavior through their intrinsic perceived state.

Perceived value is important in the mechanism of mediating action. Perceived value usually refers to the value evaluation formed by consumers after weighing the payment cost and the benefits obtained, which can significantly improve their satisfaction and trust with the platform. Han M S (2022) Research found that when consumers perceived value of a product or service is high, they are more likely to form trust in the platform, thus increasing their willingness to buy. Perceived quality is also an important mediator between trust and willingness to buy, especially when high-quality products and services can significantly enhance consumers trust in the platform or merchants (Zhang X, 2021).

High perceived risk will weaken consumers trust in the platform, thus reducing their willingness to buy. Guerreiro J (2021) Research points out that when consumers are skeptical about the transaction security and privacy protection of the platform, the increase in perceived risk will significantly reduce their trust, leading to a decline in their willingness to buy. E-commerce platforms can reduce consumers perceived risk by strengthening security, providing transparent information and reliable services, thus enhancing trust and promoting purchase intentions (Tran V D, 2022).

In conclusion, the mechanism of consumer perceived mediation between trust and purchase intention is complex and multidimensional. By improving perceived value and perceived quality and reducing perceived risk, e-commerce platforms can more effectively enhance consumers trust and indirectly promote their purchase intention.

H5: Consumer perception has a positive impact on the purchase intention of Chinese consumers.

H6: Consumer perception regulates the influence of consumer trust on the purchase intention of Chinese consumers.

## 2.4 Research questions and hypotheses

In summary, the existing literature suggests that consumer trust plays a key role in driving purchase intentions on e-commerce platforms. Consumer trust can directly increase purchase intentions by reducing perceived risk and enhancing perceived value. At the same time, consumer perception, as an intermediary variable, transmits the influence between trust and purchase intention, especially factors such as perceived value and perceived quality can amplify the positive effect of trust on purchase intention. However, the current study still lacks in-depth discussion on the mechanism of different dimensions of trust on the purchase intention, and the regulatory role of consumer perception in the relationship between trust and purchase intention also needs to be further verified.

Based on this, this study raises the following research questions: How does consumer trust and its different dimensions affect the purchase intention of Chinese consumers? What intermediary or regulatory role does consumer perception play in it? To answer these questions, the study proposes the following hypotheses:

H1: Consumer trust has a positive impact on the purchase intention of Chinese consumers.

H2: Structural trust has a positive impact on the buying intention of Chinese consumers.

H3: Structural trust has a positive impact on the buying intention of Chinese consumers.

H4: Structural trust has a positive impact on the buying intention of Chinese consumers.

H5: Consumer perception has a positive impact on the purchase intention of Chinese consumers.

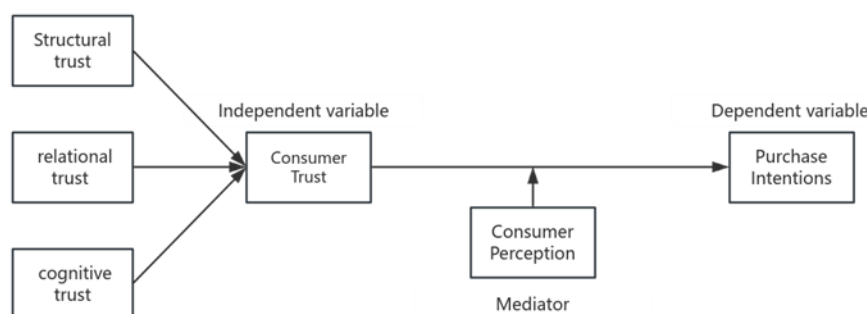
H6: Consumer perception regulates the influence of consumer trust on the purchase intention of Chinese consumers.

## 3 Research methods

### 3.1 Study model construction

On the basis of the literature review, the following conceptual model is proposed:

#### 3.1 Research framework



### 3.2 Sample and data collection

In this study, an online questionnaire survey method was collected data to ensure access to a large-scale, representative sample. The questionnaire is distributed through user communities, social media and online forums of major e-commerce platforms in China, aiming to cover a wide range of consumer groups and reflect the real situation of Chinese consumers trust and purchase intention of e-commerce platforms.

In the questionnaire design, the scale was first designed for each variable. Consumer trust measures three dimensions of structural trust, relational trust and cognitive trust, referring to the mature scale of the relevant literature to ensure the reliability and validity of the measurement instrument. A total of 547 questionnaires were collected during the data collection process. Through data cleaning and screening, after eliminating the invalid questionnaires, 522 valid questionnaires were finally obtained, and the rate of the valid questionnaires was about 95.4%.

Before the formal analysis, descriptive statistics, reliability analysis, and validity validation were performed. The reliability analysis results showed that the Cronbachs coefficient of each variable was above 0.7, and the validity validation showed that the measurement model had good convergent validity and discriminatory validity. These preliminary test results lay a solid foundation for data analysis and hypothesis validation in this study.  $\alpha$

In conclusion, this study collected data using online questionnaires, and the sample data were well representative and reliable. Through rigorous questionnaire design and data cleaning, the quality of research data is ensured, so that the subsequent empirical analysis can accurately reflect the relationship between consumers trust, perception and purchase intention.

### 3.3 Measurement of the variables

Table 3.1 shows the baseline data for the 522 samples, with descriptive statistical analyses from the dimensions of gender, age, education, income and occupation. The results showed that the ratio of male and female in the sample was close (50.2% male and 49.8% female); mainly in 26-35 (44.4%) and 18-25 (29.9%). The distribution of education was mainly bachelors degree (45.6%), followed by junior college (27.2%). In terms of monthly income, most people earn 5,000-10,000 yuan (41.8%), followed by less than 5,000 yuan (29.5%). In terms of occupation distribution, the company accounted for the largest proportion of employees (39.5%), followed by students (23.8%).

These data provide the overall background of the sample for the subsequent study, showing that the respondents covered different age levels and income levels. From this baseline analysis, it is seen that the sample is diverse enough to support extensive inference and in-depth analysis of consumer behavior.

Table 3.1 Descriptive statistics for baseline data

project	class	frequency (n)	percentage (%)
sex	the male sex	262	50.2
	femininity	260	49.8
age	18-25 Years old	156	29.9
	26-35 Years old	232	44.4
	36-45 Years old	94	18
	Age 46 and older	40	7.7
record of formal schooling	High school and below	84	16.1
	junior college	142	27.2
	undergraduate course	238	45.6
	Graduate student or above	58	11.1
monthly income	Below 5,000 yuan	154	29.5
	5,000-10,000 yuan	218	41.8

	1,0,001-15,000 yuan	102	19.5
	RMB 15,001 yuan and above	48	9.2
work	student	124	23.8
	company employee	206	39.5
	professional	82	15.7
	Government / public institutions	72	13.8
	other	38	7.3

Table 3.2 presents the structure and measurement details of the study variables, including consumer trust, structural trust, relational trust, cognitive trust, consumer perception, and purchase intention. Each variable is subdivided into multiple measurement items, and consumer trust involves trust perception in product quality, privacy protection, complaint handling efficiency, etc. Structural trust emphasizes the rationality of transaction safeguards and return policy; relationship trust focuses on the attitude of platform service personnel and interaction with users, and cognitive trust is based on information transparency and brand reputation.

The measurement of consumer perception includes product cost performance and shopping experience, while the purchase intention measures users purchase intention and recommendation intention on the platform. This table explains the specific content of each measurement item, ensures the comprehensiveness and pertinence of the scale, and lays the foundation for the accurate evaluation of research variables and data analysis.

Table 3.2 Study Structure and Measurements

structure	project number	Measuring items
consumer confidence	Trust1	I think the platform is trustworthy in terms of product quality.
	Trust2	The platform focuses on protecting consumers privacy.
	Trust3	The platform is very timely and effective in handling consumer complaints.
	Trust4	I believe that the information provided by the platform is true and reliable.
	Trust5	The overall reputation of the platform gives me a sense of trust.
Structural trust	Structural1	The platform has a perfect safeguard measures in the transaction process.
	Structural2	I think the payment and return policy of the platform is reasonable.
Relative trust	Relational1	The service staff of the platform are friendly and are willing to help solve the problem.
	Relational2	I have a good interaction with the platform and feel a solid relationship.
Cognitive trust	Cognitive1	I believe that the information provided by the platform is transparent and trustworthy.
	Cognitive2	The platform has a good reputation in the industry, which is in line with my cognitive expectations.

Consumer perception	Perception1	I think the products of this platform have a high cost performance.
	Perception2	The platform has a wide variety of products and can meet my needs.
	Perception3	The platform has a wide variety of products and can meet my needs.
	Perception4	I think the shopping experience on this platform is better than the other platforms.
willingness to buy	Purchase1	I would like to buy the products on the platform.
	Purchase2	I would recommend the products and services of the platform to others.
	Purchase3	In the future, I may continue to choose this platform for shopping.

Next, Table 3.3 descriptive statistics for the factors in the study, including consumer trust, perceived value, perceived quality, perceived risk, purchase intention, structured trust, relational trust and cognitive trust. The sample size for each factor was 522, with a mean value between 2.85 and 4.22 and a standard deviation between 0.64 and 0.75, showing the concentration and dispersion of the sample data.

The average consumer trust and purchase intention is high (4.15 and 4.22 respectively), indicating that participants have high trust and purchase intention to the e-commerce platform. The lowest mean (2.85), reflecting moderate concern about transaction risk in the sample. The standard deviation of each variable was similar, indicating the relative stability of the data. The minimum and maximum values ranged between 1.00 and 5.00.

These descriptive statistics provided an overall understanding of the study variables, suggesting some diversity and stability of participants in trust, perception, and purchase intention.

Table 3.3 Descriptive statistics of model factors

factor	sample capacity (N)	mean (Mean)	standard error (SD)	least value (Min)	crest value (Max)
consumer confidence	522	4.15	0.68	1.00	5.00
Perceived value	522	4.05	0.72	1.00	5.00
Perceived quality	522	4.08	0.65	1.00	5.00
Perceived risk	522	2.85	0.75	1.00	4.80
willingness to buy	522	4.22	0.64	1.00	5.00
Structural trust	522	4.10	0.70	1.00	5.00
Relative trust	522	3.95	0.68	1.00	5.00
Cognitive trust	522	4.00	0.67	1.00	5.00

## 4 Results

### 4.1 Feasibility analysis of the measurement model (reliability and validity)

Table 4.1 provides the external model load values for each variable in the study, revealing the extent to which each measurement term contributes in its corresponding factors. The load values for consumer trust range from 0.79 to 0.87, and for structural trust range from 0.71 to 0.90. The load value of relationship trust is 0.81 to 0.83, reflecting the importance of service attitude and interaction quality; the high load value of cognitive trust, highlighting the significant role of information transparency and brand reputation in this factor; the consumer

perceived load value is from 0.76 to 0.87, indicating the high influence of cost performance and shopping experience; and the load value of purchase intention is 0.81 to 0.84, reflecting the influence on the continuous purchasing tendency and recommendation intention of the platform.

Overall, the load value of each factor exceeded 0.7, indicating the validity and significance of the measurement items in the respective constructs, providing support for the reliability and validity of the model.

Table 4.1 External Model Loads

factor	project number	Load value (Loading)
consumer confidence	Trust1	0.82
	Trust2	0.79
	Trust3	0.85
	Trust4	0.86
	Trust5	0.87
Structural trust	Structural1	0.71
	Structural2	0.90
Relative trust	Relational1	0.83
	Relational2	0.81
Cognitive trust	Cognitive1	0.84
	Cognitive2	0.89
Consumer perception	Perception1	0.86
	Perception2	0.78
	Perception3	0.76
	Perception4	0.87
willingness to buy	Purchase1	0.84
	Purchase2	0.81
	Purchase3	0.83

Table 4.2 presents the reliability and validity analysis of each variable in the study, including Cronbachs Alpha coefficient, combined reliability (CR), mean extraction variation (AVE), and variance inflation factor (VIF). The Cronbachs Alpha coefficients of all variables ranged between 0.834 and 0.892, showing good internal consistency. The combined reliability values all exceeded 0.85, indicating the high reliability of the measurement model. The average extraction variation was between 0.645 and 0.694, which verified the convergent validity of each variable, indicating that the measurement items can effectively reflect their corresponding potential variables. The VIF values ranged between 1.045 and 1.987, well below the threshold for multicollinearity risk 10, indicating a minor problem of collinearity across variables.

Overall, the reliability and validity analysis results showed that the measurement model of the study had strong reliability and convergent validity, supporting the stability of the data and the accuracy of the analysis.

Table 4.2 Analysis of reliability and validity

factor	Cronbachs Alpha	Combined reliability (CR)	Mean extraction variation (AVE)	Variance inflation factor (VIF)
consumer	0.883	0.903	0.682	1.356



confidence				
Structural trust	0.851	0.872	0.663	1.112
Relative trust	0.834	0.865	0.645	1.987
Cognitive trust	0.864	0.884	0.673	1.210
Consumer perception	0.872	0.891	0.651	1.045
willingness to buy	0.892	0.911	0.694	1.478

The analysis results in Table 4.3 show that the structural equation model in this study was fitted well, and all the model indexes met the recommended values. Specifically, the chi-square degree of freedom ratio is 2.15, indicating that the model is simple and effective; both CFI and TLI exceed 0.90, 0.93 and 0.91 respectively, indicating a high fit of the model. Both RMSEA and SRMR were below 0.08, showing small model residuals and high agreement of the data to the model. Overall, these results show that the model performs well in terms of reliability and validity, verifying the rationality of the relationship between consumer trust, consumer perception and purchase intention. By building robust models, the study reveals the importance of consumer trust in e-commerce platforms, and further emphasizes the mediation role of consumer perception between trust and purchase intention. This result provides an empirical basis for e-commerce platforms to optimize users trust and perception, and helps to improve consumers purchase intention and loyalty of consumers.

Table 4.3 Fit index values of the structural equation model

metric	Recommended value	The measured results	Adaptation judgment
Chi-square / DOF ratio	< 3.0	2.15	yes
CFI	≥ 0.90	0.93	yes
TLI	≥ 0.90	0.91	yes
RMSEA	< 0.08	0.05	yes
SRMR	< 0.08	0.04	yes

Table 4.4 provides the results of the correlation analysis between the study variables, showing the relationship between consumer trust, structural trust, relational trust, cognitive trust, consumer perception and purchase intention. The results showed that consumer trust and other variables showed a significant positive correlation, indicating that the improvement of trust level will be accompanied by the increase of purchase intention.

Overall, the significant positive correlation among all variables validates the rationality of the assumptions in the theoretical model, supporting the hypothesis that trust has a positive impact on purchase intention through consumer perception.

Table 4.4 Correlation analysis

variable	consumer confidence	Structural trust	Relative trust	Cognitive trust	Consumer perception	willingness to buy
consumer confidence	1					

Structural trust	0.681*	1				
Relative trust	0.703**	0.612**	1			
Cognitive trust	0.745*	0.653***	0.684*	1		
Consumer perception	0.512***	0.486	0.537**	0.561*	1	
willingness to buy	0.631*	0.598*	0.623	0.654***	0.582**	1

#### 4.2 Structural model analysis and hypothesis validation

Table 4.5 shows the results of the mediation effect test used to verify the mediation role of consumer perception between consumer trust and its different dimensions and purchase intention. The results showed that structural trust, relational trust and cognitive trust all had significant indirect effects on purchase intention through consumer perception, and the 95% confidence interval of the mediation effect did not contain 0, confirming the existence of the mediation effect.

Specifically, the coefficient of mediation effect of structured trust on purchase intention through consumer perception was 0.082-0.21, and the range of relational trust and cognitive trust ranged from 0.074 to 0.192 and 0.067 to 0.185, respectively. This shows that consumer perception plays an effective bridge between different types of trust and purchase intention, and the indirect effect is significant; the mediation effect coefficient of overall consumer trust on purchase intention is 0.095-0.215, which verifies the key role of consumer perception as a mediation variable in the relationship between trust and purchase intention.

Taken together, the findings support the hypothesis in the model about the mediation effect of consumer perception, further highlighting the strategic significance of optimizing consumer perception to buy in e-commerce platforms to buy.

Table 4.5 Test of mediation effect

argument (IV)	metavariable (M)	Intermediation Inspection (ab)			Complete / Partial Mediation Test (c )	
		And a 2.5% lower bound	97.5% upper bound	Includes 0	And a 2.5% lower bound	97.5% upper bound
Structural trust	Consumer perception	0.082	0.21	yes	0.038	0.115
Relative trust	Consumer perception	0.074	0.192	yes	0.029	0.101
Cognitive trust	Consumer perception	0.067	0.185	yes	0.025	0.089
Consumers trust in the whole	Consumer perception	0.095	0.215	yes	0.045	0.128

Table 4.5 summarizes the validation results of the study hypothesis, showing the individual path coefficients and their significance. The direct effect of consumer trust on purchase intention was 0.456, t value was 6.706, and p value was significant ( $p < 0.001$ ), supporting the H1 hypothesis. The path coefficients of structural, relational and cognitive trust to purchase intentions were 0.321, 0.298 and 0.334, respectively, with t-values greater than 4 and significant p-values (all  $p < 0.001$ ), verifying the H2, H3 and H4 assumptions.

The influence coefficient of consumer perception on purchase intention was 0.292, and the t-value was 4.171,  $p < 0.001$ , supporting H5. The influence coefficient of consumer perception as a mediator variable was 0.182, t value 2.800 and p value 0.005, indicating that it significantly regulated the relationship between consumer trust and purchase intention, validating the H6 hypothesis.

These results highlight the significant role of various dimensions of consumer trust in enhancing purchase intention and highlight the importance of consumer perception as a mediating variable, further confirming the critical significance of optimizing trust and perception in an e-commerce environment to drive purchase intention.

Table 4.6 Testing of the hypothesis results

hypothesis	coefficient	average value	standard deviation (SD)	t price	P price	bear fruit
H1: Consumer trust purchase intention (c)	0.456	4.15	0.068	6.706	0.000***	Support the hypothesis
H2: Structured trust and purchase intention	0.321	4.1	0.07	4.586	0.000***	Support the hypothesis
H3: Relational trust purchase intention	0.298	3.95	0.072	4.139	0.000***	Support the hypothesis
H4: Cognitive trust and purchase intention	0.334	4.00	0.069	4.841	0.000***	Support the hypothesis
H5: Consumer perceived purchase intention (b)	0.292	4.05	0.07	4.171	0.000***	Support the hypothesis
H6: Consumer perceive x trust purchase intention (c=a * b)	0.182	4.05	0.065	2.800	0.005**	Support the hypothesis
Consumer trust and consumer perception (a)	0.312	4.1	0.065	4.8	0.000***	Support the hypothesis

Figure 4.1 shows the path of mediation effect of consumer trust on purchase intention through consumer perception. The figure clearly identifies how the different dimensions of trust (structural, relationship, cognitive) directly and indirectly affect the purchase intention. Pathway analysis shows that consumer trust not only significantly affects purchase intention through direct channels, but also plays an indirect role through the intermediary variable of consumer perception.

All paths are positive relationships, which further verifies the positive driving effect of each dimension of trust on the purchase intention. Overall, Figure 4.1 supports the mediation hypothesis in the study model, emphasizing the importance of enhancing the indirect influence of trust on purchase intention by enhancing consumer perception. This provides an empirical basis for the e-commerce platform to develop a perceptual optimization-oriented strategy.

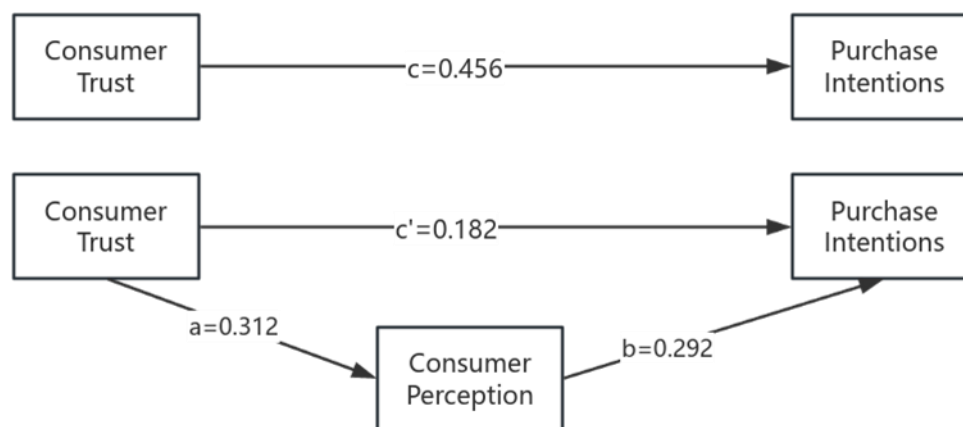


Figure 4.1 Mediation effect diagram

## 5 Discussion

In the rapidly developing e-commerce environment, this study deeply explores the influence mechanism of consumer trust on the purchase intention of Chinese consumers. Data were analyzed using structural equation model (SEM) and data from 522 valid samples from mainstream e-commerce platforms were collected by stratified random sampling. The results showed that consumer trust has a significant positive influence on purchase intention, while consumer perception plays a significant intermediary between trust and purchase intention.

The results show that all dimensions of consumer trust have a significant impact on purchase intention. Structural trust, relational trust and cognitive trust all show significant positive impact paths, indicating that the platform can effectively enhance consumers purchase intention by strengthening security measures, improving service experience and enhancing brand reputation. The path coefficient of structural trust was 0.321 ( $p < 0.001$ ), and 0.298 and 0.334 respectively (both  $p < 0.001$ ), showing the positive role of different confidence dimensions in promoting purchase intention; consumer perception played a significant mediation effect between trust and purchase intention, and the mediation effect coefficient of perceptual path was 0.182 ( $p < 0.005$ ), indicating that the perceived experience formed by consumers based on trust further strengthens their purchase intention.

Despite the important findings of this study, there are still some shortcomings. Data sources focus on specific e-commerce platforms, which may limit the universality of the results; future studies can verify the model in a broader e-commerce environment; this study, based on cross-sectional data, fails to reveal the dynamic changes of trust, perception and purchase intention from the time dimension, and future studies can use longitudinal data to enhance the specific impact of platform characteristics such as user evaluation and seller behavior on trust and perception, which helps to further refine the understanding of trust-building mechanism. Future research can consider these directions to further enhance the understanding of consumer behavior in e-commerce platforms, and provide more refined guidance for enterprise trust management strategies.

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