



Influencing Factors of Second-Hand Platform Trading in C2C E-commerce



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Abstract: Due to COVID-19, the trade and circulation of second-hand goods grew rapidly in the past three years, bringing new opportunities to online second-hand Consumer to Consumer (C2C) trading platform. This paper aimed to study the influencing factors of the platform by constructing a questionnaire based on willingness degree influencing factors in probit model. This paper designed analysis framework of influencing factors and variables, including information acquisition before commodity transaction, communication and consultation during transaction, service after transaction, and user's personal characteristics. Then this paper constructed a binary discrete probit model, with consumers on the platform considered as survey objects. Finally, this paper summarized key influencing factors of the C2C platform based on analysis results of the questionnaire, and put forward measures and suggestions to improve the operating efficiency and performance of the platform.

Keywords: Probit model; C2C second-hand platform; Transaction influencing factors

1. Introduction

E-commerce C2C model, a business model in which different consumers conduct transactions through the Internet [1], consists of buyers, sellers and the trading platform. As the main body of C2C, consumers are commodity providers and buyers [2]. As the multiple roles of provider, manager and service provider, the electronic trading service platform gathers buyers and sellers together, and ensures smooth transaction progress [3]. Second-hand transactions refer to consumers selling their idle goods or other resources or purchasing second-hand goods from others through the second-hand platform. C2C online second-hand platform transaction refers to online purchase of second-hand goods through a special trading platform. Due to the impact of COVID-19 in China, people's consumption concepts changed greatly in the past three years. People paid more attention to benefits and prices of goods because of significant decrease of market and employment opportunities, pay cuts of enterprises, increase of factory shutdowns and other emergencies, and deterioration of external economic environment. Compared with brand new goods, second-hand ones are often not new, but they have not lost their use value. Achieving lower-price use value has led to the increasing recognition of consumers for second-hand goods sales, such as clothing, household and sports products. Rapid growth in the trade and circulation of second-hand goods have brought new opportunities to e-commerce C2C transactions. This paper aimed to study the influencing factors of the transaction by constructing a questionnaire.

2. Research Design

According to the transaction process, the transaction willingness of C2C online second-hand platform can be divided into pre-transaction, transaction and post-transaction. Before the transaction, the key of the influencing factors of the transaction is to attract consumers' attention and generate their desire to buy. Consumers mainly click on the push link of the product or click after searching. After entering the page, the clarity of the product description and picture and the display of the seller's homepage have a decisive role in whether consumers will further communicate; If consumers are interested in the product through the description and pictures of the product, they will communicate with the price of the product. At this time, in addition to price, consumers mainly focus on the

communication with the counterparty and the speed of information reply [4]. At the same time, consumers will also be concerned about the timeliness and safety of goods logistics or express delivery; Second-hand goods often have quality or description inconsistent with the facts. Therefore, in order to protect their own interests, the convenience of after-sales protection and return will also affect consumer transactions. At the same time, the age, income level and education level of consumers will also affect the transaction.

Based on the above analysis, this study sets up an analysis framework of influencing factors for information acquisition before commodity trading, communication and negotiation during commodity trading, service after commodity trading, and user's personal characteristics (Table 1).

Table 1. Influential factors of second-hand platform transaction satisfaction under C2C mode

Classify	Influence factor
Accuracy of information acquisition	Product push and search before commodity transaction Product description and picture clarity Display of seller's homepage information
Communication and negotiation during commodity trading	Consumer satisfaction with product cost performance Communication experience and response timeliness Timeliness and security of logistics/express delivery
Service after commodity transaction	Effectiveness of after-sales guarantee Convenience of return service
User's personal characteristics	Age Income Education level

3. Proposal of Influence Variables

3.1 Information Acquisition Variables Before Commodity Transaction

Before the users transaction, the consumer needs to find the goods he needs on the platform, which generally consists of two situations: first, the consumer has no clear demand for goods, and only when he or she browses the goods on the platform and meets the goods he or she likes and needs, the purchase intention will be generated. At this time, the consumer's intention is not clear, then the more accurate the goods pushed to the consumer, the more likely the consumer will have the purchase desire, So as to promote the transaction; The second is that users browse or search for goods with clear needs. At this time, consumers have clear intentions. If the platform provides accurate recommendations and search results according to their needs, it is likely to facilitate the transaction. Accurate product push can stimulate the desire to buy and reduce the difficulty of user selection. Therefore, this paper puts forward the following assumptions:

X₁₁: The accuracy of commodity push and search has a significant positive impact on the C2C online platform's willingness to trade second-hand goods [5]. When users browse the goods they intend to buy, they will click to enter the page to view the detailed description of the goods. Because of the uncertainty of the quality of second-hand goods, consumers' judgment of the quality of goods mostly depends on the description and picture display of the merchants, so the clarity of the description and picture will affect the purchase of consumers, and the clearer the description and picture display, the more exposure will be increased and more people will see it, Generally speaking, the clearer the description and picture of the goods, the better it can help consumers understand the status and quality of the goods, and promote the occurrence of commodity transactions. Therefore, the following assumptions are proposed.

X₁₂: The product description and image clarity have a significant positive impact on the willingness of the C2C online platform to trade second-hand goods. C2C transaction mode is a transaction between individuals. When dealing with strangers who lack understanding and trust, consumers usually have more concerns, including credit risk. Displaying personal sesame credit information and location information on the seller's personal home page can help reduce consumers' concerns, and displaying the location can help consumers estimate the delivery efficiency, The past transaction evaluation can provide reference for consumers. Rich personal homepage display can make consumers feel close, increase trust and promote transactions. Therefore, this paper puts forward the following assumptions.

X₁₃: The seller's homepage information display has a significant positive impact on the platform's willingness to trade second-hand goods.

3.2 Communication and Negotiation Variables in the Process of Commodity Trading

Generally, the price of goods traded on the C2C online second-hand platform is more advantageous than that of new goods. Therefore, consumers who choose to trade goods on the C2C online platform tend to pursue lower

prices and higher performance-price ratio. At the same time, unlike ordinary e-commerce, consumers can directly connect with the seller's individual and negotiate the price of goods to a certain extent. Through negotiation, they can usually obtain a price lower than the list price of goods. Considering the reality of consumers' pursuit of lower prices, consumers' satisfaction with commodity prices will have an impact on the transaction. Therefore, the following assumptions are proposed:

X₂₁: Consumer satisfaction with product cost performance has a significant positive impact on the C2C online platform's willingness to trade second-hand goods [6]. Generally speaking, in the process of purchasing goods, consumers want to know more about the goods, but the seller's description of the goods is usually not satisfied. Consumers will communicate with the seller through messages, private chat and other ways. At this time, the timeliness of the seller's reply and the communication experience in the communication process will have an impact on the consumer's desire to buy. The more timely the seller replies and the better the communication experience, the easier it is for consumers to understand the goods in depth, build trust and facilitate the transaction. Therefore, this paper puts forward the following assumptions.

X₂₂: Communication experience and response timeliness have a significant positive impact on the C2C online platform's willingness to trade second-hand goods. After the consumer decides to purchase the goods and places the order, the goods are often sent to the consumer by express delivery/logistics [7]. Although modern logistics is convenient and fast, the delivery time of the C2C online second-hand platform under the C2C mode needs to be further determined with the seller. Because the seller is not a professional business, its delivery may be delayed. And because there are many uncertain factors in express transportation, the goods may be lost and damaged during the transportation process, and sometimes it is difficult to guarantee the timeliness of express delivery. If the goods can not be delivered to consumers in time, it may also affect the conclusion of commodity transactions. Therefore, this paper puts forward the following assumptions.

X₂₃: The timeliness and safety of logistics/express have a significant positive impact on the willingness of C2C online platform to trade second-hand goods.

3.3 Service Variables After Commodity Transaction

Because the way consumers understand the goods is mainly through text, pictures, videos and other invisible ways, so after the goods are delivered, they may encounter situations that are inconsistent with the description of the goods or the expectations of consumers. At this time, how to provide effective after-sales service can relieve consumers of their worries. However, because the seller is an independent individual and the goods may be unique, it is difficult to improve the after-sales service. However, after the transaction, it is inevitable to encounter the phenomenon of wrong version of the goods, false description or consumers do not know how to use the goods. Therefore, the following assumptions are proposed:

X₃₁: The effectiveness of after-sales support has a significant positive impact on the willingness of C2C online platform to trade second-hand goods. At present, the C2C online return service is that after the goods are sent out, if the consumer is not satisfied with the goods purchased, he/she needs to file a return application with the seller, and the goods can be returned only after the seller agrees. If the seller does not agree with the consumer's request, he/she needs to coordinate through the C2C online small court and official customer service. However, it often takes days or even weeks, which consumes a lot of energy, but also brings tension between buyers and sellers and bad shopping experience. Some sellers will indicate in advance that the goods will not be returned or exchanged after they are sold, which to some extent increases consumers' concerns and affects the conclusion of the transaction. Therefore, this paper puts forward the following assumptions:

X₃₂: The convenience of return service has a significant positive impact on the C2C online platform's willingness to trade second-hand goods.

3.4 User Personal Characteristic Variables

People of different ages have different concerns when buying goods. Young people pursue fashion and novelty and pay attention to emotion. They pay more attention to communication and communication during the transaction process. Young people pay more attention to the cost performance of goods and are more sensitive to price. Middle-aged people tend to pay more attention to the quality of goods and have strong buying opinions. Buying goods will become more rational, proactive and fast as people grow older. Therefore, the following assumptions are proposed in this paper:

X₄₁: The age of consumers has a significant positive impact on the willingness to trade second-hand goods on the C2C online platform. Income is the economic basis for tourists to buy goods. The level of income largely determines consumers' propensity to choose goods and purchase conditions. Generally, the higher the income level of consumers, the higher the expenditure on commodity purchase, and the higher the purchase frequency, so they will participate more in second-hand commodity transactions. Therefore, this paper puts forward the following assumptions.

X₄₂: The level of consumer income has a significant positive impact on the willingness to trade second-hand goods on the C2C online platform. The positive impact of the epidemic on consumer income levels is mainly due to changes in consumer attitudes. On the one hand, the higher the income level of consumers, the more consumer choices they have, the more rational their consumption will be, and they will also care more about the cost performance of commodity consumption; On the other hand, due to the impact of the epidemic, high income levels have greater uncertainty, leading to high income consumers being more willing to reduce consumption and prepare in advance for the risk of future income decline. This is also one of the reasons why the impact of the epidemic has led to the gradual increase in the popularity of the second-hand commodity market.

X₄₃: The education level of consumers has a significant impact on the willingness to trade second-hand goods on the C2C online platform. Different levels of education of consumers correspond to different understanding abilities and values, so their views on second-hand goods trading will be different. Consumers with higher education level may have higher judgment on the goods to facilitate the transaction, or they may have higher requirements on the goods to cause the transaction to fail. Therefore, the impact of education level on C2C online second-hand platform transactions under C2C mode. Whether it is positive or negative still needs to be verified by subsequent empirical results. Therefore, this paper puts forward the following assumptions.

4. Research Model and Data Collection

4.1 Research Model and Its Variables

Table 2. Description of assumptions of influence variables

Variable	No.	Variable description	Priori hypotheses
Information acquisition variables before commodity transaction	X ₁₁	Accuracy of product push and search (imprecise=1 less precise=2 general=3 more precise=4 very precise=5)	Positive
	X ₁₂	Product description and picture clarity (unclear=1 unclear=2 general=3 relatively clear=4 very clear=5)	Positive
	X ₁₃	The seller's homepage information display (imperfect=1 imperfect=2 general=3 relatively perfect=4 very perfect=5)	Positive
Communication and negotiation variables in commodity trading	X ₂₁	Consumer satisfaction with commodity prices (dissatisfied=1 not satisfied=2 general=3 relatively satisfied=4 very satisfied=5)	Positive
	X ₂₂	Communication experience and timeliness of response (bad=1 bad=2 general=3 good=4 very good=5)	Positive
	X ₂₃	Timeliness and safety of logistics/express delivery (unsatisfied=1 unsatisfied=2 general=3 relatively satisfied=4 very satisfied=5)	Positive
Service variables after commodity transaction	X ₃₁	Effectiveness of after-sales support (invalid=1 less effective=2 general=3 more effective=4 very effective=5)	Positive
	X ₃₂	Convenience of return service (not convenient=1 not convenient=2 general=3 relatively convenient=4 very convenient=5)	Positive
	X ₄₁	Consumer's age (14-23 years old=1 24-33 years old=2 34-43 years old=3 44-53 years old=4 53 years old and above=5)	Positive
User personal characteristic variable	X ₄₂	Consumer income level (monthly income) (500 yuan and below=1 500-3000 yuan=2 3000-7000 yuan=3 7000-10000 yuan=4 10000 yuan and above=5)	Positive
	X ₄₃	Education level of consumers (junior high school and below=1 senior high school or equivalent=2 junior college=3 undergraduate=4 graduate=5)	Uncertain
Dependent variable	Y	C2C online second-hand platform transaction willingness (very unwilling=1 unwilling=2 general=3 willing=4 very willing=5)	

Probit model is a generalized linear model, which obeys normal distribution. It is a discrete selection model used to study the relationship between the occurrence probability of a random event and specific influencing factors. Probit model means that the explained variable Y is a 0,1 variable, and the probability of event occurrence depends on the explanatory variable, that is, $P(Y=1)=f(X)$, that is, the probability of $Y=1$ is a function of X, where $f(\cdot)$ is subject to standard normal distribution [8]. In order to meet the requirements of Probit model for binary dependent variables, this paper classifies the "very unwilling", "unwilling" and "general" options in the C2C online platform's willingness to trade second-hand goods into one category and records them as 0; Put the "willing" and "very willing" options into one category and record them as 1. Based on the research assumptions in the second part of this paper, this paper establishes the following relationship function of influencing factors of C2C online second-hand platform transaction under the C2C model: Y (C2C online second-hand platform transaction willingness)= F (information acquisition variables before commodity transaction, communication and negotiation variables during commodity transaction, service variables after commodity transaction, user personal characteristics variables)+random interference items. The specific expression is: $Y^*=\alpha+\beta X_1+\beta X_2+\beta X_3+\beta X_4+\mu$. When $Y^*>0$, $Y=1$, consumers are willing to trade on the C2C online second-hand platform; When $Y^*\leq 0$, $Y=0$,

consumers are unwilling to trade on the C2C online second-hand platform.

Therefore, the binary discrete probit model of the influencing factors of the C2C online platform second-hand commodity transaction willingness used in this paper is:

$$\text{prob}(Y=1|X_i)=\Phi(\alpha_0+\beta_{1n}X_{i1}+\beta_{2n}X_{i2}+\beta_{3n}X_{i3}+\beta_{4n}X_{i4}+\mu)=\Phi(\alpha_0+\beta_{11}X_{i1}+\beta_{12}X_{i2}+\beta_{13}X_{i3}+\beta_{21}X_{i21}+\beta_{22}X_{i22}+\beta_{23}X_{i23}+\beta_{31}X_{i31}+\beta_{32}X_{i32}+\beta_{41}X_{i41}+\beta_{42}X_{i42}+\beta_{43}X_{i43}+\mu) \quad (1)$$

The specific description of each influence variable in the model is shown in Table 2.

4.2 Data Collection

The questionnaire was sampled by random sampling. The questionnaire was collected through the network. From January 2022 to December 2022, the questionnaire survey was launched online. The questionnaire is mainly divided into two parts. The first part is personal information, including the age, income and education level of consumers. The second part is designed in the form of "total scale" for the eight specific influencing factors of the C2C online second-hand platform transaction willingness and the C2C online second-hand platform transaction willingness and perception. A total of 349 questionnaires were collected this time, of which 322 were valid and the effective rate was 92%.

5. Empirical Analysis

5.1 Descriptive Statistical Analysis

In the survey sample data (Table 3), the proportion of men and women is basically the same, with 978 men, accounting for 50.62% of the total number of respondents; There are 954 women, accounting for 49.38% of the total number of respondents. In terms of age distribution, there are 858 young people aged 14-23, accounting for almost half of the total sample; The minimum age is over 54 years old, only 18 people; There are 582 people aged 24-33, accounting for 30.12% of the surveyed sample; There are 390 people aged 34-43, accounting for 20.18% of the surveyed sample; There are 84 people aged over 44-53, accounting for 4.35% of the surveyed samples. In terms of the distribution of education level, the largest number of people are college and undergraduate, which are in line with the data of age characteristics. On the whole, the number of people with education level of college and above accounts for more than half of the total number of people. The number of people with education level of junior high school and below, high school or the same level of education are 78 and 474, accounting for 4.04% and 24.53% respectively. In terms of income, 83.85% of the population has a monthly income of less than 7000 yuan, and 114 people have a monthly income of more than 10000 yuan, accounting for only 5.9%. See Table 3 for details.

Table 3. Type and number of respondents

Population sample	Number of people	Percentage
Participant	1932	100%
Gender		
male	978	50.62%
female	954	49.38%
Age		
14-23 years old	858	44.41%
24-33 years old	582	30.12%
34-43 years old	390	20.19%
44-53 years old	84	4.35%
Over 53 years old	18	0.93%
Monthly income		
500 yuan and below	528	27.33%
500-3000 yuan	654	33.85%
3000-7000 yuan	420	21.74%
7000-10000 yuan	216	11.18%
More than 10000 yuan	114	5.90%
Education level		
Junior high school and below	78	4.04%
High school or equivalent	474	24.53%
Junior college	522	27.02%
Undergraduate	546	28.26%
Graduate student	162	8.39%

5.2 Reliability Analysis

Cronbach's coefficient (Cronbach's α) Method is used. Out of 322 valid data, 0 cases were excluded and 322 cases were valid. Usually Cronbach α The value of the coefficient is between 0 and 1. If α The coefficient is not more than 0.6, and it is generally considered that the internal consistency reliability is insufficient; When it reaches 0.7-0.8, it indicates that the scale has considerable reliability, and when it reaches 0.8-0.9, it indicates that the scale has very good reliability [9]. It can be seen from the reliability analysis results (Table 4) that Cronbach's α the coefficient is 0.832, and the coefficient value is very high, indicating that the questionnaire designed in this paper has good reliability and high use value.

Table 4. Reliability statistics

Cronbach's α	Number of items
0.832	12

5.3 Validity Analysis

It can be seen from Table 5 that KMO=0.849>0.6, indicating strong correlation and good effect. Bartlett's sphericity test value is 1415.309, $P=0.000<0.001$, which denies the original hypothesis that the correlation matrix between variables is not the unit matrix [10], and there is a certain correlation between variables, indicating that the results of the questionnaire are stable and reliable (Table 5).

Table 5. KMO and Bartlett sphericity test

KMO sampling suitability quantity		0.849
Bartlett sphericity test	approximate chi-square	1415.309
	Degrees of Freedom	66
	Significance	0.000

5.4 Model Inspection and Analysis

The obtained data are estimated and analyzed to obtain the estimated results of model 1. After removing the non-significant variables X_{13} , X_{22} , X_{32} , X_{33} , X_{42} and X_{43} in model 1, the model was estimated again, and the R^2 of model 2 reached 0.313, and the accuracy was further improved (Table 6).

Table 6. Estimation results of model 1 and model 2

Variable	Model 1		Model 2	
	Estimated parameter	Z statistic value	Estimated parameter	Z statistic value
X_{11}	0.214***	1.383	0.204	1.816
X_{12}	0.240**	2.865	0.264	2.412
X_{13}	-0.058	-1.284	-	-
X_{21}	0.605***	1.76	0.632	2.684
X_{22}	0.337***	1.379	0.333	2.683
X_{23}	0.01	1	-	—
X_{31}	0.207**	2.104	0.374	2.325
X_{32}	0.021	0.209	-	-
X_{41}	0.03	0.337	-	-
X_{42}	0.313*	4.448	0.376	3.916
X_{43}	0.123	1.059	-	-
C	-4.595	-5.991	-3.99	-5.628
R^2	0.224		0.301	
Log-likelihood value	-135.312		-144.295	
Maximum likelihood value	-170.952		-172.952	

Note: *, ** and *** indicate that they are significant at the level of 1%, 5% and 10% respectively.

From the estimated results of probit model (Table 6), it can be known that:

(1) Impact of information acquisition before commodity trading

The accuracy of product push and search and the clarity of product description and pictures have a significant positive impact on the willingness of C2C online platform to trade second-hand goods. According to the data results calculated by the model, the impact coefficient of product push and search accuracy is 0.214, and the impact coefficient of image definition is 0.240.

These two values show that the more accurate the products that the platform pushes to consumers, the more consistent with consumers' needs and preferences, and the more accurate the search results, the easier and faster consumers will find the products they want, which will generate a stronger willingness to buy and promote the transaction; In terms of the description of goods and the clarity of pictures, the more accurate the description of goods and the clearer the pictures are, the greater the promotion of achieving consumption intention.

(2) The impact of communication and negotiation in the process of commodity trading

Consumer satisfaction with commodity prices, communication experience and timeliness of response have a significant positive impact on the C2C online platform's willingness to trade second-hand goods under the C2C model [11, 12]. According to the data calculated by the model, the impact coefficient of consumer satisfaction with commodity price is 0.605, and the impact coefficient of communication experience and response timeliness is 0.337.

These two numbers show that price is the key to the conclusion of the transaction. The more reasonable the price is, the easier it is to facilitate the transaction. Consumers of second-hand goods on the C2C online platform have the common characteristic of pursuing low prices. In the C2C model of second-hand trading platform, the commodity prices are calibrated by the sellers themselves, and there is no unified standard. The situation of different prices for the same item is quite common, which makes the goods searched by consumers often fail to reach a deal because of price dissatisfaction. At present, the C2C online platform will display the latest transaction price of the goods on the interface of the seller to publish the goods to provide a reference for the pricing of the goods, which, to a certain extent, can enable consumers to judge the reasonable price; The more timely and smooth communication is, the more willing consumers will be to buy and promote the transaction.

(3) Influence of service factors after commodity transaction

The effectiveness of after-sales support has a significant positive impact on the willingness of C2C online platform to trade second-hand goods under the C2C model. According to the data calculated by the model, the influence coefficient of the effectiveness of after-sales service is 0.374. It shows that the more after-sales service can protect consumers, the less concerns they have, and the easier it is to facilitate the transaction.

Unlike the after-sales guarantee mechanism of traditional e-commerce platforms, the second-hand goods sold on the C2C online platform generally do not support the return and exchange of goods without reason. Therefore, consumers must face the risk of lack of after-sales service before purchasing goods. At present, for some valuables sold on the C2C online platform, the C2C online launched the inspection treasure service, which can detect electronic products and identify the authenticity of luxury goods. If the test results are inconsistent with the seller's description, the consumer can directly choose to give up the purchase and close the transaction. If the third-party inspection process is added, the after-sales risk that the consumer needs to face will be reduced to a certain extent.

(4) Influence of user's personal characteristics

The income level of consumers has a significant positive impact on the C2C online platform's willingness to trade second-hand goods under the C2C model [13]. According to the data calculated by the model, the impact coefficient of consumer's income level is 0.376. It shows that the income level of consumers determines their purchasing power level, and the higher the income level, the easier it is to reach the purchase intention. At a certain level, when the consumer's income is low, the scope of their choice of goods is smaller, and the more sacrifices they need to make, the more factors they need to consider. Therefore, the commodity buyers have less anti-risk ability and more concerns. When consumers' income is high, the categories and demand points they choose will also change, for example, they will pursue the quality of goods and ease of communication, and their sensitivity to price is relatively low. Purchase goods more frequently and decisively, and grasp the goods more accurately. Therefore, the level of consumer income has a significant positive impact on the C2C online platform's willingness to trade second-hand goods under the C2C model.

6. Conclusions and Suggestions

Through the analysis of the model, it is concluded that the accuracy of product push and search, the clarity of product description and pictures, the satisfaction of consumers with product prices, the timeliness of communication experience and response, the effectiveness of after-sales protection, and the income level of consumers have a significant positive impact on the C2C online platform's willingness to trade second-hand goods under the C2C model [14]. Among the above factors, the positive impact of consumer satisfaction with commodity prices is significantly stronger than other factors. Based on the above conclusions, this paper puts forward the following suggestions in order to further enhance the C2C online platform's willingness to trade second-hand goods under the C2C model, accelerate the circulation of second-hand goods, and promote the completion of the platform's transactions.

6.1 Standardize the Pricing of Goods

On the one hand, the historical selling price is used to provide reference for sellers to price, and promote the

reasonable and stable price of goods. On the other hand, it is necessary to strengthen the regulation of bad merchants' false pricing to attract traffic, and restrict the promotion of goods with abnormal prices and consumers' feedback that the actual price is inconsistent with the marked price. We will limit the price manipulation to ensure a stable trading environment.

6.2 Improve and Innovate the Original Recommendation Mechanism and Search Mechanism

In addition to pushing the products that consumers search on Taobao platform, analyze the functional uses and supporting products of the products, and push the substitutes and related supporting products that are the same as the functional categories of the products that consumers need to reduce the difficulty of consumer information acquisition and information gap. In the ranking of search results of products, increase the differentiation of results, so that consumers can quickly find products that meet their needs and characteristics, and how to strengthen the recommendation of related products in the interface to promote the transaction.

6.3 Strengthen the Guidance for Sellers to Clearly Describe the Goods

Through the description of other similar products and the summary of product characteristics, the problem points that consumers pay attention to are highlighted in the template, so that consumers can understand the product more quickly and clearly. In terms of product image display, intelligent algorithms can be used to make the system automatically adjust the pictures released by the seller to ensure the clarity of the product. At the same time, we can introduce the current popular live broadcast with goods mode, so that the goods can be displayed more comprehensively.

6.4 Strengthen Message Push

For example, the notification chat content will pop up directly, click on the message to communicate directly, and the SMS reminder of continuous messages will enable the buyer and seller to feel the pushed message more clearly, so as to reply quickly. On the other hand, in the process of communication, the uncivilized words and offensive words will be monitored, the message will be timely reminded, and the communication will be temporarily suspended through the system if necessary. At the same time, strengthen the publicity of friendly exchanges and remind both parties before communication. Timely and good communication is an important prerequisite for the transaction.

6.5 Strengthen After-Sales Support and Improve Return and Exchange Rules

In case of disputes over commodity quality issues, the platform will play a regulatory role, further clarify the division of responsibilities between the two parties, and quickly respond to and resolve disputes. Or it can be used for the after-sales service of the platform by charging a certain service fee. After charging, the after-sales service is undertaken by the platform, and the resume is unified and standardized.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

- [1] J. H. He, "Empirical study on factors influencing C2C online auction fraud in China," Master's Thesis, Chongqing University, China, 2007.
- [2] E. Garbarino and M. Strahilevitz, "Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation," *J. Bus. Res.*, vol. 57, no. 7, pp. 768-775, 2004. [https://doi.org/10.1016/S0148-2963\(02\)00363-6](https://doi.org/10.1016/S0148-2963(02)00363-6)
- [3] C. Ranganathan and S. Ganapathy, "Key dimensions of business-to-consumer web sites," *Inform. Manage.*, vol. 39, no. 6, pp. 457-465, 2002. [https://doi.org/10.1016/S0378-7206\(01\)00112-4](https://doi.org/10.1016/S0378-7206(01)00112-4)
- [4] W. R. Swinyard and S. M. Smith, "Why people (don't) shop online: A lifestyle study of the internet consumer," *Psychol. Market.*, vol. 20, no. 7, pp. 567-597, 2003. <https://doi.org/10.1002/mar.10087>

- [5] Y. P. Yang and D. H. He, "Research on the influencing factors of college students' willingness to participate in crowdfunding," *Chinese J. Bus. Review*, vol. 117, no. 7, pp. 165-169, 2017.
- [6] B. Zi, "Thoughts on strengthening internal risk control of urban commercial banks," *J. Financ. Dev. Res.*, vol. 44, no. 7, pp. 177-178, 2009. <https://doi.org/10.19647/j.cnki.37-1462/f.2009.12.023>
- [7] B. Y. Zhou, "An analysis of consumers' choice of cross-border e-commerce platforms and the influencing factors," *J. Henan Univ. Eng.*, vol. 2021, pp. 30-34, 2021. <https://doi.org/10.3969/j.issn.1674-3318.2021.03.005>
- [8] B. N. Yi, "Charitable donation and corporate performance and value: an empirical study based on private enterprises in China," Ph.D. Thesis, Central South University, China, 2012.
- [9] Y. W. Gong, "Research on the impact of risk mortgage on cost control performance of project management teams," Master's Thesis, Jilin University, China, 2021.
- [10] Y. Liu, "Research on the influence of internet finance development on the efficiency level of commercial banks in China," Master's Thesis, Henan Normal University, China, 2021.
- [11] S. Q. Wu, "Research on pricing strategy of C2C second-hand platform based on bilateral market theory," Master's Thesis, East China Jiaotong University, China, 2020.
- [12] X. N. Ma, "Research on the influencing factors of online transaction of second-hand idle goods," Master's Thesis, Shanghai Jiaotong University, China, 2018.
- [13] P. H. Wang, "Research on the influencing factors of consumer initial trust in C2C second-hand trading environment," Master's Thesis, Zhejiang University of Technology Univ., China, 2021.
- [14] V. Barends-Jones, "E-commerce: opportunities and challenges for the Western Cape agricultural fresh produce sector," *Agriprobe*, vol. 17, no. 1, pp. 34-36, 2020.