

Exploring the Factors Affecting Consumer Trust in Cross-Border E-commerce: A Comparative Study

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Abstract: The development of cross-border e-commerce has greatly contributed to the growth of global trade and economic prosperity. However, the issue of consumer trust has been one of the important factors constraining the development of cross-border e-commerce. This study aims to explore the factors affecting consumer trust in cross-border e-commerce and conduct a comparative study. The study adopts both qualitative and quantitative research methods, and collects and analyzes data through literature review, questionnaires and interviews. The results of the study show that consumers' trust factors in cross-border e-commerce include the credibility of the website, the reputation of the merchant, the security of payment, the reliability of logistics, and the legal and regulatory environment of the host country. In addition, the study found that there are differences in the importance consumers attach to trust factors in different countries and regions. Theoretically, this study provides new insights and perspectives on the formation and development of consumer trust in cross-border e-commerce. In practice, this study provides cross-border e-commerce companies with strategies and suggestions to improve consumer trust.

Keywords: cross-border e-commerce, consumer trust, influencing factors, comparative study

1. Introduction

The rapid development of cross-border e-commerce has brought new opportunities and challenges to global trade. According to the World Trade Organization, global cross-border e-commerce transactions exceeded US\$3.5 trillion in 2019 and are expected to continue to grow in the coming years (World Trade Organization, 2020)^[1]. However, the issue of consumer trust has been one of the main factors limiting the development of cross-border e-commerce. As cross-border e-commerce involves transactions and cooperation between different countries and regions, consumers are often exposed to many uncertainties and risks. Therefore, consumer trust has a significant impact on their choice to participate in cross-border e-commerce activities^[2].

2. Literature review

2.1. The concept of consumer trust

In today's digital era, cross-border e-commerce has become a global hot topic. However, with the development of cross-border e-commerce, consumers are increasingly demanding quality and reliability from cross-border e-commerce platforms and goods. Therefore, it is important to understand consumer trust factors in cross-border e-commerce. First, we need to clarify what is the concept of consumer trust. Consumer trust refers to consumers' confidence in the products or services they purchase, believing that these products or services can fulfill their needs and provide a good experience. And this trust comes from the knowledge and experience consumers have accumulated about the brands, merchants and products they choose^[3]. So, how to improve consumers' trust in cross-border e-commerce? On the one hand, cross-border e-commerce platforms should focus on improving their credibility and reputation, and enhance consumers' trust in the platforms by continuously optimizing the user experience and strengthening after-sales services; on the other hand, cross-border e-commerce merchants should also focus on their own image and quality management, and set up stable supply chain systems and perfect pre-sales and after-sales processes to ensure the quality and safety of their goods. In addition, cross-border e-commerce platforms can also use social media and other channels for

publicity and promotion to increase exposure and visibility, thus attracting more potential customers. Consumer trust refers to a consumer's sense of trust and willingness to trust an object or entity. In cross-border e-commerce, consumer trust is mainly reflected in the trust of e-commerce websites and trading platforms. Previous studies have shown that consumer trust is one of the important factors for consumers to choose to participate in cross-border e-commerce (Yang et al., 2015). Therefore, understanding the influencing factors of consumer trust is crucial for promoting the development of cross-border e-commerce. First, product quality is an important influencing factor. If the quality of goods cannot meet consumers' needs and expectations, then consumers will lose trust in the brand. In addition, price is also a key factor. If the price of goods is too high, consumers will think that the value of goods is not trustworthy. Secondly, after-sales service also has a great impact on consumer trust. If the after-sales service is inadequate or fraudulent, it will be more difficult for consumers to trust the e-commerce platform. Finally, word-of-mouth reviews on social media can also affect consumer trust^[5].

2.2. Factors affecting consumer trust

2.2.1. Credibility of the website

Consumers' trust in a website is one of the most important factors in determining whether they trust a website. The trustworthiness of a website includes aspects such as the accuracy, security and reliability of the information on the website. For cross-border e-commerce, these aspects are particularly important^[6]. For example, the prices of goods and logistics services offered on a website need to be strictly scrutinized before they are released, so as to ensure that consumers will not be affected by fraud or false advertising. In addition, the website should also provide a comprehensive after-sales service system to ensure that consumers can get timely and effective help to solve problems.

Product quality and product safety are also one of the key factors affecting consumer trust. For cross-border e-commerce, solving this problem needs to be realized by establishing a perfect quality control system. This can be achieved in a variety of ways, such as conducting regular product inspections, strengthening communication with suppliers, and improving supply chain management. At the same time, in order to protect the interests of consumers, the government should also introduce relevant laws and regulations to regulate the market order, crack down on illegal behaviors, and protect the rights and interests of consumers.

2.2.2. Merchant's reputation

A merchant's reputation is an important indicator for consumers to determine whether a merchant is trustworthy. Merchant reputation includes a merchant's credibility, historical performance and customer reviews^[7]. For cross-border e-commerce, a merchant's reputation not only affects whether consumers will choose the merchant to purchase goods, but also affects whether consumers will purchase the merchant's products again. Therefore, merchants should focus on improving their reputation and image, responding positively to customer feedback and taking measures to improve their own shortcomings.

2.2.3. Subjective perception of consumers

Consumer perception is a complex concept involving many aspects. The most important of these is the consumer's evaluation and experience of the purchased goods. If consumers perceive that the value of the purchased goods is not in line with their expected value or there are other defects^[8], then they will have negative feelings towards the goods, which will in turn reduce their trust in the merchant. Therefore, merchants need to pay attention to consumers' real needs and expectations, fulfill them as much as possible, and maintain good interaction during the sales process.

2.2.4. Security of payments

The issue of payment security is an important factor affecting consumer trust. As a new business model, cross-border e-commerce faces more risks and challenges. How to ensure consumers' personal privacy and property security has become an important issue. To this end, merchants should adopt various means to safeguard users' payment security, such as using third-party payment platforms and encryption technology^[9]. Meanwhile, the government should also formulate corresponding regulations and policies to provide consumers with more comprehensive legal protection. Whether cross-border e-commerce transactions are safe and reliable, payment security is a key factor for consumers to consider. Payment security includes aspects such as the security of the payment gateway and the reliability of the payment system.

2.2.5. Logistics reliability

Logistics reliability refers to the time and efficiency of goods from the place of shipment to the place of receipt. For cross-border e-commerce, logistics reliability is directly related to whether consumers can receive goods in time^[10]. Therefore, merchants need to pay attention to every detail in the logistics link, such as transportation time, delivery speed, return and exchange process. In addition, merchants also need to establish a perfect logistics system and logistics network to better cope with emergencies, handle complaints and other issues. Logistics reliability refers to whether products can reach consumers on time and in good condition during cross-border transportation. For consumers, logistics reliability is an important standard for measuring whether cross-border e-commerce transactions are credible^[11].

2.2.6. Country's legal and regulatory environment

The national legal and regulatory environment is one of the key factors affecting the development of cross-border e-commerce. Different legal systems and regulatory mechanisms in different countries determine the direction and mode of development of cross-border e-commerce. For domestic enterprises, it is crucial to understand the legal and regulatory situation in foreign markets. For overseas enterprises, they need to comply with local laws and regulations. Only with mutual understanding and cooperation between the two countries can cross-border e-commerce develop healthily. A country's legal and regulatory environment has a significant impact on the formation and development of cross-border e-commerce consumer trust^[12]. A country with sound laws and strict regulations can provide a safer and more reliable e-commerce environment, thus enhancing consumer trust.

3. Comparative research methods

This study adopts a mixed research methodology, including quantitative and qualitative research methods. First, relevant theoretical and empirical research literature is collected and organized through a literature review in order to establish a theoretical framework^[13]. Then, a questionnaire survey is designed and implemented to collect data on consumer trust in cross-border e-commerce consumers. Finally, interviews were conducted to gain insights into consumers' perceptions and attitudes toward trust factors in different countries and regions.

3.1. Idea and design of the empirical study

The purpose of this paper is to explore how consumers' trust level affects their shopping decisions and the interaction between trust level and risk. Through theoretical analysis, we find that information quality, privacy protection, security, third-party authentication and website reputation are five important indicators affecting consumers' trust level. After in-depth research, we carefully selected market areas with good development prospects and concentrated our target customer groups in areas with high consumption frequency^[14]. On the basis of literature reading, we carefully selected the test indicators for the variables and conducted an in-depth pre-survey to ensure the accuracy and reliability of the scale, so as to eliminate the indicators that do not meet the requirements and realize the purification of the scale. In addition, exploratory factor analysis was utilized to ensure the reliability of the theoretical framework. The reliability of the findings was verified through the demographic characteristics of the respondents, descriptive analysis of the scales, reliability and validity assessment, and development of appropriate models.

3.2. Selection of research subjects

The focus of this article is to explore the business models of cross-border e-commerce, especially the B2C e-commerce market. We will explore this area through a survey of domestic and foreign cross-border e-commerce websites, with a focus on the B2B model of cross-border e-commerce. According to Nielsen's "Hangzhou Index" white paper, the main audience of cross-border e-commerce is the high-income and highly educated young generation aged 26-35, while women aged 26-40 are more involved in it. According to the "2015 Cross-border Online Shopping Consumption Report", more and more people are choosing cross-border shopping, and their financial situation is getting better and better, and their monthly household incomes tend to exceed 11,000 yuan, of which consumers with undergraduate degrees and above account for 72%, and those with 82% of the monthly household incomes are also more than 10,000 yuan 82%^[15]. Coming results of information about the study subjects is shown in Table 1. According to the data of "Tmall International 2015 Annual Consumption Report", the proportion of seafood users under 28 years old has increased by 5% in the past year, but it is still the 28-35 year olds, and Amazon's data also shows that the first-tier cities have the highest

volume of seafood transactions, followed by Beijing, Shanghai, Hangzhou, Nanjing, Shenzhen, Chengdu, Suzhou, Wuhan, Guangzhou, and Ningbo. also ranked in the top ten. Most of the top ten provinces in terms of Tmall International sales are from the coastal and northeastern regions, including Shanghai, Beijing, Tianjin, Guangdong, Heilongjiang, Chongqing, Jiangsu, Liaoning, Jilin and Hubei.

Table 1: Respondent information combing

regimentation	result
Monthly income	More than 11,000 yuan in the majority
age	Most people are between 26 and 40 years old
sex	Most women
degree of education	Bachelor degree or above

3.3. Design of research questions

The questionnaire is mainly divided into three parts, namely, understanding consumers' cross-border e-commerce behavior, trust-related issues and basic personal information^[16].

1) Understanding consumers' cross-border e-commerce behavior.

By surveying consumers, we can better understand their recent cross-border e-commerce behavior, such as the websites they have recently used, the types of goods they have recently purchased, and their consumption. These questions can help us determine the representativeness and validity of our sample.

2) Understand the trust status of consumers

By surveying consumers, we can better understand their trust situation, such as their trust level on cross-border e-commerce, what factors they think will affect their trust, what aspects of information they care about the most, etc. These questions can help us determine the representativeness and validity of the sample.

3) Trust-related questions

Through the question "Based on my past experience, which website I trust the most", this survey aims to explore consumers' trust, risk perception and willingness to buy, and to filter out the best participants from websites with shopping experience, so as to gain a deeper understanding of consumers' trust level^[17]. Before answering the question about trust, we reminded respondents to check the box if you think the above website is correct: "In addition, in order to better assess those respondents with distrustful sentiments, a similar scale was used to measure this. By using a 7-point Likert scale, we can accurately assess all the questions in this section.

4) Basic Personal Information

This section includes: consumer's baseline attributes: age, province and city of permanent residence, gender, education level, nature of the employer, household income/personal income; use of cross-border e-commerce platforms: the type of imported goods most recently purchased using a cross-border e-commerce platform, the reason for trying a cross-border e-commerce platform for the first time, the type of platform most recently used by a cross-border e-commerce provider, and the amount of money spent on this consumption: experience of living overseas Situation: whether they have had experience of living overseas, average annual frequency of online shopping when living overseas: computer and online shopping experience: average annual frequency of online shopping, average annual frequency of online shopping on cross-border e-commerce platforms, proportion of using mobile (e.g., cell phones, tablets, etc.) to shop online, familiarity with the Internet, experience of using the Internet, familiarity with computers, and experience of seafood shopping.

4. Findings and discussion

From the perspective of the gender of the respondents, 69% of the women with cross-border e-commerce platform shopping experience and 31% of the men, it can be seen that the interviewees are predominantly women. From the perspective of the age group of the respondents, the age of the respondents is evenly distributed between 20 and 40 years old, of which the main consumer group (26 to 40 years old) mentioned in the industry research report, accounted for 65.7% of the total number of people in this research. According to the survey results, more than 97.8% of the respondents have a lumber major or higher degree. Their job types are mainly concentrated in foreign companies and private companies, with (28.4%) and (29.5%) of the respondents having higher incomes. Based on their

average monthly salary, their average income is around 6,000-7,500 dollars. The results show that more than half of the respondents shopped on cross-border e-commerce platforms 1-3 times a month, while more than half of them have 2 years of experience in seafood. According to the latest findings, Amazon US ranked first among cross-border e-commerce platforms, with 47.27% of consumers saying they trust the site the most, followed by Tmall International, Jingdong Overseas Purchase and Taobao Global Purchase, which accounted for 52.99%, 46.27% and 45.52% respectively. Tmall International and Jingdong Overseas Purchase followed with 42.96% and 41.13% respectively. The results showed that more than 61.54% of consumers said they trusted Jumeiyoupin's overseas shopping the least, followed by Taobao's global shopping (31.15%), Vipshop's overseas direct-shipping specialties (22.86%) and Xiaohongshu (22.06%). Regarding the analysis of the survey findings is shown in Table 2. The presence of Xiaohongshu on both the most and least popular sites shows that there are differences in how consumers rate it. The data from the most popular websites show that there is a large deviation in consumers' evaluation of privacy protection, trust and willingness to buy, which also shows that there is a divergence in consumers' attitudes towards this issue. According to the table of the least trusted websites, it can be found that consumers' evaluations of security, privacy protection, trust and willingness to buy are low, while there is a large deviation in the evaluations of information quality, privacy protection, trust and willingness to buy. Respondents are highly divided on perceived security protection of Jingdong Overseas Purchase, while most of the question items of Jumeiyoupin Overseas Purchase, among the 3 websites that respondents trust the least, except for third-party authentication, perceived security protection and willingness to purchase, the mean values are at a low level and the standard deviation is also the lowest. The experience of using Jumeiyoupin for overseas purchases showed the lowest level of trust, but the third-party certification label for Taobao Global Purchase showed a high mean and a low standard deviation, which suggests that consumers still want a third-party certification label on a website of a platform nature that can help them make a purchase decision.

Table 2: Consumer trust analysis on the e-commerce platform

The most trusted cross-border e-commerce platform		The least trusted cross-border e-commerce platform	
Amazon US	47.27%	Jumeiyoupin's overseas shopping	61.54%
Tmall International	52.99%	Taobao's global shopping	31.15%
Jingdong Overseas Purchase	46.27%	Vipshop's overseas direct-shipping specialties	22.86%
Taobao Global Purchase	45.52%	Xiaohongshu	22.06%

The results of the study show that the main factors affecting consumers' trust in cross-border e-commerce include website credibility, product quality and product safety, merchant credibility, consumers' subjective feelings, payment security, logistics reliability, and national laws and regulations environment. Specifically, consumers value website credibility most, followed by product quality and product safety, merchant credibility, consumers' subjective feelings, payment security, logistics reliability and national laws and regulations environment. Through data analysis and comparative research, this study finds that there are differences in the importance consumers attach to cross-border e-commerce consumer trust factors in different countries and regions. For example, in developed countries, consumers attach more importance to the credibility of the website and the security of payment, while in developing countries, consumers attach more importance to the reputation of the merchant and the reliability of logistics. In addition, this study finds that a country's legal and regulatory environment has a significant impact on the formation and development of consumer trust. Specifically

The first point, we find that product quality and service quality are key factors affecting consumer trust. Consumers will first consider product and service quality when conducting cross-border e-commerce transactions, which will directly affect their trust in merchants. Meanwhile, cross-border e-commerce involves more uncertainty and risk than domestic e-commerce, so consumers will be more sensitive to these issues. Therefore, merchants must attach great importance to product and service quality, and continuously improve their business strategies and management models in order to win consumers' trust. Secondly, consumers also attach great importance to the reputation of merchants. Consumers usually check the reputation ratings and reviews of merchants to assess their credibility before shopping. Therefore, merchants need to strengthen their branding and marketing activities to enhance their visibility and reputation in order to attract more potential consumers. In addition,

consumers will also pay attention to factors such as merchants' track records and word-of-mouth reviews, which are factors affecting consumer trust. Thirdly, consumers' subjective feelings are also an important factor affecting consumer trust. Therefore, trust in product and service quality is also more important.

The second point, we find that brand reputation and merchant reputation also play a key role in cross-border e-commerce. Consumers are more inclined to trust cross-border e-commerce platforms with good brand reputation and merchant reputation because these platforms usually provide better products and services with higher reliability and trust.

The third point, we find that information transparency and transaction security have a greater impact on consumer trust. In cross-border e-commerce, consumers have higher demands for information transparency and transaction security provided by merchants. Consumers are more inclined to trust merchants if they can provide clear and accurate product information and take effective security measures to protect consumers' transaction information and financial security.

The fourth point, cultural differences and language barriers may also affect consumer trust. Since cross-border e-commerce involves consumers and merchants from different countries and regions, cultural differences and language barriers may lead to different levels of consumer trust in merchants. Therefore, establishing a cross-border e-commerce platform with cross-cultural communication capabilities and understanding of the needs of consumers in different countries and regions is important for improving consumer trust.

The fifth point, we conducted a comparative study to compare the level of consumer trust in cross-border e-commerce in different countries and regions. Through the comparative study, we found that there are some differences in consumers' perceptions of factors affecting trust in different countries and regions. These differences may be caused by factors such as culture, laws and institutions. Therefore, when conducting cross-border e-commerce, merchants need to consider the trust needs and preferences of consumers in different countries and regions and adopt appropriate strategies to improve consumer trust.

5. Conclusions and recommendations

This study draws the following key conclusions: (1) The main factors affecting cross-border e-commerce consumer trust include website credibility, product quality and product safety, merchant credibility, subjective consumer perception, payment security, logistics reliability, and national legal and regulatory environments. (2) Consumers in different countries and regions attach different importance to the cross-border e-commerce consumer trust factors. (3) A country's legal and regulatory environments have an important impact on the formation and development of cross-border e-commerce consumer trust. A country's legal and regulatory environment has an important impact on the formation and development of cross-border e-commerce consumer trust. This study has important theoretical and practical implications for the formation and enhancement of cross-border e-commerce consumer trust. Theoretically, this study enriches the understanding and explanation of consumer trust and provides new perspectives and ideas for consumer behavior theory and e-commerce theory. In practice, this study provides cross-border e-commerce companies with strategies and suggestions to enhance consumer trust, including strengthening website credibility, improving payment security, and enhancing logistics reliability.

References

- [1] Zhou Qianying, Qu Hongjian. *The impact of cross-border e-commerce bonded warehouse strategy on consumers' purchase intention of light luxury goods*[J/OL]. *Journal of Donghua University (Natural Science Edition)*:1-12[2023-08-19].
- [2] Qin Gaofeng. *Research on the impact of integrated service quality of Tmall cross-border e-commerce platform on Chinese consumers' repurchase intention*[D]. *Huazhong University of Science and Technology*, 2022.
- [3] Wang Jia. *Research on Influencing Factors of Consumers' Purchase Intention on Cross-border E-commerce Platform*[J]. *Foreign Trade and Economics*, 2021(06):21-23.
- [4] Li Cong. *Research on the influencing factors of cross-border e-commerce development of China's agricultural exports*[D]. *Jilin University*, 2021.
- [5] Li Mingming. *Research on the impact of cross-border e-commerce platform logistics service*

- quality on consumers' repurchase intention[D]. Donghua University, 2021.
- [6] Zhang L, Ma L, Yang Yuxian et al. Online "grass-planting" behavior under the perspective of emotional experience: a case study based on cross-border e-commerce platform[J]. *Guangxi Economy*, 2021, 39(Z2):45-54.
- [7] Zhang Yiwei, Chang Zhonghua, Dai Qingwen. Research on the impact of consumer trust on purchase intention of cross-border e-commerce platform based on perceived risk[J]. *Modern Business Industry*, 2021, 42(08):71-72.
- [8] Liu Li, Cheng Dong, Su Xin. Exploration of consumer trust mechanism based on blockchain technology [J]. *Research on Business Economy*, 2020(15):32-36.
- [9] Li Jiang, Jiang Yushi, Fan Chaoran et al. The impact of cross-border e-commerce platform perception on consumers' purchase intention - a study based on UTAUT model[J]. *Journal of Southwest Jiaotong University(Social Science Edition)*, 2020, 21(04):135-143.
- [10] Chen WJ. Research on consumers' perceived cross-border e-commerce logistics risk based on trust behavior [D]. Guangxi University, 2020.
- [11] Zhang Xiaopeng. Research on the influencing factors of cross-border e-commerce consumer trust based on structural equations[D]. Zhengzhou University, 2020.
- [12] J. Wang. Research on the impact of Chinese cross-border e-commerce platform on Vietnamese consumers' purchase intention [D]. Guangxi University for Nationalities, 2020.
- [13] Liu Xun. Research on the impact of cross-border e-commerce UGC community value co-creation on consumers' purchase intention[D]. Huazhong University of Science and Technology, 2020.
- [14] Yili Lin. Research on the influence of consumer trust on purchase intention under cross-border e-commerce platform[J]. *Finance and Economics*, 2019(26):251.
- [15] Song Yang, Xiao Zhiqiang, Zuo Qiuyue. Research on cross-border e-commerce consumer trust evaluation based on BP neural network[J]. *Liaoning Economy*, 2019(06):54-55.
- [16] Chai Yixin. Research on factors influencing consumers' purchase intention and pricing strategy on cross-border e-commerce platform [D]. Beijing University of Posts and Telecommunications, 2019.
- [17] Tu Haitang. Research on brand loyalty influencing factors of B2C cross-border e-commerce platform [D]. Hainan University, 2019.