


# Analysis of Consumer Service Quality Factors Impacting on Online Shopping Based on Technology Acceptance Model: A Green Purchase Intent in China

Xiaofei Ji <sup>1,2</sup>, Xue Bai <sup>3\*</sup>, Abdul Rahman bin S Senathirajah <sup>4</sup>, Abd Majid Mohd Isa <sup>5</sup>

<sup>1</sup> Ph.D candidate, Faculty of Business and Communication, Xinzhou Normal University, Xinzhou, China

<sup>2</sup> Ph.D candidate, Faculty of Business and Communication, INTI International University, Nilai, Malaysia

<sup>3</sup> Doctor, Faculty of Education, Xinzhou Normal University, Xinzhou, China

<sup>4</sup> Associate Professor, Doctor, Faculty of Business and Communication, INTI International University, Nilai, Malaysia

<sup>5</sup> Professor, Faculty of Education and Liberal Arts, INTI International University, Nilai, Malaysia

\* **Corresponding Author:** [1033611675@qq.com](mailto:1033611675@qq.com)

**Citation:** Ji, X., Bai, X., bin S Senathirajah, A. R., & Mohd Isa, A. M. (2024). Analysis of Consumer Service Quality Factors Impacting on Online Shopping Based on Technology Acceptance Model: A Green Purchase Intent in China. *Journal of Information Systems Engineering and Management*, 9(2), 25714. <https://doi.org/10.55267/iadt.07.14759>

## ARTICLE INFO

Received: 06 Feb 2024

Accepted: 24 Apr 2024

## ABSTRACT

The effect of different service quality factors on online shopping, specifically green purchase intention in China is examined in this work. By employing partial least squares structured equation modelling (PLS-SEM), the study assessed the data obtained from 159 respondents who filled out valid semi-structured questionnaires from the e-commerce company's employees. Based on the TAM model, this study tested the consumer green purchase intentions where the factors involved were supply chain management, inventory management, supplier relationships, quality control, and return policies. All these aspects, the study established, increase customer satisfaction and the likelihood of buying the product. Customer satisfaction is a mediator that balances the association between e-commerce platform service quality and consumer buying behaviour. Similarly, the study findings revealed that supply chain management practices, inventory management, relationships with suppliers, quality management and return policies regarding green products were significant factors that affected green purchase intention. The study emphasizes the need to sustain high standards of service delivery to increase employees' customers' satisfaction and consumption cultures. Behavioural e-commerce and consumer research are both advanced by this study, and findings aimed at enhancing e-commerce service quality and encouraging environmentally friendly purchasing. However, the findings of the study cannot be generalized widely due to the regional context and the small sample size of the study, so it is imperative to conduct more extensive Studies that can support these findings.

**Keywords:** Green Purchase Intent, Consumer Service Quality, Online Shopping, Perceived Value, Technology Acceptance Model.

## INTRODUCTION

The development of the 5.0 industry has been progressing at an incredibly fast pace and the situation in the information age has changed e-commerce profoundly, which makes consumption behaviour in cyberspace an important research issue in business studies (Sharma, Krishna, & Kumar, 2022; Rosillo-Díaz, Blanco-Encomienda, & Crespo-Almendros, 2020). Boden, Maier, and Wilken (2020) noted that cultural and regional differences of consumers make varied intended purchase motives across the Internet affecting their perception of the quality

and price of the commodities. Other trends revealed include green purchasing intentions as a result of growing concerns about the environment and sustainability (Ghali-Zinoubi & Toukabri, 2019). The Technology Acceptance Model (TAM) is another theoretical model applicable to explain consumer decision-making in online shopping emphasizing perceived usefulness and perceived ease of use (Davis, 1989). Specifically, this study seeks to investigate the effect of green e-commerce service quality on purchase intention regarding supply chain management, inventory provision, management of suppliers, quality assurance, and returns policies. It is to identify these factors that the study aims to determine their contribution towards customers' satisfaction and green purchases. The present study offers significant contributions to the knowledge of enhancing e-commerce service quality and facilitating sustainable consumption by considering the possible interactions of these variables, which are usually neglected in prior studies on the subject.

Industry 5.0 and the information age have driven the development of e-commerce. Consumers' online purchasing behavior has become a hot topic in business research (Sharma et al., 2022). Due to cultural and regional differences, consumers have diverse online purchasing intentions and perception concepts, including product quality and product price (Díaz, Paternina-Arboleda, Martínez-Flores, & Jimenez-Barros, 2020). Thus, consumers are willing to try novel shopping platforms and payment methods (Boden et al., 2020). On the other hand, green purchasing intentions require consumers to be willing to buy sustainable products. This increased willingness reflects the growing concern about environmental issues and sustainable development (Al-Swidi & Saleh, 2021). Sustainability concerns are also one of the reasons driving people to choose green products. People want to support the idea of sustainability by buying the right products (Tandon, Dhir, Kaur, Kushwah, & Salo, 2020). Meanwhile, cloud services are also one of the factors that influence green purchase intention. Lost networks lead to poor online shopping experience for consumers in different regions (Zeqiri, Alserhan, Gleason, & Ramadani, 2022). Regional economic conditions levels also affect consumers' price sensitivity (Ghali-Zinoubi & Toukabri, 2019). Consequently, E-commerce companies need to have a deep understanding of these differences to meet the needs of consumers from different regions and cultures. This helps improve the bottom line of the business.

Green consumer purchase intention and behavior are core elements of e-commerce success (Yang, Xu, & Xing, 2022). Although there is a large body of research on consumer purchasing behavior and decision-making processes, relatively few studies specifically explore the relationship between online purchase intention and overall service quality (Mishra, Singh, & Koles, 2021). This status hinder businesses and academics from developing a deeper understanding of consumer online shopping behavior. Current research focuses more on single service quality factors, such as website ease of use or payment security, than overall service quality (Bressolles & Nantel, 2008). Most studies are based on data from a specific region or industry, which makes the conclusions of these studies not applicable to other regions or industries (Bergman & Feser, 2020). In addition, most current studies adopt qualitative research methods and lack quantitative, empirical data-based analysis.

Through the establishment of the technology acceptance model, researchers can deeply analyze the level of consumers' awareness of the technologies involved in online shopping. Technology acceptance models can provide researchers with a powerful framework for understanding and explaining consumer attitudes and behaviors toward new technologies. On the other hand, the widespread application of emerging technologies has profoundly affected consumers' online shopping behavior (Ameen, Hosany, & Tarhini, 2021). Moreover, introducing emerging technologies has brought consumers convenience and wider shopping options. Also, implementing these technologies may lead to declining service quality, affecting consumers' purchase intentions. They have been widely adopted in e-commerce to improve the personalized experience and logistics efficiency. However, when these technologies fail to deliver high-quality services in operations, they can negatively impact overall service quality. This poor service quality manifest as false recommendations, delayed delivery, or false advertising, reducing consumer trust and satisfaction with the online shopping platform (Masita, Kamsul, Aidil, & Hanan, 2022). In addition, poor e-commerce service quality will affect consumers' willingness to purchase online. This negative impact can be mitigated by evaluating and improving the implementation of emerging technologies to ensure their synergy with service quality.

Consequently, this paper conducts a literature review on the overall service quality factors that affect consumers' online purchase intention to provide strategic suggestions for actual operators. With the booming development of e-commerce, understanding the service quality factors that drive consumers to purchase online has become the focus of enterprises. This study aims to explore these factors in-depth using questionnaires and Smart-PLS. To attract and retain customers, it is crucial to understand the key service quality factors that drive consumer purchase intentions. Based on the above analysis, the goals of this study are (1) To quantify the influence of factors on online shopping service quality. (2) To establish an evaluation model of online shopping service quality. (3) To analyze strategies based on models and differences in online shopping service quality.

## LITERATURE REVIEW

This article is analyzed and summarized using a literature review. Next, we elaborate on the relationships between all variables and variable structures. All variables were incorporated into the theoretical framework and the relationship between influencing factors was analyzed and a conceptual model and research hypotheses were proposed.

### Supply Chain Management and Online Shopping Service Quality

The quality of supply chain management directly affects logistics speed and accessibility, which is one of the core elements of online shopping service quality. When the supply chain is well managed, products can get from supplier warehouses to consumers faster. It means fast delivery time, improved consumer satisfaction, and increased trust in online shopping (Mostafa, Hamdy, & Alawady, 2019). In addition, the logistics speed will be affected, resulting in extended delivery times and possible out-of-stock situations, reducing consumer satisfaction with the service and even leading to churn (Bhan & Anderson, 2023). Supply chain management is also directly related to product quality. When consumers shop online, they cannot check the quality of products in person, so they rely more on the information and product descriptions provided by suppliers. Supply chain management can result in damaged products in transit or suppliers providing accurate product information. It directly affects the quality and conformity of the product, and consumers may receive products that do not meet their expectations, thus reducing their satisfaction (Mahsyar & Surapati, 2020). On the contrary, suppliers with good supply chain management can ensure that products are well protected during transportation and provide accurate product information, which helps to improve the quality of products and increase consumer trust in online shopping.

Based on the literature, it is evident that different aspects of service quality for online retailers play a significant role in influencing online shopping behaviour. Prior studies have also established the diversity of cultural and geographical contexts influencing consumers' buying behaviours on the Internet, stressing the importance of the differentiated e-commerce approach (Sharma et al., 2022; Rosillo-Díaz et al., 2020). In general, purchasing intentions are gaining green characteristics because of the growing environmental issues and the need for environmentally friendly consumption (Ghali-Zinoubi & Toukabri, 2019). Davis presented the Technology Acceptance Model (TAM) in 1989, which explains consumer acceptance of new technology, about perceived usefulness and ease of use. Based on the literature review, this study extends the application of TAM by seeking to explore the effects of supply chain management, inventory management, supplier relations, quality assurance, and return policies on green purchase behaviour. Hence, utilizing multiple Partial Least Squares Structural Equation Modeling (PLS-SEM), the study tests the hypothesis based on 159 valid questionnaires. The research objectives are to measure the impact of these service quality factors on the level of satisfaction with online shopping and use all these variables in the model explaining consumer behaviour while purchasing green electronic goods. In this respect, this research not only contributes to the literature by presenting an integrative perspective on how service qualities can influence green purchase intentions but also provides useful implications for e-commerce firms that wish to boost their clients' satisfaction and promote environmentally friendly behaviours.

On the other hand, the quality of privacy protection directly affects consumers' trust in online shopping services, the convenience of return policies directly affects consumer satisfaction, and user feedback provides valuable information about service quality that can help suppliers continuously improve (Miao et al., 2022). When shopping online, consumers face product failure to meet expectations, quality issues, or other unsatisfactory situations. Suppose an online shopping platform or supplier provides a flexible and convenient return policy. Consumers will feel more confident about shopping because they know they can quickly return or exchange items when needed. Customer opinions and reviews can provide valuable information to help suppliers continuously improve their services. Positive user feedback can motivate other potential consumers to try online shopping and increase trust in the service (Meilatinova, 2021). In the online shopping market in China, these factors jointly affect consumers' shopping decisions and satisfaction, and a comprehensive analysis of supply chain management and online shopping service quality will help to meet consumer needs better.

Thus, it is inferred that supply chain management plays an important role in influencing purchase intention for online shopping (see **Figure 1** for details). Therefore, we assume:

H1: Supply chain management has a significant positive impact on online shopping service quality.

H1a: Inventory management is positively related to supply chain management.

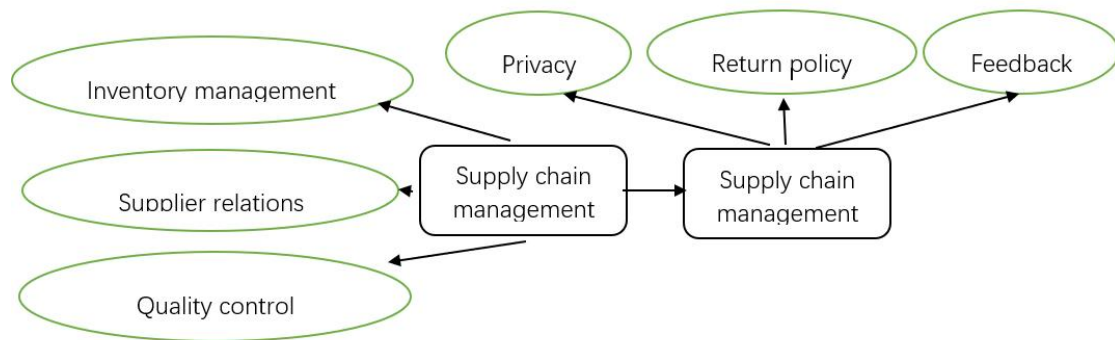
H1b: Supplier relationships are positively related to supply chain management.

H1c: Quality control is positively related to supply chain management.

H1d: Privacy protection is positively related to online shopping service quality.

H1e: Return policy is positively related to online shopping service quality.

H1f: User feedback is positively related to online shopping service quality.



**Figure 1.** Supply Chain Management and Online Shopping Service Quality

### Supply Chain Management, Product Accuracy and Online Shopping Service Quality

In China, online shopping has become the primary shopping method for consumers, and consumer satisfaction with online shopping is primarily affected by supply chain management, product accuracy, and online shopping service quality. Among them, commodity accuracy is a crucial factor jointly involved in quality control, product design, and information management (Li, Maiti, Springer, & Gray, 2020). Quality control plays a vital role in ensuring the accuracy of goods. In supply chains, quality control measures ensure the integrity and quality of products during production and logistics (Shariff & Ahmad, 2019). There needs to be more quality control or omissions resulting in damaged, defective, or non-conforming products. It will directly affect product accuracy and reduce consumer satisfaction. Part of supply chain management is ensuring quality control is carried out at all stages to ensure the accuracy of goods.

Secondly, product design also affects product accuracy. Product design should consider consumer needs to ensure that the product is consistent with the description and meets consumer expectations. A well-designed product may result in a match between the description and the actual item, compromising item accuracy (Sharma & Mir, 2020). Therefore, ensure coordination with supply chain management during the product design to maintain merchandise accuracy. At the same time, online shopping relies on accurate product information, including descriptions, prices, and specifications (Ilhamalimy & Ali, 2021). Therefore, suppliers and platforms need to establish effective information management systems to ensure proper product information is available to consumers.

H2: There is a positive correlation between supply chain management and merchandise accuracy.

H3: There is a positive correlation between product accuracy and online shopping service satisfaction.

H3a: Quality control is positively related to product accuracy

H3b: There is a positive correlation between the quality of product design and product accuracy.

H3c: Information management is positively related to product accuracy

### Supply Chain Management, Service Quality and Online Shopping Service Quality

The impact of response time on product accuracy cannot be ignored. Consumers expect to receive goods as soon as possible after placing an order, and the corresponding time in supply chain management and logistics directly affects the accuracy of product delivery (Tien, Anh, & Thuc, 2019). If response times are delayed or unstable, consumers may face delivery times inconsistent with expectations, reducing product accuracy. Therefore, the timeliness of supply chain management and logistics efficiency are crucial to maintaining commodity accuracy.

Problem resolution is directly related to product accuracy. When shopping online, order problems, product defects, or delivery errors may occur. If issues are not resolved quickly, consumers may become dissatisfied, which can affect their evaluation of the accuracy of the item. On the other hand, service attitude is important in maintaining product accuracy. The service attitude of suppliers and customer service teams will affect consumers' shopping experience. A friendly, professional, and helpful service attitude helps build consumer trust in the accuracy of goods (Uzir et al., 2021). On the contrary, unfriendly or unprofessional service may reduce consumer

trust, thereby affecting the evaluation of the accuracy of goods. Therefore, a positive service attitude can help improve product accuracy and overall service quality.

Therefore, product accuracy plays a crucial role in online shopping service quality, which is jointly affected by factors such as response time, problem resolution, and service attitude. In China, maintaining product accuracy helps improve consumer satisfaction and enhance the quality of online shopping services.

Through the above literature analysis, this article develops bold hypotheses as follows:

H4: There is a positive correlation between supply chain management and service quality.

H5: There is a positive correlation between service quality and online shopping service satisfaction.

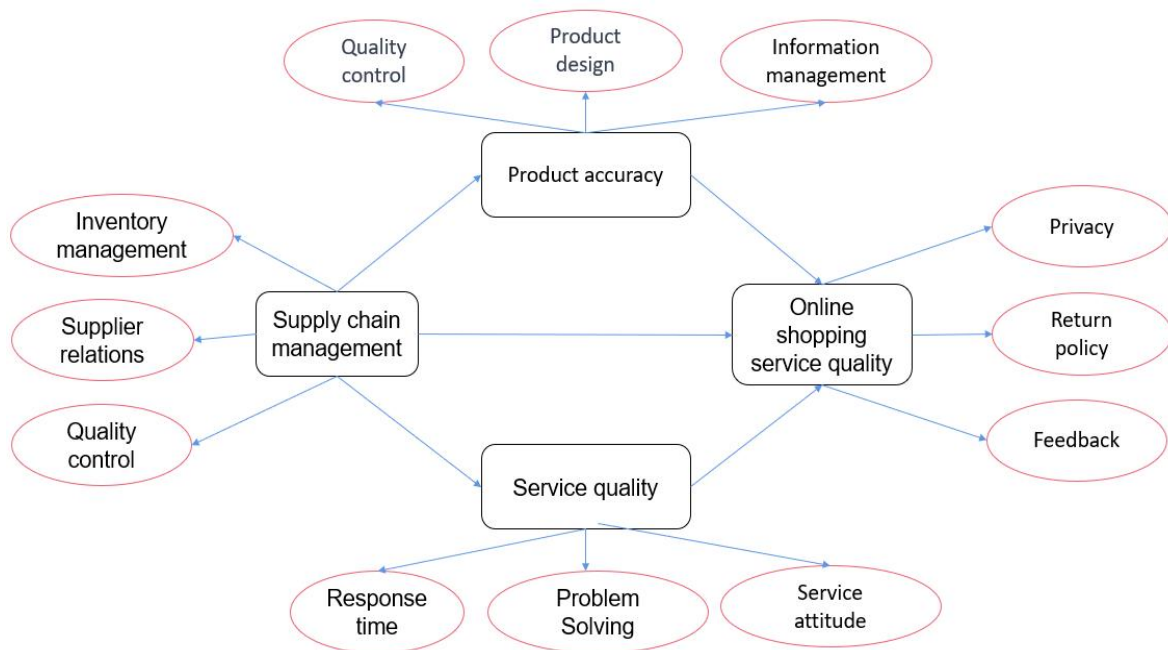
H5a: Response time is positively related to service quality

H5b: The speed of problem resolution is positively related to service quality.

H5c: Service attitude is positively related to service quality.

## METHODOLOGY

To analyse the net impact of the overall service quality on the quality of online shopping services, this study uses both SPSS and Smart-PLS for analysis and discussion. This research seeks to establish the relationship between Supply Chain Management and overall satisfaction with online shopping services with product accuracy and service quality as the intermediary variables. This is so because supply chain management affects the quantity of goods during the logistics and delivery process which has an impact on total service quality dimensions comprising of after-sale service and speed in solving problems. The theoretical model of this study, the evaluation model of online shopping service quality, is presented in **Figure 2**.



**Figure 2.** Framework of Online Shopping Service Quality

### Sample and Design

The research employs a quantitative research design through the administration of closed-ended questionnaires to elicit primary data from college student e-commerce users in central China. College students were selected to act as the sample for the study based on the expertise, they have regarding e-commerce platforms especially the graduating students from Hunan University of Finance and Economics's e-commerce major. Data study shows that 220 students are graduating from this major while the Krejcie and Morgan table presents a sample size of 155. The two parts of the questionnaire that were developed examined the amount of time the respondents spent shopping online and the factors which affected the satisfaction level of online shopping.

Supermarket shopping vouchers were offered to the respondents to improve the response rate. The data collection exercise was carried out from June to July 2023, using the Questionnaire Star. The authors distributed 180 surveys and received 166 returned surveys. After removing unusable surveys due to missing data, 159 were retained for analysis. The questionnaires were distributed in two languages: English and Chinese, and the null hypothesis was checked using the chi-square test to eliminate the possibility of differences between the samples depending on the respondent.

### Data Collection and Pre-processing

Measures of overall service quality and consumers' attitudes toward purchasing online were obtained in the form of mean values of multiple factors and quantitative characteristics of consumers' buying readiness. The data was cleaned to address issues such as missing values and outliers to attain high-quality data for analysis.

### Measure

In the present study, the constructs were operationalized using multi-item scales adapted from extant literature, with the response format anchored on a 7-point Likert scale, anchored by "completely disagree" and "completely agree" To measure privacy protection, the perceptions of the consumers on personal information security and data privacy in online shopping contexts were considered (Kim, Wang, & Roh, 2021). Return policy evaluation pays attention to the customer experience with returns, exchanges, and refunds (Lysenko-Ryba & Zimon, 2021). The feedback construct analyzed consumer use and satisfaction with various forms of user feedback and rating systems of shopping platforms (Meilatinova, 2021). Inventory management was assessed via factors like item availability, product information detail, and delivery time (Ramos, Pettit, Flanigan, Romero, & Huayta, 2020). Supplier relationship was measured by focusing on the consumer attitude regarding the trust, partnership, and reliability of the supplier (Alzoubi & Yanamandra, 2020). Supply chain management was assessed by concentrating on effectiveness, flexibility, and integration in the chain or network (Dutta, Kumar, Sindhvani, & Singh, 2021). Last, quality control aspects were evaluated through product quality, order accuracy, and time taken to address a problematic order (Zaato et al., 2023). These comprehensive measures offered an extensive reference framework for examining the effects of the numerous service quality dimensions on online shopping satisfaction and green purchase inclination.

## RESULTS

**Table 1** shows the statistical information of the sample in this study. Among the mixed samples based on online shopping time, 49.6% shopped between 5 and 6 hours a day, 23.5% shopped online between 4 and 6 hours a day, and only 4.1% of people shopped online for less than 2 hours. The number of women whose preferred entertainment activity is online shopping accounts for 74.6% of the total number of people, while men only account for 25.4%. Demographic variables and experience show that the distribution of instances participating in online shopping activities has research value for service satisfaction evaluation.

**Table 1.** Online Shopping Behavior Statistics

Online Shopping Time Spent Daily	Percentage (%)
5-6 hours	49.6
4-6 hours	23.5
Less than 2 hours	4.1
Preferred Entertainment Activity	Percentage (%)
Women whose preferred activity is online shopping	74.6
Men whose preferred activity is online shopping	25.4

### Reliability and Validity

In this paper, the data analysis tools employed are SPSS 27 and Smart-PLS 4.0, reliability testing was conducted out of 159 samples and descriptive statistics and correlations, regression and model tests were also conducted. Cronbach's alpha, composite reliability and average variance extracted were used to test the reliability and validity of the measurement instrument used. The Cronbach's alpha values ranged from 0.763 to 0.852,

indicating high reliability (**Table 2**). The composite reliability coefficients were all more than 0.7 and AVE values were greater than 0.5, confirming convergent validity. These steps helped to build the reliability of the PLS-SEM analysis and offered a better understanding of the connections between service quality drivers and green buying decisions.

**Table 2.** Reliability Statistics

Variables	Cronbach's Alpha	Items
SM-1, SM-2, SM-3	0.763	3
PA-1, PA-2, PA-3	0.776	3
SQ-1, SQ-2, SQ-3	0.813	3
OSS-1, OSS-2, OSS-3	0.852	3

The effectiveness of supply chain management can be assessed in several ways. For inventory management, we can check the difference between actual and theoretical inventory to ensure the effectiveness of inventory management. Regarding dependent variables, the validity of online shopping service quality can also be comprehensively evaluated using various methods. The accuracy of the product serves as a mediating variable, and its validity can also be assessed from multiple perspectives. The reality of a product design can be determined by comparing the consistency of the design specifications with the final product. The effectiveness of information management can be assessed by analyzing the accuracy and timeliness of product information, such as product descriptions and inventory data. The significance of product accuracy can be evaluated by analyzing defective rates and product defect reports. The validity of response time can be determined by measuring the average response time for customer inquiries. A fast response should characterize adequate response time. The effectiveness of problem-solving can be assessed by analyzing the average resolution time and resolution rate of customer issues, and practical problem-solving should be reflected in improvements in these metrics. These validity assessment methods can help researchers accurately quantify the validity of each factor, thereby ensuring that they can accurately explain the impact of supply chain management on online shopping service quality.

### Descriptive Analysis

According to **Table 3**, descriptive analysis can provide a preliminary understanding of the relationship between different variables. The sample size (N) of supply chain management is 158, the score ranges from 1 to 2, the average score is 1.26, and the standard deviation is 0.440. This variable represents the overall level of supply chain management, with a narrow score range and a relatively low average score. The sample size (N) for product accuracy is 158, with scores ranging from 3 to 7. The average scores for product design, information management and quality control were 5.30, 5.33 and 5.27 respectively. The standard deviations are 1.115, 0.961 and 1.104 respectively. Therefore, the product's accuracy score is higher, but there is some variation. In addition, the service quality and online shopping service quality scores range from 1 to 7. Their scores are relatively high, but there are differences. Through these descriptive statistics, we can initially understand the distribution and characteristics of each variable, which provides a basis for subsequent data analysis and research, especially the impact mechanism of supply chain management on online shopping service quality and the role of intermediary variables.

**Table 3.** Descriptive Statistics

	N	Minimum	Maximum	Average	Standard
SM1	158	1	7	5.34	1.199
SM2	158	1	7	5.33	1.114
SM3	158	1	7	5.54	1.092
PA1	158	3	7	5.30	1.115
PA2	158	3	7	5.33	.961
PA3	158	3	7	5.27	1.104
SQ1	158	1	7	4.95	1.315
SQ2	157	1	7	5.17	1.205
SQ3	158	1	7	5.07	1.282
OSS1	158	1	7	5.36	1.119
OSS2	158	2	7	5.40	1.111
OSS3	158	2	7	5.46	1.176

### Regression Analysis

The regression analysis results are shown in **Table 4** and **Table 5**. According to the regression analysis results, certain factors in supply chain management have a significant impact on the green purchasing intention of

Chinese consumers. Specifically, SM1 has a marginal significant positive impact on green purchase intention, SM2 has no significant impact on green purchase intention, while SM3 has a significant positive impact on green purchase intention. This indicates that when promoting consumer green purchasing intentions, special attention should be paid to key factors in supply chain management, such as green supply chain practices and the use of environmentally friendly materials.

**Table 4.** Analysis of Variance

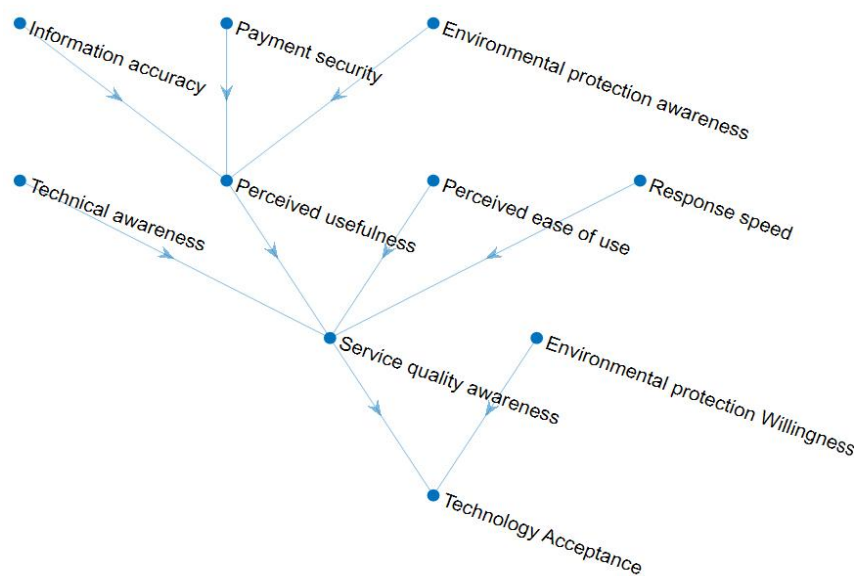
Model		Square	Freedom	Mean	F	Significance
1	Regression	36.459	3	12.153	11.490	.0001
	Residual	162.882	154	1.058		
	Total	199.342	157			

**Table 5.** System Standard Analysis

	B	Standard error	Beta		
1		2.875	.483	5.959	.0001
	SM1	.155	.079	1.973	.050
	SM2	-.039	.102	-.384	.701
	SM3	.368	.103	3.562	.0001

### DISCUSSION

In this study, a comprehensive analytical model was constructed through TAM and online shopping consumer service quality influencing factors. In this model, cognitive factors include technology perception and service quality perception, TAM factors include perceived usefulness and perceived ease of use, and service quality factors include responsiveness, information accuracy, and payment security. These factors are mediated through technology acceptance and ultimately influence consumers' green purchase intention. The model provides insight into the mechanism by which service quality influences consumers' green purchase decisions by shaping technology acceptance in the online shopping environment. In order to demonstrate this relationship more intuitively, appropriate diagrams, such as structural equation model diagrams, can be used to clearly present the associations among the factors and emphasize the mediating role of service quality on technology acceptance and final green purchase intention (**Figure 3**).



**Figure 3.** Factors Online Shopping Consumer Service Quality Based on TAM

This study aims at understanding and understanding consumer service quality factors in online shopping. Although previous studies have carefully studied the analysis of supply chain management on consumer service quality of shopping (Z. Zhang, Liu, & Niu, 2020), in addition, no similar studies have been found that have



evaluated product accuracy and online shopping service quality on the analysis of consumer service quality factors. This study helps to the impact of customer attitude on the service quality of online shopping consumers through inventory management, quality control, supplier relations, return policy, privacy, feedback service quality, response time, problem solving and service attitude. People's requirements for online shopping consumer service quality are increasing. Therefore, product accuracy and service quality have a positive impact on online shopping consumer service quality. At the same time, e-commerce services and informatization are expanding in China, and product accuracy and service quality are positively related to consumer service quality as intermediary variables (Figure 4).

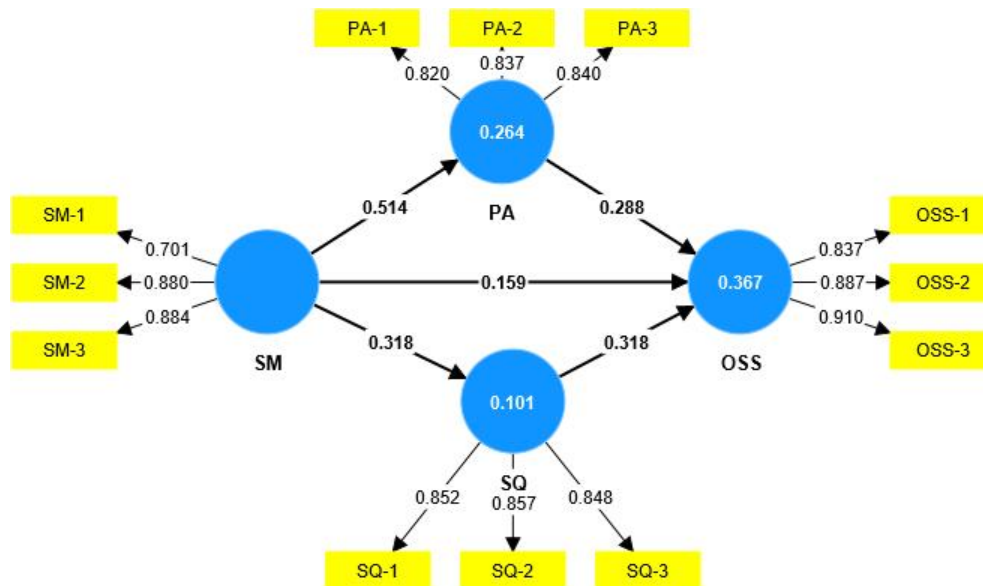


Figure 4. The Model of Smart-PLS

On the other hand, this study found that inventory management, quality control, and supplier relationships have a positive and significant impact on supply chain management. The path coefficient value is (H1, H2) and is high. This shows that the quality of consumer service for online shopping has a strong relationship with inventory management, quality control, and supplier relationships. Understanding customers' needs and providing them with personalized online shopping services will naturally help build customers' online shopping intentions. Therefore, the connection between online shopping consumer service quality and inventory management, quality control, and supplier relationships is appropriate. These guidelines will indicate that inventory management, quality control, and supplier relationships will lead to higher consumer willingness to purchase.

Product accuracy has a significant positive direct impact on online shopping consumer service quality (H3), and product accuracy plays a mediating role. Quality control, product design and information management are key determinants of product accuracy. Before online buyers make a purchasing decision, a professional evaluation of the product's quality control and design is required. This is consistent with previous studies showing that information management is a major motivational factor in the decision-making process (Cerdeira & García, 2021). Although this finding is consistent with previous literature, it further suggests that trust still plays an important role in promoting green purchase intentions in the context of online shopping. The mediating role of product accuracy reveals an interesting result in this study and provides implications for online shopping consumer service quality. Obviously, supply chain management uses product accuracy as an intermediary variable to affect the quality of online shopping consumer service by manufacturers. This is also verified by the observed Smart-PLS pattern (Yim, Tse, & Chan, 2008). According to Abbas (2020), product accuracy enhances the significance of service quality, quality control, product design and information management, so there is a strong positive correlation between them.

The structural equation model (Figure 3), presents the formulated hypotheses and the mediating effect of service quality on technology acceptance and green purchase intention. The study found similar results to prior research that posits that effective supply chain management leads to improved service quality and customer satisfaction (Sharma et al., 2022; Rosillo-Díaz et al., 2020). However, this study goes beyond the existing research and adds product accuracy and different dimensions of service qualities to the TAM model to draw a more comprehensive picture of the factors that affect online shopping.

Response time, problem solving, and service attitude have a positive impact on online shopping consumer service quality, but not significantly (H4). The relationship between online shopping consumer service quality factors and supply chain management is mediated by service quality and influence positively. Although supply chain management can affect the service quality of online shopping consumers, service quality also affects the service quality of online shopping consumers, including response time, problem solving, and service attitude. Generally speaking, customer service quality for online shopping depends not only on supply chain management, but also on service quality. However, it is found from **Figure 3** that the impact of service attitude is more effective than response time and problem solving, so service attitude is a key influencing factor of service quality. When customers have good customer service attitudes, they share their enjoyment and satisfaction with their existing network friends. If consumers are satisfied with the quality of the product, they will participate in the action of recommending a certain product.

All the above variables have significant positive direct and moderating effects, while service quality has a less significant direct effect on online shopping consumer service quality. Among the mediating variables of product accuracy and service quality, service quality is the most important and has the highest adjustment path coefficient. Therefore, supply chain management can affect online shopping consumer service quality through the mediating role of product accuracy and service quality and show a positive correlation.

The finding also reveals the relationship between supply chain management, inventory management, supplier management, quality control, return policy and green purchase intentions on overall service quality and customer satisfaction. More so, by exploring the mediating roles of product accuracy and service quality the study unveils how these factors overemphasize the perceived value of online shopping experiences. It supports the existing literature that explains how reliable product information and better supply chain management are essential for gaining the trust and satisfaction of the end consumers (Ghali-Zinoubi & Toukabri, 2019; Kim et al., 2021).

Some of the limitations of this particular study have to be revealed. The only type of participants included in this research were college students from central China, and this may skew the results. Future research, therefore, should involve a less homogenized sample to confirm the findings with other populations. Also, the analysis involved the use of a self-administered survey hence it was prone to response bias. Actual research-based studies and definable measures of service quality might offer more conclusive results.

Future research studies should focus on examining how new technologies affect service quality and customer satisfaction with e-commerce. Analyzing cross-cultural variations in green purchase intentions and the influence of digital literacy on technology acceptance could give consumer research another dimension. The study could be extended to explore other mediating/moderating factors, including but not limited to, trust and perceived risk to have a more comprehensive understanding of the factors that affect online shopping and sustainable consumption.

## CONCLUSION

The current research involved data from 159 samples and utilized comprehensive statistical procedures using SPSS 27 and Smart-PLS 4.0, such as reliability testing, descriptive analysis, correlation, regression model, and model validation. These findings indicated that the measurement model has good reliability, convergent validity, and discriminant validity according to the guidelines that were set in social sciences research. Preliminary studies suggest that the H1 hypothesis holds, as there is a positive impact of supply chain management in improving consumer service quality during online shopping. Furthermore, the results provided to support H2 and H3 hypotheses, show that product accuracy has a direct and mediated positive relationship with consumer service quality. The result also supported H4 that service quality had a positive influence on consumer service quality but also revealed that other factors influencing consumer service quality include response time, problem-solving abilities and service attitudes where service attitude had the highest impact on the consumers thought it was not statistically significant. Several considerations regarding the present study should be noted. The sample selection could only comprise a particular characteristic, restricting the overall applicability of the findings. The information collected was self-reported, which incurs certain biases, and the study design did not take into consideration time-dependent phenomena, which may affect the studied associations. To overcome the mentioned limitations, future studies should include participants from different age groups, use cross-sectional data to consider temporal changes, and utilize the third parties' evaluations of service quality. Further research into other potential mediator and moderator variables would enhance the knowledge of the relationship between supply chain management and service quality and their influence on consumer satisfaction.

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## **DATA AVAILABILITY**

The data that supports the findings of this study are available within the article.

## **ACKNOWLEDGMENTS**

The writers appreciate the feedback from editors and reviewers.

## **DECLARATION OF COMPETING INTEREST**

The authors affirm that they have no known financial or interpersonal conflicts that would have appeared to have an impact on the research presented in the study.

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