

Influencing Factors of Customer Loyalty in the Context of Social E-Commerce

Yongxiang Yang, Ruihua Wang, Yuexiang Zhang

School of Management, Zhengzhou University, Zhengzhou, Henan, China

Abstract: Amid the rapid growth of social e-commerce, customer loyalty has emerged as a crucial element for businesses to sustain their competitive edge in the market. Nevertheless, there remains a lack of comprehensive academic exploration into the factors influencing customer loyalty and the mechanisms at play within the realm of social e-commerce. In response to this gap, the present study seeks to develop a comprehensive theoretical model that covers content quality, product quality, service quality, payment security and convenience, platform design and user experience, switching costs, and platform empowerment, among other exogenous variables. Through a carefully designed questionnaire survey, we successfully collected 406 valid data sets and used a variety of advanced statistical techniques, including factor analysis and Bootstrap method, to rigorously verify the influence mechanisms of each factor. The study findings indicate that content quality, product quality, service quality, payment security and convenience, platform design and user experience, switching costs, and platform empowerment all exert a significant positive influence on customer loyalty. Furthermore, we found that customer satisfaction plays an important mediating role between these influencing factors and customer loyalty. This study not only provides solid theoretical support for social e-commerce platforms to enhance customer loyalty but also offers practical suggestions for platforms to optimize user experience and enhance user stickiness.

Keywords: Social E-Commerce, Customer Loyalty, Customer Satisfaction, Influence Factors

1. Introduction

Social e-commerce, as an innovative business

model, integrates shopping behavior with social interaction, sharing, and recommendation, facilitating precise promotion and wider dissemination of products, thus creating an unprecedented shopping experience for consumers [1]. According to the data released by Avery Consulting, the market size of China's social e-commerce has reached 2,764.8 billion yuan in 2022. This not only indicates the enormous market potential of social e-commerce but also reflects the demand and recognition of consumers for social shopping experiences. However, the slow growth of social e-commerce users and market saturation have led to increasingly fierce internal competition within the industry [2]. Consequently, how to effectively engage existing users has become a core challenge for platforms. In this context, customer loyalty plays a crucial role, as it relates not only to the continuous repurchase and stickiness of users but also enhances the platform's brand value and market competitiveness through word-of-mouth advertising and social interaction. Therefore, this paper develops a multi-dimensional theoretical model to examine the factors impacting customer loyalty within the realm of social e-commerce, examining the mechanisms through which each factor affects customer loyalty and verifying the model's applicability in this specific context.

Compared to existing studies, the innovation of this paper's theoretical model lies in systematically incorporating various factors such as content quality, product quality, and service quality into the analysis, while emphasizing the importance of customer satisfaction as a mediating variable. This approach not only enriches the theoretical framework for customer loyalty research but also provides targeted strategic recommendations for social e-commerce platforms to optimize user experience and enhance competitive advantages in a fiercely

competitive market.

2. Literature Review

2.1. The Concept and Development of Social E-commerce

IBM narrowly defined social e-commerce as word-of-mouth marketing, where user interactions influence consumption decisions [1]. However, some scholars argue that social e-commerce goes beyond traditional marketing tools, representing a deeper integration of social media and business activities, enabling consumers to actively engage in product promotion and sales [3]. The academic consensus is that social e-commerce merges social interaction with business activities, utilizing social network platforms for product promotion and sales [2,4]. A notable example is WeChat e-commerce in China, which capitalizes on personal connections to facilitate the spread and sale of products. Social e-commerce fully integrates key features like high traffic, word-of-mouth recommendations, and group buying, significantly enhancing product exposure and consumer trust. With the rise of mobile internet and social media, this sector has experienced rapid and significant expansion. Social e-commerce not only effectively meets consumer needs through user interaction, but also provides businesses with greater marketing flexibility. Additionally, social e-commerce boosts the efficiency of information sharing and product sales by leveraging the interaction mechanisms embedded in social platforms and communities.

2.2. Customer Loyalty Theory

With the advancement of theory, research on customer loyalty has progressively matured. Presently, scholars primarily investigate customer loyalty from three perspectives: behavioral, attitudinal, and comprehensive. The behavioral perspective was initially proposed by Tucker who regarded repeated purchases as a manifestation of loyalty [2]. Jacoby further supported this notion by considering frequent purchases as indicative of loyal behavior [4]. Blattberg and Subrata suggested that customer loyalty can be measured through the proportion of purchases made for a specific product [5]. Conversely,

the attitudinal perspective places greater emphasis on customers' emotional inclination towards a product. Chen et al. argued that trust is a fundamental driver of customer loyalty, and that emotional attachment and trust are key factors in fostering loyalty, as evidenced by a customer's willingness to make repeat purchases [3]. Lastly, the comprehensive perspective underscores the alignment between attitude and behavior. Customer loyalty entails a psychological commitment whereby customers exhibit repetitive purchasing behavior irrespective of fluctuations in external circumstances. Models such as Swedish Customer Satisfaction Index (SCSB) and American Customer Satisfaction Index (ACSI) emphasize how perceived value and expectations influence satisfaction which subsequently impacts loyalty. McDougall's model elucidates how satisfaction fosters loyalty formation via relationship quality with customers and perceived value. Jason's model further incorporates switching costs and product appeal into influencing factors for fostering loyalty while revealing their interplay with other variables. Overall, it is evident that customer loyalty encompasses only mere repetitive purchasing but also an amalgamation of psychology and behavior.

2.3. Research Status of Customer Loyalty in the Context of Social E-commerce.

In the e-commerce landscape of our country, extensive research has been conducted by scholars on customer loyalty through practical case studies. Customers tend to frequent and pay attention to specific websites or brands due to their preferences, thereby fostering repeat purchase behaviors and word-of-mouth publicity. This phenomenon demonstrates that customer loyalty not only encompasses purchasing behavior but also reflects emotional preference and recognition. Lei et al.'s study highlights that both perceived value and customer satisfaction play a critical role in driving customer loyalty, with perceived value being enhanced through factors such as web design, price incentives, and interactive technology [6]. On the other hand, within the realm of social e-commerce, numerous scholars have extended the traditional model. Shen and Sun propose a model for driving customer loyalty that categorizes influencing factors into internal motivations and external

motivations [7]. The loyalty models developed by Smith highlight the significance of trust, website characteristics, logistics services, customer satisfaction, online experience, cognition, perceived value, social interaction, user-generated content, trust mechanisms, and personalized recommendations in understanding customer loyalty in social e-commerce [8]. In summary, the majority of existing studies concentrate on the determinants of customer loyalty within traditional e-commerce settings. While a relatively mature theoretical framework has been established, insufficient attention has been given to new variables such as social interaction, user-generated content, and trust mechanisms in social e-commerce. To deepen the understanding of customer behavior in social e-commerce, further research is required to investigate how these variables influence customer loyalty. Therefore, this paper introduces these key variables within the social e-commerce environment, constructs a mechanism model for customer loyalty, and validates its effectiveness through empirical analysis.

3. Model Construction and Research Hypothesis

3.1 Model Construction

Drawing upon the literature research method, this study systematically reviews and synthesizes the classical models of traditional customer loyalty, online customer loyalty, and e-commerce customer loyalty. It integrates the characteristics of the current social e-commerce platform and the Internet environment to construct a novel model for assessing social e-commerce customer loyalty impact. The proposed model posits that key influencing factors in social e-commerce include content quality, product quality, service quality, secure and prompt payment methods, platform design and user experience, switching costs, and platform empowerment. Among these factors, the first five indirectly influence customer loyalty by affecting customer satisfaction while switching costs and platform empowerment directly impact it. Building upon these factors as a foundation, this paper assumes customer satisfaction as an intermediary variable connecting five independent variables with theoretical models of both payment security/speed and platform design/experience to explore their relationship with dependent variable -customer loyalty. (Figure 1)

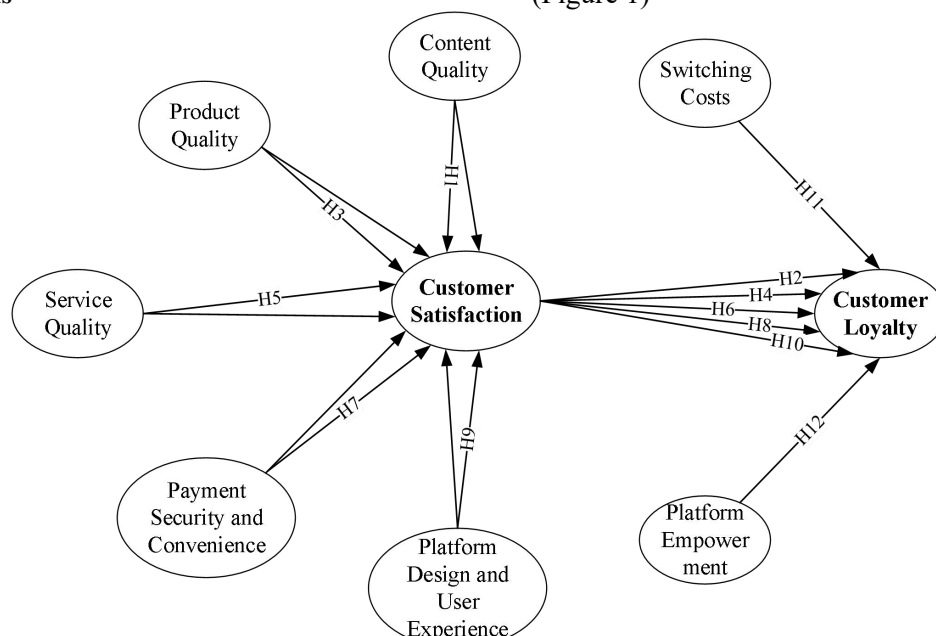


Figure 1. Hypothetical Model

3.2 Research Hypothetical

Based on the model proposed in this paper, a series of hypotheses are set up to examine the influence of these key factors on customer

loyalty.

3.2.1 The hypothesis of the relationship between content quality, customer satisfaction, and customer loyalty

On social platforms, the presence of rich and

high-quality content plays a pivotal role in attracting users. Extensive research has demonstrated that websites offering high-quality information services can significantly reduce users' search time, enhance efficiency, foster user participation and loyalty through improved community interaction. Furthermore, scholars have highlighted that high-quality content not only influences customer satisfaction but also indirectly bolsters customer loyalty by elevating their overall satisfaction levels [6,9]. Drawing from these findings, this study puts forward the following hypothesis.

H1: The quality of content has a positive impact on customer satisfaction.

H2: The quality of content exerts a positive influence on customer loyalty through its impact on customer satisfaction.

3.2.2 The hypothesis of the quality of the product, customer satisfaction, and customer loyalty

In the domain of social e-commerce, product quality is a critical determinant influencing customer loyalty. Research has demonstrated that customers' contentment with the quality of goods directly impacts their trust and allegiance to the platform [10]. In this context, customers typically assess product quality through word-of-mouth communication. High-quality products often garner positive user feedback, thereby augmenting customer satisfaction and loyalty. Based on these premises, we posit the following hypothesis in our study.

H3: The quality of product has a positive impact on customer satisfaction.

H4: The quality of product exerts a positive influence on customer loyalty through its impact on customer satisfaction.

3.2.3 The hypothesis of the quality of the service, customer satisfaction, and customer loyalty

The effect of service quality on customer loyalty has been widely confirmed in previous studies. Superior services not only enhance customers' shopping experience but also foster trust in the platform, thereby bolstering their loyalty [11]. Whether it pertains to pre-sales or post-sales support, enhancing service quality can significantly augment customer satisfaction. Building upon this premise, the present study posits the following hypothesis.

H5: The quality of service has a positive impact on customer satisfaction.

H6: The quality of service exerts a positive influence on customer loyalty through its impact on customer satisfaction.

3.2.4 The hypothesis of payment security and convenience, customer satisfaction, and

customer loyalty

The security and convenience of online payment are crucial factors that significantly impact the satisfaction and loyalty of e-commerce customers. A swift and secure payment process can enhance users' purchasing experience, minimizing any friction during the transaction. On social e-commerce platforms, users anticipate an effortless and seamless payment procedure to augment overall satisfaction. Building on this foundation, this study proposes the following hypothesis.

H7: Payment security and convenience has a positive impact on customer satisfaction.

H8: Payment security and convenience positively affect customer loyalty by enhancing customer satisfaction.

3.2.5 The hypothesis of platform design and experience, customer satisfaction, and customer loyalty

The design and user experience of social e-commerce platforms are vital elements that strongly impact customer satisfaction and loyalty. A well-functioning and user-friendly platform not only enhances customers' shopping efficiency but also provides them with a delightful shopping experience [12]. Thus, platform design and user experience are critical in shaping customer satisfaction and loyalty. Based on this foundation, the study puts forth the following hypothesis.

H9: Platform design and experience has a positive impact on customer satisfaction.

H10: Platform design and experience exerts a positive influence on customer loyalty through its impact on customer satisfaction.

3.2.6 The hypothesis of switching costs and customer loyalty

Switching costs encompass temporal, cognitive, and financial investments that customers may encounter when transitioning between shopping platforms [13]. These costs often augment customer stickiness to the incumbent platform, thereby fortifying their loyalty. Building upon this premise, we posit the following hypothesis in this study.

H11: Switching costs has a positive impact on customer satisfaction.

3.2.7 The hypothesis of platform empowerment and customer loyalty

The empowerment of platforms can effectively enhance customers' sense of participation and loyalty by providing them with greater control and more opportunities for engagement. Through mechanisms such as online evaluations, user-generated content, and network-based word-of-mouth communication, platforms empower users and enhance their overall experience, thereby fostering customer loyalty [14].

Based on this premise, this study advances the following hypothesis.

H12: Platform empowerment has a positive impact on customer satisfaction.

3.2.8 The hypothesis of customer satisfaction and customer loyalty

The satisfaction of customers directly influences their loyalty, with numerous studies showing that greater satisfaction with products or services increases the probability of repeat purchases on the platform [14,15]. As a result, a strong positive relationship between customer satisfaction and loyalty can be identified. Building upon this premise, the present study proposes the following hypothesis.

H13: Customer satisfaction has a positive impact on customer satisfaction.

4. Research Methods

4.1 Scale Design

The questionnaire items in this paper primarily pertain to relevant domestic and international

literature. The research subjects encompass customers from various social e-commerce platforms, and the sample data is collected using rigorous methodologies. The survey is structured into two main sections. The first section surveys customers' basic information, including age, gender, education level, monthly disposable income, platform awareness, and shopping duration. The second section focuses on customers' subjective item selection based on their personal experiences, constituting the core aspect of this study. Measurement employs the Richter five-level scale with 1 indicating "strongly disagree" and 5 denoting "strongly agree". A total of 31 items were formulated to gauge variables such as content quality (CQ), product quality (PQ), service quality (SQ), payment security and convenience (PSC), platform design and user experience (PDUE), switching costs (SC), platform empowerment (PE) measures customer satisfaction levels and customer loyalty.

The detailed measurement items and their sources can be found in Table 1: Variable Measurement Table.

Table 1. Variable Measurement Table

Measurement Dimension	Measurement Items	Source Description
Content Quality	1. The textual representation of the platform is well-organized, images are clear, labels are clear, indicating brand and price.	Kelton (2009); Cao Huanhuan & Jiang Jinhua (2013)
	2. The content on the platform is very helpful for my purchasing decisions.	
	3. The content on the platform is generally authentic and trustworthy.	
Product Quality	1. The actual quality of the products on the platform matches my expectations.	Wang Ruinan (2004); Cha Jinxiang (2006)
	2. The products offered by the platform generally meet my needs.	
	3. The product quality on the platform is better than I expected.	
Service Quality	1. The platform can provide the services I need in a timely manner.	Xiao Fang (2008); Cha Jinxiang (2006); Sun Ying et al. (2011)
	2. The customer service personnel on the platform have a good attitude.	
	3. The platform can promptly handle return and exchange requests.	
	4. The logistics provided by the platform are reliable.	
Payment Security and Convenience	1. The platform offers multiple payment methods.	Li Xiangtao (2013)
	2. The platform emphasizes protecting user payment security.	
	3. The platform processes transactions quickly.	
Platform Design and Experience	1. The shopping interface of the platform is easy to find and open.	Yu Ping (2014); Zhou Yanrong (2019); Zerihun Temesgen Belayneh (2011)
	2. The shopping interface of the platform is clear and aesthetically pleasing.	
	3. The platform responds quickly to my actions.	
	4. It is easy to find the products I want to purchase on the platform.	
Switching Costs	1. The platform provides me with unique products and services.	Deng Aimin et al. (2014)
	2. I am very familiar with the shopping process on this platform.	
	3. I will continue using this platform as I do not wish to invest significant time and effort in adjusting to a different one.	
Platform Empowerment	1. The platform allows me to take the initiative in transactions with merchants.	Customer Empowerment Scale
	2. I have the right to freely choose products and services during the shopping process on this platform.	
	3. The platform gives me a higher level of participation.	
Customer Satisfaction	1. I am content with the quality of the content offered by the platform.	ACSI Model
	2. I am satisfied with the product quality on the platform.	
	3. I am very satisfied with the shopping service quality of the platform.	
	4. I am satisfied with the security and convenience of payment on the platform.	
	5. I am pleased with the platform's design and overall user experience.	
Customer Loyalty	1. I have the intention to use this platform for a long time.	Zeithaml (2002); Gefen et al. (2008)
	2. I would be inclined to recommend this platform to my friends and family.	
	3. Even if other community e-commerce platforms emerge, I will continue to use this platform.	

4.2 Data Collection

Questionnaires were distributed for this study through online channels, specifically targeting

social e-commerce users on platforms such as WeChat, Xiaohongshu, Weibo, QQ, and other social media platforms. In total, 425

questionnaires were gathered. To ensure the authenticity and validity of the data, responses with completion times under 70 seconds and overly simplistic answers were removed, yielding 406 valid questionnaires.

5. Data Processing and Analysis

5.1 Reliability Analysis

The questionnaire data underwent reliability analysis using SPSS software in this study, with each dimension achieving a Cronbach α value surpassing 0.8 (Table 2). This indicates that the scale developed in this study exhibits high internal consistency and effectively measures key variables such as users' shopping behavior, satisfaction, and loyalty within the context of social e-commerce.

Table 2. Reliability Analysis Table

variables	CQ	PQ	SQ	PSC	PDUE	SC	PE	CS	CL
α	0.84	0.83	0.87	0.83	0.85	0.84	0.84	0.91	0.85

5.2 Exploratory Factor Analysis

5.2.1 Applicability Analysis

Prior to conducting factor analysis, this study evaluated the suitability of the data using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. A KMO value greater than 0.6, along with a p-value from Bartlett's test lower than 0.05, is generally regarded as indicative of significant correlations among variables, confirming that the data is appropriate for factor analysis.

Table 3. KMO and Bartlett's Sphericity Test

KMO sample appropriateness measure		0.870
Bartlett's sphericity test	<i>Approximate chi-square</i>	6779.311
	<i>Degree of freedom</i>	465
	<i>Significance</i>	0.000

As illustrated in Table 3, this study yielded a KMO value of 0.870. Additionally, the results of Bartlett's test yielded an approximate chi-square value of 6,779.311, with 465 degrees of freedom and a p-value of 0.000. These findings suggest that there is a significant correlation among the selected variables, thus affirming the data's appropriateness for factor analysis.

5.2.2 Extraction Common Factor

Once the data's suitability for factor analysis was confirmed, this study utilized principal component analysis to extract latent factors. The conventional criterion for factor

extraction is eigenvalues greater than 1, and a cumulative variance explained rate exceeding 60% is generally required to ensure comprehensive information coverage by the extracted factors.

Based on the total variance interpretation table generated from the SPSS analysis, nine factors with eigenvalues exceeding one were extracted during the factor analysis. The cumulative variance interpretation rate was 75.337%, surpassing the threshold of 60%. This indicates that these nine factors can effectively account for most of the variation observed in the original variables. Furthermore, after rotation, these nine factors exhibited post-rotation variance contribution rates of 11.789%, 9.576%, 9.566%, 7.585%, 7.497%, 7.417%, 7.308%, 7.306% and 7.293% respectively, demonstrating their substantial explanatory power.

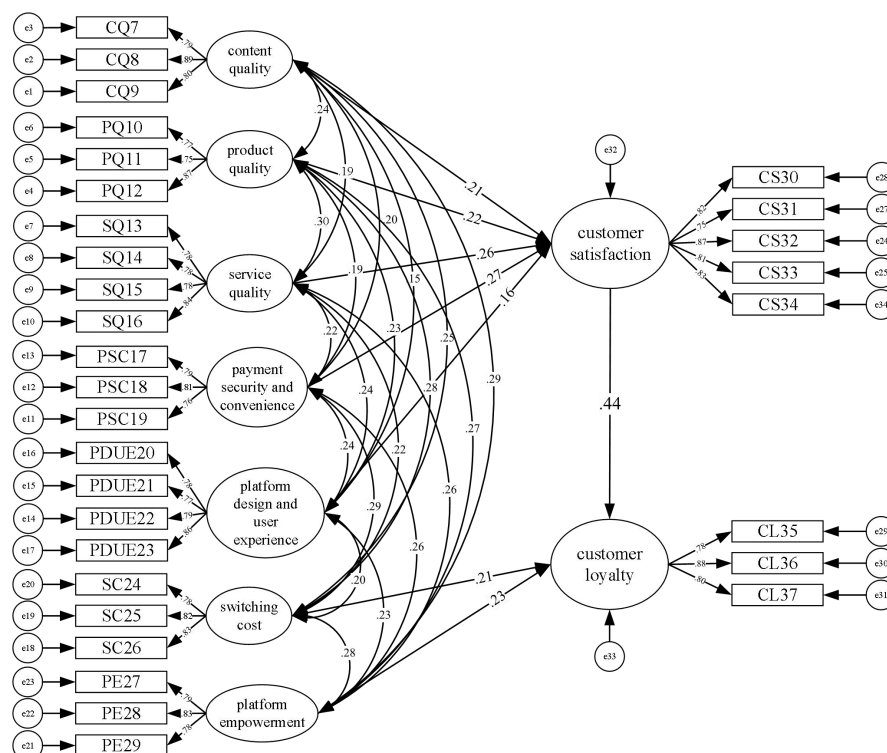
5.3 Confirmatory Factor Analysis

The main aim of confirmatory factor analysis is to assess how well a predefined factor model fits the observed data, determining whether the number of factors and the loadings of the observed variables conform to theoretical predictions. Unlike exploratory factor analysis, confirmatory factor analysis is grounded in established theories or hypotheses and seeks to determine whether a specific factor model accurately represents the relationships among observed variables. The results of the analysis are displayed in Table 4.

Table 4. The Table of Model Fit Test

Index	X ² /df	RMR	RMSEA	CFI	TLI	IFI	GFI
Value	1.162	0.038	0.020	0.990	0.988	0.990	0.933

The results in Table 4 indicate that the X²/df fitting value is 1.162, well below the threshold of 5, suggesting a favorable model fit. The RMR fitting value stands at 0.038, which is below the significance threshold of 0.05. Additionally, the RMSEA fitting value is 0.020, lower than the critical value of 0.08. All indices, including CFI, TLI, IFI, and GFI, exceed the recommended threshold of 0.9, indicating an excellent fit for the proposed model. Moreover, we provide a fully standardized path coefficient diagram that not only displays the standardized factor loadings for each item but also illustrates the correlations among the factors along with their respective path coefficients. This diagram acts as a visual aid, facilitating a better comprehension of the relationships among the different factors (Figure 2).



5.4 Correlation Analysis

Table 4 displays a correlation coefficient of 0.491 between customer satisfaction and customer loyalty, indicating a significant

Table 5. Correlation analysis table

	CQ	PQ	SQ	PSC	PDUE	SC	PE	CS	CL
CQ	1								
PQ	0.21113	1							
SQ	0.16445	0.25478	1						
PSC	0.16609	0.17415	0.18508	1					
PDUE	0.13382	0.20536	0.19901	0.20976	1				
SC	0.21467	0.24685	0.19829	0.24864	0.17159	1			
PE	0.24378	0.24585	0.22429	0.21638	0.19681	0.23810	1		
CS	0.35314	0.39843	0.41369	0.39438	0.32468	0.25862	0.25406	1	
CL	0.25517	0.22243	0.24142	0.25045	0.24709	0.34065	0.35834	0.49178	1

Mediating effect analysis is a widely used statistical approach for examining the indirect influence of independent variables on

dependent variables via mediating variables. In cases where independent variables do not directly influence dependent variables, but instead exert indirect effects via mediating factors, these mediating factors are referred to

as mediators. This study incorporates content quality, product quality, service quality, safe and efficient payment methods, switching costs, and platform empowerment as independent variables; customer satisfaction as an intermediary variable; and customer loyalty as the dependent variable. The bootstrap method was utilized to examine the mediation effect of customer satisfaction with a sample size of 5000 (Table 6).

Table 6. Results of mediation effect test

path	value	95% confidence interval		p
		lower limit	upper limit	
CQ→CS→CL	0.093	0.051	0.143	0.000
PQ→CS→CL	0.096	0.055	0.143	0.000
SQ→CS→C	0.112	0.065	0.168	0.000
PSC→CS→CL	0.118	0.077	0.167	0.000
PDUE→CS→CL	0.069	0.027	0.115	0.001

- The confidence interval for the path of CQ→CS→CL is (0.051, 0.143), excluding 0, indicating that customer satisfaction serves as a mediator in the relationship between content quality and customer loyalty.
- The confidence interval for the path of PQ→CS→CL is (0.055, 0.143), excluding 0, suggesting that customer satisfaction acts as an intermediary in the influence of product quality on customer loyalty.
- The confidence interval for the path of SQ→CS→CL is (0.065, 0.168), excluding 0, implying that customer satisfaction serves as a mediator in the effect of service quality on customer loyalty.
- The confidence interval for the path of PSC→CS→CL is (0.077, 0.167), excluding 0, suggesting that customer satisfaction plays a mediating role in linking payment security and speed with customer loyalty.
- The confidence interval for the path of PDUE→CS→CL is (0.027, 0.115), excluding 0, implying that customer satisfaction functions as a mediating factor in the effect of platform design and user experience on customer loyalty.

6. Conclusions and Policy Implications

Based on a theoretical model and empirical analysis, this study investigates the determinants of customer loyalty in the context of social e-commerce and arrives at several conclusions. Firstly, the quality of content significantly impacts customer loyalty. High-quality content encompasses detailed product descriptions, clear multimedia displays, and fosters new customer acquisition

while enhancing existing customers' loyalty through word-of-mouth communication. Secondly, there is a direct relationship between product quality and customer satisfaction; superior products promote repeat purchases and enhance brand loyalty. Service quality is also a crucial factor as efficient and thoughtful service effectively enhances overall customer satisfaction, thereby driving loyalty growth. Simultaneously, payment security and convenience are vital factors affecting customer loyalty; a fast and secure payment experience strengthens trust among customers. Additionally, optimizing platform design and user experience plays a pivotal role in improving customer loyalty; smooth operations coupled with user-friendly interfaces enhance user enjoyment while reducing the likelihood of users switching to other platforms. Moreover, higher switching costs make customers more inclined to maintain their existing usage habits when faced with platform switching; meanwhile, platform empowerment further bolsters customer loyalty by enhancing user participation and control.

Based on these findings, this study proposes several recommendations. Firstly, the platform should continuously optimize content and user experience to ensure the accuracy and effectiveness of information while providing a streamlined and intuitive interface to reduce user workload. Secondly, it is essential to meticulously manage product quality to align with customer expectations, utilizing technologies such as big data and artificial intelligence to improve service quality and provide a more personalized and efficient customer experience. During the payment process, ensuring both security and seamless transactions is crucial for further enhancing customers' payment experience. Additionally, social e-commerce platforms should strive for deeper integration between social networking and online shopping by creating more interactive shopping scenarios that foster users' sense of participation; ultimately fostering greater customer loyalty while enhancing platform competitiveness.

While this study investigates the factors influencing customer loyalty in social e-commerce from various dimensions, it is not without limitations. Firstly, the sample underrepresentation may affect the

generalizability of the results. Secondly, the research methodology is relatively simplistic, relying solely on questionnaire surveys and empirical analysis without incorporating other qualitative research methods. Future studies should aim to enhance the sample size, employ more diverse data collection techniques, and conduct cross-platform comparative analyses to offer more profound and comprehensive strategic recommendations for the social e-commerce industry.

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