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An Investigation on Factors Influencing Satisfaction and Loyalty of Online Shopping Customers in China

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Abstract

Purpose: This study investigates the factors influencing customer satisfaction and loyalty in online shopping among Chinese consumers, focusing on the impact of response, security and privacy, payment methods, and disconfirmation of information, service, and product quality on customer satisfaction and loyalty. **Research design, data and methodology:** A quantitative methodology was adopted, utilizing data collected from 550 online shoppers in China through a structured questionnaire. Multiple regression analysis and Structural Equation Modeling (SEM) were employed to examine the relationships between the variables. **Results:** The analysis indicates that all proposed constructs were positively correlated with online shopping customers' satisfaction and loyalty. Among these factors, product quality, security/privacy and service quality have the most significant influence on satisfaction, which, in turn, indirectly affects customer loyalty. Conclusions: This study highlights key factors influencing customer satisfaction and loyalty in China's e-commerce, emphasizing the practical importance of secure transactions, efficient payment processes, accurate information, and responsive service. The findings underscore overall satisfaction as a critical mediator, guiding businesses to optimize service quality for long-term customer retention. By aligning with emerging trends in China's digital economy, this research contributes to the literature on e-commerce growth, offering actionable insights for enhancing competitive advantage.

Keywords: Customer Loyalty, Online Shopping, Customer Satisfaction, SEM, Disconfirmation Theory

JEL Classification Code: L81, M10, M30, O30

1. Introduction

The rapid growth of e-commerce has significantly transformed the retail landscape, especially in China, where platforms like Alibaba, JD.com, and Amazon dominate the online shopping market (China Internet Network Information Center, 2021). As competition intensifies, understanding the factors that influence customer loyalty has become crucial for businesses seeking long-term success. Customer loyalty is often driven by various factors, including response time, security, payment convenience, and the quality of product and service information. A notable example of the importance of these factors is Alibaba's "Customer First" strategy, which prioritizes secure transactions, seamless payment methods, and high-quality product information to enhance user experience. Taobao and Tmall, Alibaba's leading platforms, have implemented AI-driven customer service chatbots and stringent security measures, such as facial recognition for payments via Alipay, to improve consumer trust. Similarly, JD.com has gained a reputation for its fast and reliable delivery services, leveraging an extensive logistics network to reduce response time and enhance service quality. These real-world applications underscore the necessity for businesses to prioritize factors that drive customer satisfaction, making this study highly relevant in the current e-commerce landscape. The study investigates how these variables affect customer satisfaction and, consequently, customer loyalty among Chinese online shoppers. The research builds on established theories such as Expectancy

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Disconfirmation Theory (EDT), the Technology Acceptance Model (TAM), and the Theory of Planned Behavior (TPB), which provide a framework for analyzing the relationships between customer expectations, perceptions, and satisfaction.

Previous studies on e-commerce satisfaction and loyalty have primarily focused on Western markets or individual factors in isolation, overlooking the integrated impact of response time, security, payment, and information quality in China's digital economy. This study addresses this gap by analyzing these factors collectively, providing a more holistic view of Chinese online consumer behavior. This study also highlights the importance of meeting or exceeding customer expectations in e-commerce settings, particularly in regard to product and service quality, information accuracy, and customer service responsiveness. Online shoppers in China often rely on detailed product descriptions, reviews, and other cues to make purchasing decisions, making the accuracy and reliability of such information critical for building trust. Furthermore, secure payment methods and the protection of personal information are also key concerns that influence customer trust and loyalty. By exploring the relationships between these factors and using a structured questionnaire, this study aims to offer insights into how e-commerce platforms can improve customer satisfaction and foster long-term customer loyalty. The findings will provide practical recommendations for online businesses to enhance their competitiveness in the rapidly growing Chinese e-commerce market.

2. Literature Review

2.1 Response

Response time and efficiency are key factors that shape customer satisfaction in online shopping. The responsiveness of a platform—how quickly it replies to inquiries, resolves issues, and provides feedback—is crucial in building trust with customers. Several studies emphasize that fast and effective response times contribute significantly to customer satisfaction, especially in e-commerce where direct human interaction is absent (Parasuraman et al., 1988; Zeithaml et al., 2002). Effective communication not only reassures customers but also plays a pivotal role in handling service recovery, further solidifying the consumer's positive perception of the platform. Particularly in online shopping, where customers expect real-time solutions, the speed of customer service responses influences whether they feel valued and respected. Customers who perceive the platform as responsive are more likely to be satisfied with their overall shopping experience. The hypothesis for the study is then proposed as:

H1: Response has a significant influence on online shopping overall satisfaction.

2.2 Security/Privacy

Security and privacy concerns are central to customer satisfaction in online transactions, given the heightened risk of data breaches and identity theft. Platforms that demonstrate transparency through well-defined privacy policies and protect user data, especially financial information, significantly enhance customer trust (Kim et al., 2009; Pavlou, 2011). Studies in Western markets suggest that security trust is often built through encryption technologies and legal frameworks (e.g., GDPR in Europe), whereas in China, consumer trust is heavily influenced by peer recommendations, social proof, and government-backed digital infrastructure (Zhou et al., 2020). Unlike individualistic cultures where personal data privacy is a major concern, collectivist societies like China place greater trust in widely used platforms such as Alipay and WeChat Pay, which are integrated into daily transactions (Hofstede, 2011). However, trust is not solely based on security guarantees but also on how widely accepted and endorsed a payment system is within one's social circle (Ma & Hu, 2022). Therefore, e-commerce platforms in China must focus not only on technical security but also on fostering community trust through user testimonials, influencer endorsements, and social media-driven credibility. The hypothesis for the study is then proposed as:

H2: Security/privacy has a significant influence on overall satisfaction.

2.3 Payment

Payment convenience is a fundamental element of customer satisfaction in the online shopping experience. The ability to choose from various payment options and to complete transactions quickly and securely enhances the shopping experience (Gupta & Huang, 2014). Payment gateways that are user-friendly and reliable contribute to a smoother transaction process, minimizing any friction that could arise during the purchasing process. In particular, fast and efficient payment methods help customers feel reassured about the security of their financial information, which is key to establishing trust (Kim et al., 2015). In contrast, complicated or insecure payment processes can lead to frustration and dissatisfaction. Thus, payment efficiency and security directly influence customer satisfaction in e-commerce platforms. The hypothesis for the study is then proposed as:

H3: Payment has a significant influence on online shopping customer satisfaction.

2.4 Disconfirmation of Information Quality

Disconfirmation of information quality occurs when there is a gap between customer expectations of product descriptions and the actual information they encounter during or after purchase. Previous research suggests that Western consumers tend to place greater trust in brand reputation and seller credibility, whereas Chinese consumers rely heavily on collective sources of information such as online reviews, social commerce platforms (e.g., Xiaohongshu), and influencer endorsements (Wang, 2015). Studies show that peer recommendations and customer reviews play a significantly larger role in China than in Western markets (Guo et al., 2021). For instance, platforms like Taobao and JD.com incorporate extensive product descriptions, multimedia reviews, and live-streaming sales sessions to reduce perceived uncertainty and enhance consumer confidence. When product information aligns with consumer expectations—especially through trusted social networks—it leads to positive disconfirmation and higher satisfaction. Conversely, inaccurate or misleading information can cause negative disconfirmation, resulting in dissatisfaction and distrust in the platform (Oliver, 1980). The hypothesis for the study is then proposed as:

H4: The disconfirmation of information quality has a significant influence on online shopping customer satisfaction.

2.5 Disconfirmation of Service Quality

Service quality encompasses several dimensions, including responsiveness, reliability, assurance, and empathy, all of which directly affect customer satisfaction in online shopping (Parasuraman et al., 1988). Disconfirmation of service quality arises when the actual service provided exceeds or falls short of customer expectations. Positive disconfirmation occurs when the platform exceeds expectations in delivering reliable and timely services, thereby increasing customer satisfaction. Conversely, if the service is perceived as inadequate, such as delayed responses or unempathetic customer service, negative disconfirmation leads to dissatisfaction (Collier & Bienstock, 2006). As customers are increasingly expecting high-quality service in e-commerce, platforms must focus on meeting or surpassing these expectations to ensure satisfaction. The hypothesis for the study is then proposed as:

H5: The disconfirmation of service quality has a significant influence on online shopping customer satisfaction.

2.6 Disconfirmation of Product Quality

Product quality is a critical factor influencing customer satisfaction in online shopping, especially since customers cannot physically inspect products before purchase. Disconfirmation of product quality occurs when there is a gap between the expected quality of a product and the actual quality received (Oliver, 1980). Research suggests that when customers receive products that meet or exceed their expectations, they are more likely to be satisfied and continue shopping with the platform (Fornell et al., 1996). On the other hand, products that fail to meet expectations result in negative disconfirmation, leading to dissatisfaction and potential loss of customer loyalty. Therefore, ensuring that product quality aligns with customer expectations is essential for maintaining high satisfaction levels in e-commerce platforms. The hypothesis for the study is then proposed as:

H6: The disconfirmation of product quality has a significant influence on online shopping customer satisfaction.

2.7 Overall Satisfaction

Overall satisfaction is an accumulation of the customer's experiences with various aspects of the platform, including response, security, payment, and product quality. Research consistently shows that satisfied customers are more likely to exhibit loyalty, including repeat purchases and recommendations (Oliver, 1997). However, the mechanisms driving satisfaction differ between cultures. In individualistic societies, personal convenience, ease of use, and direct brand interactions tend to drive satisfaction (Anderson & Srinivasan, 2003). In contrast, in collectivist cultures like China, satisfaction is strongly influenced by community validation and peer engagement (Hofstede, 2011). Chinese consumers often seek approval from social networks before making purchasing decisions, and their satisfaction is reinforced by a platform's reputation within their peer groups and online communities (Wang & Yu, 2019). This highlights the importance of incorporating social proof mechanisms, such as customer testimonials, influencer collaborations, and group-buying promotions, into e-commerce strategies in China. The hypothesis for the study is then proposed as:

H7: Overall satisfaction has a significant influence on customer loyalty.

2.8 Customer Loyalty

Customer loyalty is defined as a customer's willingness to continue purchasing from a platform despite the availability of alternatives. While previous studies highlight

that satisfaction and trust are key drivers of loyalty (Reichheld & Schefter, 2000), cultural differences play a crucial role in how loyalty is formed. In Western contexts, loyalty is often transactional, driven by personalized experiences, discounts, and convenience. However, in China, loyalty is relational and community-driven, meaning that consumers are more likely to return to a platform that is widely endorsed by their social circle (Lu et al., 2020). Chinese consumers frequently engage in word-of-mouth marketing (WOM), online discussions, and group-buying trends (e.g., Pinduoduo's social commerce model) to validate their loyalty choices (Li et al., 2021). Platforms that foster ongoing engagement through loyalty programs, influencer partnerships, and interactive features (e.g., live-stream shopping) can strengthen customer retention and advocacy.

3. Research Methods and Materials

3.1 Research Framework

The development of the conceptual framework for this study involved a comprehensive review of existing literature and theoretical models to identify the key factors influencing customer loyalty in the context of online shopping. Researchers began by examining foundational theories such as Expectancy Disconfirmation Theory (EDT), the Technology Acceptance Model (TAM), and the Theory of Planned Behavior (TPB), which provide insights into the cognitive and behavioral processes that drive customer satisfaction and loyalty. EDT, proposed by Oliver (1980), posits that customer satisfaction is determined by the discrepancy between prior expectations and actual performance. This theory was instrumental in identifying the role of disconfirmation of expectations regarding product and service quality as critical factors influencing customer satisfaction. Similarly, TAM, developed by Davis (1989), emphasizes the importance of perceived usefulness and perceived ease of use in technology adoption, which informed the inclusion of factors such as response and convenient payment mechanisms. TPB, introduced by Ajzen (1991), highlights the impact of attitudes, subjective norms, and perceived behavioral control on behavioral intentions, supporting the exploration of trust and security/privacy as key determinants of customer loyalty.

Building on these theoretical foundations, researchers conducted an extensive literature review to identify empirical studies that have examined similar constructs in the context of e-commerce. This review revealed consistent findings that highlighted the importance of service quality, product quality, and customer satisfaction in fostering loyalty. For instance, studies by Collier and Bienstock (2006) and Cristobal et al. (2007) demonstrated that high service quality leads to positive disconfirmation of expectations and enhances customer satisfaction, which in turn drives loyalty. The literature also underscored the significance of trust and security in online transactions, as evidenced by research conducted by Kim et al. (2009) and Pavlou (2011), which found that secure and reliable online shopping environments positively influence customer trust and loyalty. Additionally, the role of perceived value, encompassing the trade-off between benefits and costs, was highlighted in studies by Chen (2015) and Zeithaml (1988), indicating that perceived value is a significant predictor of customer loyalty.

To develop the conceptual framework, researchers synthesized these insights to identify seven key independent variables: Response, Security/Privacy, Convenient Payment Mechanism, Disconfirmation of Information Quality Expectations, Disconfirmation of Service Quality Expectations, Disconfirmation of Product Quality Expectations, and Customer Satisfaction. These variables were chosen based on their demonstrated influence on customer satisfaction and loyalty in the context of online shopping. The relationships among these variables were hypothesized to capture the complex interplay of factors that drive customer loyalty. The inclusion of disconfirmation of expectations as a central concept aligns with EDT, emphasizing the importance of meeting or exceeding customer expectations to achieve satisfaction. The framework also incorporates elements from TAM and TPB, highlighting the role of perceived usefulness, ease of use, trust, and security in shaping customer behaviors. This integrative approach provides a comprehensive understanding of the factors influencing customer loyalty in e-commerce and offers a robust foundation for empirical testing and validation.

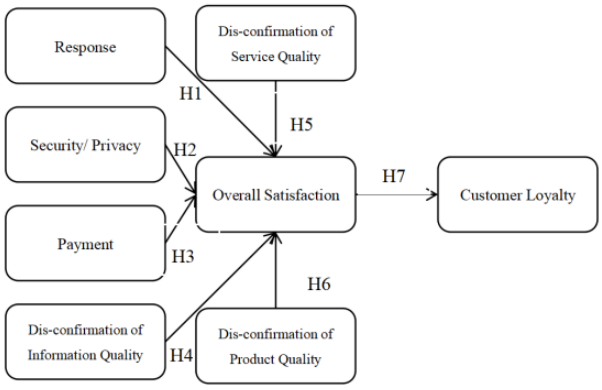

Figure 1: Research Framework

3.2 Research Methodology

This study adopts a quantitative research methodology to explore the factors influencing customer satisfaction and loyalty in online shopping. The research focuses on analyzing the relationships between several independent variables such as response, security/privacy, payment, and disconfirmation of product quality and dependent variables, which are overall customer satisfaction and loyalty.

Data collection was conducted through a structured questionnaire, targeting online shoppers in China. The questionnaire was designed using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), to ensure a structured and objective measurement of the study variables. This scale helps capture respondents' attitudes toward different elements of their shopping experience in a standardized manner, facilitating meaningful statistical analysis. A total of 550 responses were gathered, ensuring a sufficiently large sample size for statistical analysis and generalizability of the findings.

To analyze the data, multiple statistical techniques were employed, including descriptive statistics for summarizing respondent characteristics and inferential statistics like correlation and multiple regression analysis to test the hypotheses. Structural Equation Modeling (SEM) was used to validate the proposed model and assess the relationships between variables. Various goodness of fit indices were applied to ensure the adequacy of the structural model in representing the collected data. Despite a robust methodology, potential biases exist. Self-selection bias may arise as tech-savvy users or frequent online shoppers are more likely to participate, potentially skewing the findings. Response bias is also a concern if participants provide socially desirable answers rather than their true experiences. To mitigate these issues, efforts were made to diversify the respondent pool and ensure anonymity to encourage honest responses.

In conclusion, this methodological approach provides a comprehensive framework for identifying the significant factors that influence customer satisfaction and loyalty in the context of online shopping, enabling the development of strategies to improve e-commerce platforms.

3.3 Population and Sample Size

The population for this study consists of online shoppers in China, focusing on those who regularly engage with e-commerce platforms. Given the vast and diverse nature of the online shopping market in China, the study aims to capture a broad representation of shoppers with varying demographic backgrounds. To ensure the results are statistically robust and generalizable, a sample size of 550 respondents was selected. This sample size was determined based on standard practices for Structural Equation Modeling (SEM), ensuring sufficient statistical power for the analysis. The respondents were selected using a stratified random sampling method to ensure a balanced representation across gender, age, and shopping frequency, enabling the study to comprehensively explore the relationships between the variables of interest.

Table 1: Stratified Random Sampling

Strata	Population Size (Male)	Proportional Sample Size
Alibaba	6.300,000	252
Jingdong	5,220,000	208
Amazon	2,349,000	90
Total	**13,869,220**	**550**

The study employs a stratified random sampling technique to select participants from the population of online shoppers in China. This technique ensures that key demographic groups are adequately represented in the sample. Stratified random sampling helps in minimizing sampling bias by dividing the population into distinct subgroups (strata) and then randomly selecting individuals from each group proportionally.

This approach is particularly useful for achieving greater precision in the results, as it reflects the diversity of the population while maintaining randomness in participant selection. By using this method, the study ensures that the findings can be generalized across different segments of the online shopping population.

4. Results and Discussion

4.1 Demographic Profile

The demographic profile of male participants shows a balanced representation across various categories, with a total sample size of 550 online shoppers from Alibaba, JD.com, and Amazon. This focus ensures that insights are derived from users of leading e-commerce platforms in China, reflecting real-world online shopping behaviors. In terms of age, the majority fall within the 25-34 age range, followed by those aged 35-44, indicating a relatively young to middle-aged demographic. Education levels are diverse, with most male participants holding a bachelor's degree, while a smaller but significant portion has attained a master's degree. The employment status of male participants reveals that a large percentage are employed, with others identifying as students or retired, providing insight into a workforce-oriented and educated group. Income levels among male participants vary, with the largest group earning between $2,001 and $4,000 per month, reflecting a moderate to high-income bracket. As the study focuses on Alibaba,

JD.com, and Amazon users, it captures consumer behavior across distinct platforms, Alibaba and JD.com dominate domestic retail with strong logistics, while Amazon offers an international shopping experience. This segmentation helps assess how platform features, pricing, and product availability influence purchasing behavior.

Overall, the male demographic profile suggests a group that is predominantly educated, professionally active, and financially stable, which is pertinent for understanding their purchasing behaviors and preferences in online shopping.

Table 2: Demographic Information

Demographic Characteristic	Category	Frequency (N=550)	Percentage
Age Group	18-24	110	20.0
	25-34	166	30.2
	25-44	136	24.7
	45-54	82	14.9
	55 and above	56	10.2
Education Level	High School	88	16.0
	Bachelor's	274	49.8
	Master's	132	24.0
	Doctorate	56	10.2
Employment Status	Employed	330	60.0
	Unemployed	56	10.2
	Student	110	20.0
	Retired	54	9.8
Income Level (Monthly)	Below $2,000	126	22.9
	$2,001 - $4,000	204	37.1
	$4,001 - $6,000	156	28.4
	Above $6,000	64	11.6

4.2 Confirmatory Factor Analysis (CFA)

The Confirmatory Factor Analysis (CFA) results indicate strong reliability and convergent validity across the constructs measured. Before the analysis data normality and internal consistency were assessed. Data was normally distributed as depicted in skewness and kurtosis values that falls within the acceptable range (Kline, 2015) and affirmed internal consistency from Cronbach's Alpha values exceeding 0.7 (Nunnally, 1978). For each construct, the composite reliability (CR) values are above the recommended threshold of 0.7, with values ranging from 0.835 to 0.873, indicating that the items for each factor are internally consistent. The average variance extracted (AVE) values are also satisfactory, all above 0.5, suggesting that a significant portion of the variance is captured by the latent variables. Most factor loadings exceed 0.7, demonstrating strong relationships between the items and their corresponding latent factors. The t-values are significant, supporting the relevance of the individual item contributions to the constructs. Customer Loyalty (CL) stands out with a particularly high CR (0.873) and AVE (0.637), indicating a strong and reliable measurement of this construct. Overall, these results suggest a robust measurement model with good internal consistency and convergent validity.

Table 3: Confirmatory Factor Analysis (CFA), Composite Reliability (CR), and Average Variance Extracted (AVE) Results

Variable	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factor Loading	CR	AVE
Response (RE)	Eroglu et al. (2001)	4	0.87	0.765-0.821	0.835	0.56
Security/Privacy (SP)	Smith et al. (2011)	4	0.85	0.700-0.831	0.848	0.584
Payment (PA)	Gupta and Huang (2014)	4	0.88	0.736-0.857	0.864	0.615
Dis-confirmation of Information Quality (IQ)	Oliver (1980)	4	0.86	0.721-0.861	0.861	0.61
Dis-confirmation of Service Quality (SQ)	Parasuraman et al. (1988)	4	0.89	0.747-0.789	0.857	0.6
Dis-confirmation of Product Quality (PQ)	Oliver (1980)	4	0.9	0.667-0.852	0.845	0.58
Overall Satisfaction (OS)	Oliver (1997)	4	0.91	0.735-0.783	0.848	0.583
Customer Loyalty (CL)	Reichheld and Schefter (2000)	4	0.92	0.624-0.940	0.873	0.637

Note: CR = Composite Reliability, AVE = Average Variance Extracted

The fit indices for the model indicate an acceptable and robust model fit. The CMIN/DF ratio of 1.859 falls well below the acceptable threshold of 5.00 (Wheaton et al., 1977), suggesting an adequate fit between the model and the observed data. The GFI and AGFI are 0.917 and 0.900, respectively, both exceeding their acceptable criteria of ≥ 0.85 for GFI and ≥ 0.80 for AGFI (Sica & Ghisi, 2007), demonstrating that a significant portion of the covariance is explained by the model. Additionally, NFI of 0.909, CFI of 0.956, and TLI) of 0.950 all surpass the benchmark of 0.80 (Bentler, 1990; Sharma et al., 2005; Wu & Wang, 2006), indicating a strong comparative fit to a null model. RMSEA at 0.040 is well below the cutoff of 0.08, further confirming a close fit of the model to the data.

Discriminant validity in table 4 shows the inter-variable correlations and square root of AVE values (diagonal elements in bold). The square root of AVE for each construct is higher than the inter-construct correlations, confirming discriminant validity as per the Fornell-Larcker criterion (Fornell & Larcker, 1981). These results confirm that the constructs are distinct, indicating good discriminant validity.

Table 4: Discriminant Validity

Variable	Factor Correlations							
	RE	SP	PA	IQ	SQ	PQ	OS	CL
RE	**0.748**							
SP	0.129	**0.764**						
PA	0.169	0.134	**0.784**					
IQ	0.188	0.196	0.208	**0.781**				
SQ	0.041	0.046	0.096	0.071	**0.775**			
PQ	0.121	0.175	0.231	0.194	0.132	**0.762**		
OS	0.235	0.328	0.213	0.236	0.258	0.348	**0.764**	
CL	0.238	0.168	0.310	0.272	0.175	0.341	0.351	**0.798**

Note: The diagonally listed value is the AVE square roots of the variables

4.3 Structural Equation Model (SEM)

The structural model for male users achieves an acceptable fit, with indices of CMIN/DF = 2.224, GFI = 0.890, AGFI = 0.873, NFI = 0.886, CFI = 0.934, TLI = 0.928, and RMSEA = 0.047 confirming the validity of the proposed relationships. The results highlight the model's ability to explain the key factors influencing male users' satisfaction and loyalty.

Table 5: Goodness of Fit for Structural Model

Index	Criterion	Statistical Value
CMIN/DF	< 5.00 (Wheaton et al., 1977)	2.224
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.890
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.873
NFI	≥ 0.80 (Wu & Wang, 2006)	0.886
CFI	≥ 0.80 (Bentler, 1990)	0.934
TLI	≥ 0.80 (Sharma et al., 2005)	0.928
RMSEA	< 0.08 (Pedroso et al., 2016)	0.047

Note: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker Lewis index and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

The hypothesis testing results outline the significance and strength of the relationships among constructs within the structural model. Each hypothesis was assessed using standardized path coefficients and t-values, with all paths demonstrating significant effects at $p < 0.05$.

Table 6: Hypothesis Testing Result

Hypothesis	Standardized path coefficients (β)	t-value	Test Result
H1: RE → OS	0.192	4.147*	Supported
H2: SP → OS	0.287	5.999*	Supported
H3: PA → OS	0.109	2.483*	Supported
H4: IQ → OS	0.125	2.784*	Supported
H5: SQ → SS	0.251	5.380*	Supported
H6: PQ → SS	0.300	6.550*	Supported
H67 OS → CL	0.428	8.880*	Supported

Note: *=p-value<0.05

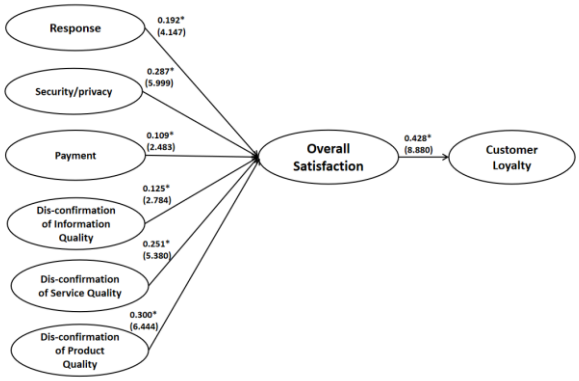

Figure 2: The Results of Research Framework
Note: Solid line reports the Standardized Coefficient with * as p<0.05, and t-value in Parentheses

The analysis results confirm the direct impact of all factors proposed response, security/privacy, payment, and disconfirmation of quality dimensions to overall male customers' satisfaction, which ultimately influences their loyalty in online shopping. These results support the study's theoretical framework, emphasizing the key elements that drive customer satisfaction and loyalty in e-commerce settings.

H1: Response has a direct impact on overall satisfaction of male customers as shown in standard coefficient at 0.192. Online businesses that respond quickly to customers are more likely to gain their trust, make them happy, and keep them returning for more (Hajli et al., 2017; Pavlou, 2011).

H2: Security/privacy of online shopping platform has a significant impact on overall satisfaction as shown in standard coefficient at 0.287. Yang et al. (2015) agrees that customers are more willing to use online payment if they feel the platform is safe and their personal information is protected. Keeping the payment information safe can make customers happier and more likely to stick with them.

H3: Payment significantly influences the overall satisfaction of online shopping customers as shown in standard coefficient at 0.109. Adopting an advanced payment solution for security and innovative features can enhance the overall shopping experience, leading to higher satisfaction and loyalty levels. The finding aligns with Chopra et al. (2019) and Gupta and Huang (2014).

H4: The disconfirmation of information quality impacts the overall satisfaction as demonstrated in standard coefficient at 0.125. This emphasized the necessity for online shopping platforms to continually assess and improve their data quality to meet and surpass customer expectations, thereby fostering long-term trust (Wang et al., 2013).

H5: The disconfirmation of service quality has direct influence on overall satisfaction of online shopping customer as shown in standard coefficient at 0.251. The

result has supported that high-quality service, characterized by responsiveness and problem resolution, significantly enhances customer satisfaction by effectively addressing their needs and concerns (Cheung, 2014; Collier & Bienstock, 2006).

H6: The disconfirmation of product quality is a crucial factor influencing overall satisfaction of male customer as shown in standard coefficient at 0.300. This result emphasizes that the quality of a product is important for customer happiness when shop online. The customers would rely heavily on product details, pictures, and reviews to know what to expect (Mudambi & Schuff, 2010).

H7: Overall satisfaction of male online shopping customers significantly influences loyalty as shown in standard coefficient at 0.428. The result proves that happy customers are likelier to keep using an online shopping site, even if other choices exist (Chen, 2015). Satisfaction ensures long-term customer loyalty in an online shopping (Reichheld & Schefter, 2000).

5. Conclusions and Recommendation

5.1 Conclusions

In conclusion, this study has successfully demonstrated the critical role that various constructs such as Response (RE), Security/Privacy (SP), Payment (PA), Information Quality (IQ), and Service Quality (SQ), play in shaping Overall Satisfaction (OS) and ultimately Customer Loyalty (CL). The Confirmatory Factor Analysis (CFA) results revealed strong factor loadings and high composite reliability (CR) for all constructs, indicating that the items used to measure these variables are reliable and valid. The structural equation modeling further confirmed that overall satisfaction is a central mediator in the relationship between these service quality dimensions and customer loyalty. The findings highlight that improving specific aspects like Payment and Information Quality could significantly enhance customer satisfaction, which in turn boosts loyalty. This indicates that businesses aiming to increase loyalty should focus not only on the efficiency of their response and service processes but also on ensuring secure transactions and high-quality information dissemination.

Compared to studies conducted in Western markets, where transaction convenience and brand reputation tend to be dominant drivers of loyalty (Anderson & Srinivasan, 2003), this study finds that in China's collectivist consumer culture, trust factors such as Security/Privacy and peer recommendations play a more prominent role (Hofstede, 2011; Wang & Yu, 2019). Similar research in emerging economies like India and Brazil has also shown that trust in digital payment systems and customer service responsiveness are critical for fostering loyalty (Gupta & Huang, 2014; Lu et al., 2020). The significant standardized path coefficient between Overall Satisfaction and Customer Loyalty in this study aligns with findings from South Korea's e-commerce market, where consumer loyalty is strongly tied to seamless digital payment experiences and product quality assurance (Kim et al., 2015).

These findings suggest that businesses operating in China should not only focus on service speed and transactional efficiency, as commonly emphasized in Western research, but also on ensuring data security, reliable product information, and culturally relevant engagement strategies to sustain customer trust and long-term loyalty. Future research could further expand cross-country comparisons to examine how regional e-commerce trends and variations in consumer expectations influence satisfaction and loyalty.

5.2 Recommendations

Based on the data, several strategic recommendations can be made to enhance customer satisfaction and loyalty, particularly in the context of China's regulatory and market environment. Strengthening payment security and consumer protection is critical, as platforms must ensure data encryption, fraud prevention mechanisms, and compliance with China's Cybersecurity Law to maintain consumer trust. Transparent privacy policies and adherence to the Personal Information Protection Law (PIPL) are essential to reducing regulatory risks and enhancing consumer confidence. Given the growing concern over misleading product descriptions and fake reviews (IQ), platforms should proactively implement AI-driven content verification systems to align with the State Administration for Market Regulation (SAMR) regulations and prevent fraudulent marketing practices. These policy-driven measures will ensure a more transparent and reliable e-commerce environment, reducing legal risks while improving customer trust.

From a managerial perspective, optimizing response efficiency and service quality is essential to retaining customers in a highly competitive market. Businesses should invest in AI-powered customer service tools, chatbot automation, and 24/7 multilingual live support to improve response time and problem resolution. The integration of real-time assistance, personalized customer interactions, and efficient service recovery mechanisms can significantly enhance consumer satisfaction and loyalty. Additionally, customer service teams should undergo regular training in conflict resolution, problem-solving, and proactive engagement, ensuring that service quality meets evolving customer expectations.

Payment efficiency remains a crucial driver of satisfaction, and platforms should focus on frictionless

digital transactions by optimizing integration with Alipay, WeChat Pay, and other secure payment gateways. Ensuring a fast, reliable, and fraud-resistant checkout process will reduce transaction failures, prevent cart abandonment, and boost consumer confidence. Furthermore, businesses should develop personalized loyalty programs and seamless refund/return policies to reinforce customer retention and trust in the platform.

As information quality significantly influences customer decisions, e-commerce platforms should implement AI-driven content verification and robust review authentication to ensure product descriptions, ratings, and customer reviews remain accurate and trustworthy. Addressing false advertising and misleading product claims through policy enforcement and transparent seller verification processes will further enhance consumer confidence. Regulatory bodies must continue to monitor compliance with fair advertising laws and consumer protection policies to uphold platform credibility.

With social validation playing a major role in purchasing decisions, platforms should expand social commerce features, such as live-streaming sales, influencer collaborations, and group-buying promotions. These strategies help build community trust, engagement, and long-term customer loyalty. Additionally, platforms should embed real-time feedback loops into their system, allowing users to report issues, suggest improvements, and directly influence service quality enhancements. Regulators should ensure that anti-monopoly policies and fair competition laws are upheld to maintain a balanced and consumer-friendly digital marketplace.

By proactively aligning business strategies with regulatory frameworks, platforms can enhance consumer trust, improve service reliability, and drive long-term loyalty in China's rapidly evolving e-commerce sector.

5.3 Limitation and Further Study

While this study provides valuable insights, it has several limitations. First, although the sample size was sufficient for the analysis, it may not fully represent the wider customer base across different industries or regions. The data was collected from a specific demographic, and the findings may differ when applied to more diverse populations. Additionally, the study focused on factors like Response, Security/Privacy, and Payment, which are relevant to the current context but may not account for all factors influencing customer satisfaction and loyalty in other sectors or cultural settings. The reliance on self-reported data also introduces potential biases, such as social desirability or inaccurate self-assessments, which could affect the validity of the results, especially for sensitive topics like Security/Privacy.

Future research could address these limitations by including more diverse samples across various industries and cultural contexts for broader generalizability. Exploring additional factors, such as emotional engagement or long-term brand loyalty, could provide deeper insights. Longitudinal studies could examine how satisfaction and loyalty change over time, especially in response to business improvements. Incorporating objective data, such as actual purchasing behavior or customer service interactions, could complement self-reported surveys for a more complete understanding. Finally, investigating the role of emerging technologies, such as artificial intelligence and personalized marketing, could offer valuable insights into enhancing customer satisfaction and loyalty.

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