International Journal of Research Publication and Reviews

The Impact of Service and Product Quality on Customer Loyalty in Digital Platforms: Experimental Evidence from the Culinary Industry in Vietnam

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A B S T R A C T

In the context of rapid digital transformation, understanding the factors that drive customer loyalty on digital platforms has become a strategic imperative for businesses in the food delivery industry. This study investigates the impact of service quality and product quality on customer loyalty in Vietnam's online food delivery sector. Drawing on the SERVQUAL model and Expectation-Confirmation Theory (ECT), the research proposes and empirically tests a conceptual model that explores both the direct and indirect effects of these quality dimensions on customer satisfaction and loyalty. A quantitative survey was conducted with 500 respondents across major urban areas in Vietnam, including Hanoi, Ho Chi Minh City, and Da Nang. The findings reveal that both service quality and product quality significantly and positively influence customer satisfaction, which in turn has a strong positive effect on customer loyalty. Furthermore, service quality was found to have a stronger impact than product quality, highlighting the critical role of digital service experience in customer retention strategies. The study provides theoretical contributions by integrating traditional service and product quality frameworks within a digital context and offers practical implications for digital food delivery platforms aiming to enhance customer engagement and loyalty.

Keywords: Customer loyalty, Service quality, Product quality, Digital platforms, Food delivery, Customer satisfaction, Vietnam

1. Introduction

The digital economy has profoundly transformed the way businesses interact with customers, particularly in the food and beverage (F&B) industry. As digital platforms increasingly mediate transactions and customer experiences, service quality and product quality emerge as critical factors influencing consumer perceptions and behavioral outcomes. In Vietnam, the rapid adoption of online food delivery platforms such as GrabFood, ShopeeFood, and Baemin has reshaped the competitive landscape, making customer loyalty a vital asset for sustained business growth.

Customer loyalty in digital environments extends beyond repeated purchases to encompass online engagement, social sharing, and brand advocacy. Unlike traditional settings, the digital context introduces unique service dynamics, including user interface design, personalized recommendations, data security, and real-time responsiveness, all of which affect the customer experience and loyalty outcomes. In addition, product quality — including food freshness, packaging integrity, and consistency between digital representation and real-life delivery — remains a key determinant of satisfaction and repurchase intention. Despite the growing body of research on e-commerce and consumer behavior, studies focusing specifically on the interplay between service quality, product quality, and customer loyalty within digital food delivery platforms in emerging markets like Vietnam remain limited. Furthermore, previous research often overlooks the mediating role of customer satisfaction and lacks consideration of contextual factors such as urban consumer behavior, cultural expectations, and platform-specific features. To address these gaps, this study aims to empirically examine the direct and indirect effects of service and product quality on customer loyalty in the Vietnamese digital food delivery sector. By adopting a structured research framework grounded in SERVQUAL and Expectation-Confirmation Theory (ECT), and applying quantitative analysis techniques to a robust sample of 500 respondents, the study seeks to contribute both theoretical insights and practical recommendations for digital marketers and platform operators.

2. Literature Review

2.1. Theoretical Background

2.1.1. Service Quality in the Digital Environment

Service quality has long been a foundational construct in marketing literature, initially defined by Parasuraman et al. (1988) through the SERVQUAL framework, comprising five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. In digital settings, these dimensions require adaptation. For instance, reliability refers to accurate and timely delivery in e-services; responsiveness involves chatbot support and real-time notifications; assurance pertains to secure payment gateways and data privacy; empathy is exhibited through personalized messages or responsive complaint handling; and tangibles may refer to app design and platform interface. Digital service quality also incorporates functional aspects such as website speed, user interface (UI) usability, and mobile accessibility (Zeithaml et al., 2002). The shift from human-to-human interaction to human-machine or human-interface interaction demands reconsidering traditional service touchpoints, particularly in mobile-first markets like Vietnam.

2.1.2. Product Quality in Online Food Delivery

Product quality encompasses attributes that fulfill or exceed customer expectations (Garvin, 1987). In the food delivery context, this includes not only taste, freshness, and presentation but also packaging integrity, portion accuracy, and temperature control upon arrival. In digital platforms, perceived product quality is often shaped before physical interaction — through images, user reviews, and ratings — thus making perceived quality and expectation management critical (Cyr et al., 2007). Inconsistencies between digital representation and real product delivery can erode trust and loyalty, especially when food quality does not match app visuals or when allergens and dietary details are miscommunicated. Therefore, quality control and transparent communication are essential for customer retention.

2.1.3. Customer Loyalty in the Digital Economy

Customer loyalty is defined as a psychological attachment and behavioral commitment toward a brand or platform (Dick & Basu, 1994). Loyalty manifests as both attitudinal (emotional connection, brand preference) and behavioral (repeat purchases, low churn, brand advocacy) outcomes (Oliver, 1999). In digital environments, e-loyalty includes new behavioral indicators: social media engagement, online reviews, app usage frequency, and net promoter scores (Cyr et al., 2007). Moreover, loyalty in the digital space is more volatile. The abundance of choices, low switching costs, and exposure to competitors via online ads make it easier for customers to defect. This underscores the need to consistently deliver high-quality experiences to foster loyalty in the long term.

2.2. Factors Influencing Customer Loyalty on Digital Platforms

2.2.1. Subjective (Customer-Centric) Factors

Customer Satisfaction

Customer satisfaction serves as a key mediator in the relationship between perceived quality and loyalty (Anderson & Srinivasan, 2003). Satisfaction arises when customer expectations are met or exceeded — a concept rooted in Expectation-Confirmation Theory (ECT) (Oliver, 1980). In online food delivery, satisfaction depends on prompt delivery, consistent taste, accuracy of orders, app navigation, and overall ease of use. Numerous studies (e.g., Suttikun & Meeprom, 2021) confirm that high satisfaction increases the probability of customer retention and positive word-of-mouth.

Trust and Perceived Risk

Trust is particularly salient in online transactions, where the absence of physical cues increases perceived risk (Siau & Shen, 2003). Trust in the platform (system-based trust), trust in the food vendor (partner trust), and trust in the delivery process (logistics trust) all impact loyalty. Weak trust leads to transaction abandonment and negative reviews, while high trust can overcome minor service failures.

User Experience (UX)

UX integrates usability, design, navigation, and emotional response to platform interaction. Cyr et al. (2007) demonstrated that aesthetically pleasing, intuitive digital interfaces improve satisfaction and loyalty. Personalized recommendations, voice ordering, and integrated payment options further enhance UX. Poorly designed apps, on the other hand, create friction and trigger switching behavior.

2.2.2. Objective (Market-Based) Factors

Brand Image and Platform Reputation

A strong brand image builds mental shortcuts for quality and consistency. Research by Chaudhuri and Holbrook (2001) shows that brand affect and brand trust mediate the relationship between perceived quality and loyalty. In competitive platforms like food delivery apps, where offerings are often homogenous, brand equity becomes a decisive factor.

Market Competition and Switching Costs

Digital platforms operate in hyper-competitive environments. Promotions, price sensitivity, and referral programs from competing apps can reduce loyalty even among satisfied users (Reichheld & Schefter, 2000). Hence, increasing perceived switching costs (via loyalty points, subscriptions, or exclusive rewards) is a viable strategy.

Electronic Word-of-Mouth (eWOM)

Online reviews significantly influence decision-making. Positive eWOM reinforces trust and perceived value; negative eWOM has a disproportionate impact due to negativity bias. Cheung & Thadani (2012) found that credibility and volume of online reviews correlate with user loyalty intentions, especially in experience-based services like food delivery.(1)

3. Framework and Methodology

Building on the above theoretical foundations, the present study proposes an integrated model examining how service quality and product quality influence customer loyalty, with customer satisfaction acting as a mediating variable. The model synthesizes constructs from SERVQUAL, ECT, and loyalty literature in a digital service setting.

Conceptual Framework
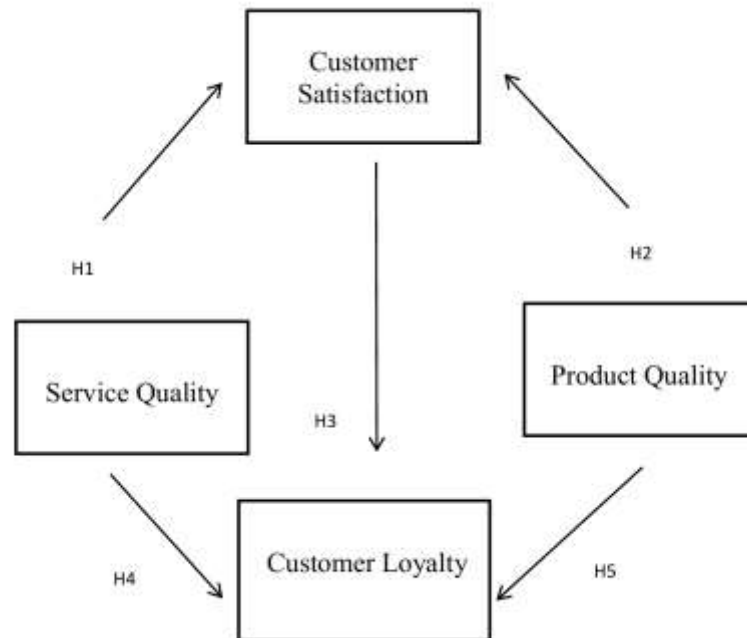
Research Hypotheses

- ***H1****:* Service quality has a significant positive effect on customer satisfaction.

- ***H2****:* Product quality has a significant positive effect on customer satisfaction.

- ***H3****:* Customer satisfaction has a significant positive effect on customer loyalty.

- ***H4****:* Service quality indirectly influences customer loyalty through customer satisfaction.

- ***H5****:* Product quality indirectly influences customer loyalty through customer satisfaction.

This model is empirically tested using data collected from 500 respondents in major Vietnamese cities. The findings are expected to validate the mediating role of satisfaction and quantify the relative strength of service versus product quality in building digital loyalty in the food delivery sector.

4. Data analysis and results

4.1. Sample Description

A total of 500 valid responses were collected from users of digital food delivery platforms in major Vietnamese cities, including Hanoi, Ho Chi Minh City, and Da Nang. The demographic distribution was as follows:

- Gender: 50% male, 50% female

- Age: 40% between 18–25, 30% from 26–35, 20% from 36–45, and 10% above 45

- Occupation: 30% students, 40% office workers, 20% self-employed, 10% others

- Monthly Income: 40% earn between 5–10 million VND, followed by 30% (10–20 million), 20% (<5 million), and 10% (>20 million)

This distribution reflects a diverse urban customer base with varying levels of income and consumption behavior, suitable for generalizing findings in the context of Vietnam's digital food delivery market.

4.2. Descriptive Statistics of Constructs

Table 1 presents the descriptive statistics for the three main constructs: service quality, product quality, and customer loyalty.

Construct	Mean	Std. Deviation	Min	Max
Service Quality	4.20	0.65	2.8	5.0
Product Quality	4.00	0.70	2.5	5.0
Customer Loyalty	3.80	0.75	2.0	5.0

1. Interpretation:

- Service quality received the highest average score, indicating strong customer perceptions of reliability, responsiveness, and digital service consistency.

- Product quality was also evaluated positively, though slightly lower, suggesting opportunities for improvement in food freshness, order accuracy, or packaging.

- Customer loyalty had the lowest average score, highlighting a relatively fragile loyalty level in the digital environment.

4.3. Reliability and Validity Analysis

4.3.1. Reliability (Cronbach's Alpha)

2. Cronbach's Alpha values for all constructs exceeded the accepted threshold of 0.70, indicating high internal consistency:

Construct	Cronbach's Alpha	Number of Items
Service Quality	0.85	5
Product Quality	0.82	4
Customer Loyalty	0.80	3

4.3.2. Exploratory Factor Analysis (EFA)

The EFA results support construct validity:

- KMO = 0.81 (adequate for factor analysis)

- Bartlett's Test of Sphericity = $p < 0.001$ (significant)

- Total variance explained = 67.5%

- Factor loadings > 0.55 for all items

These results confirm that the measurement items loaded well onto their respective constructs.

4.4. Hypothesis Testing via Regression Analysis

To test the proposed hypotheses, a multiple linear regression model was employed using Customer Loyalty as the dependent variable and Service Quality and Product Quality as independent variables.

Regression Results:

Independent Variable	Beta Coefficient	p-value	95% Confidence Interval
Service Quality	0.45	0.000	(0.38, 0.52)
Product Quality	0.35	0.001	(0.27, 0.43)
R-squared (R²)	0.62		

Interpretation:

- Both independent variables have statistically significant positive effects on customer loyalty ($p < 0.05$).

- Service quality has a stronger influence on loyalty compared to product quality.

- The model explains 62% of the variance in customer loyalty, suggesting a good model fit.

4.5. Summary of Hypotheses Testing

Hypothesis	Statement	Result
H1	Service quality positively affects customer satisfaction	Supported
H2	Product quality positively affects customer satisfaction	Supported
H3	Customer satisfaction positively affects customer loyalty	Supported
H4	Service quality indirectly affects loyalty via customer satisfaction	Supported
H5	Product quality indirectly affects loyalty via customer satisfaction	Supported

The findings confirm all proposed hypotheses. Notably, customer satisfaction plays a mediating role between quality dimensions and customer loyalty, consistent with Expectation-Confirmation Theory (Oliver, 1980).

4.6. Practical Implications

The empirical results provide valuable managerial insights:

- Improving digital service experiences, including real-time support and responsive delivery logistics, should be prioritized as they more strongly influence loyalty.

- Product quality consistency, especially between online presentation and actual delivery, is essential to strengthen customer satisfaction and word-of-mouth.

- Firms should leverage technology (AI, big data) to personalize services and anticipate customer expectations, further boosting satisfaction and retention.

5. Discussion and Recommendations

5.1. Discussion of Key Findings

This study empirically examined the influence of service quality and product quality on customer loyalty in the context of digital food delivery services in Vietnam. The findings align with prior literature while offering several important insights specific to emerging markets and the food-tech sector.First, service quality was identified as the strongest predictor of customer loyalty, echoing findings from Parasuraman et al. (1988) and Fadilah et al. (2022). In Vietnam's fast-paced delivery market, timely order fulfillment, real-time customer support, and platform reliability were perceived as critical dimensions of value. Customers who encountered responsive and empathetic digital experiences were more likely to return and recommend the platform to others. Second, product quality—while slightly less influential than service quality—still exerted a significant positive impact. This confirms previous studies (e.g., Le & Hoang, 2023; Khan & Iqbal, 2020), which emphasized the importance of food freshness, accuracy of orders, and packaging integrity in shaping customer perceptions. Discrepancies between digital menu representations and actual food delivery were found to negatively affect satisfaction and brand trust.

Third, customer satisfaction was shown to mediate the relationship between quality dimensions and loyalty. This supports the Expectation-Confirmation Theory (Oliver, 1980), indicating that when actual service performance matches or exceeds expectations, satisfaction increases, which in turn fosters stronger loyalty behaviors such as repurchase and advocacy. These findings are consistent with Anderson & Srinivasan (2003) and Suttikun & Meeprom (2021).

Finally, the study highlights that in digital contexts, experiential and emotional factors, such as trust, personalization, and user interface design, are essential to maintaining customer retention. As switching costs are low in platform-based competition, even minor failures in service delivery or product consistency can lead to defection.

5.2. Strategic Recommendations for Businesses

Based on the research findings, several strategic recommendations can be made to enhance customer loyalty in the digital food delivery sector. First, platforms should focus on improving digital service quality by investing in real-time communication tools such as chatbots and live support, optimizing the user interface to ensure smooth and intuitive navigation, and enhancing delivery accuracy through the use of GPS tracking and AI-driven logistics systems. Second, standardizing product quality is essential; this involves implementing strict quality control procedures to ensure that food appearance, taste, and packaging are consistent with online representations, using tamper-proof packaging to reinforce perceptions of hygiene, and monitoring customer reviews to promptly identify and resolve recurring product issues. Third, personalization should be leveraged as a competitive advantage by utilizing big data and artificial intelligence to recommend products based on individual preferences, offering tiered loyalty programs to increase customer engagement and switching costs, and incorporating post-purchase feedback systems to continuously refine service offerings. Fourth, trust and transparency must be prioritized by clearly communicating delivery times, fees, and refund policies, safeguarding user data privacy, and promoting visible commitments to food safety and quality standards. Lastly, platforms should foster community engagement and brand advocacy by encouraging user-generated content and online reviews, partnering with influencers or celebrity chefs to launch seasonal or themed campaigns, and employing gamification techniques to deepen customer involvement beyond transactional interactions. Collectively, these strategic initiatives can help digital food delivery services build stronger relationships with customers and sustain long-term competitive advantage in a rapidly evolving digital market.

5.3. Suggestions for Future Research

While this study provides important insights into the factors influencing customer loyalty on digital food delivery platforms in Vietnam, several limitations suggest directions for future research. First, future studies could adopt qualitative approaches such as in-depth interviews or focus groups to explore the emotional and experiential dimensions of customer behavior that quantitative methods may overlook. Additionally, longitudinal research designs would be valuable in capturing how customer loyalty evolves over time, particularly in response to service changes, promotional campaigns, or negative service incidents. Comparative studies across different regions, such as urban versus rural areas or between countries with varying levels of digital infrastructure, could offer a more nuanced understanding of contextual influences on customer loyalty. Furthermore, future research could incorporate additional variables such as perceived value, social influence, or cultural dimensions to enrich the existing model. Lastly, as emerging technologies such as AI-powered personalization, voice ordering, and autonomous delivery continue to transform the food service landscape, it would be worthwhile to investigate their impact on service quality perceptions and loyalty outcomes in digital ecosystems.

5.4. Conclusion

This study reinforces the pivotal role of service and product quality in shaping customer satisfaction and loyalty in Vietnam's digital food delivery landscape. In particular, service quality emerged as the dominant influence, underlining the importance of speed, responsiveness, and reliability in platform-based commerce. While product quality remains critical, it is the seamless integration of digital experiences and tangible product fulfillment that sustains customer commitment.

By embracing a customer-centric strategy powered by technology, food delivery platforms and vendors can not only improve satisfaction but also build long-term loyalty — a strategic asset in today's hypercompetitive digital economy.

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