International Journal of E-Business Research
Volume 21 • Issue 1 • January-December 2025

Transforming Habits Into Loyalty--Improving User Experience in Bike-Sharing Systems

Chao-Chung Ho
https://orcid.org/0000-0001-9423-2520
School of Mathematics and Statistics, Shaoguan University, Guangdong, China

Chih Huang
https://orcid.org/0000-0002-0822-7723
Business School, Shaoguan University, Guangdong, China

ABSTRACT

In real life, the operation of bike-sharing relies on users' habits. Consequently, bike-sharing platforms need to enhance customer satisfaction regarding service quality and foster customer loyalty towards the platform. This study adopts the questionnaire survey method. Taking the E-SERVQUAL scale as a framework and integrating the characteristics of the bike-sharing platform as well as the usage process, a questionnaire for evaluating the service quality of the bike-sharing platform under the two-dimensional Kano quality model is designed. Through this questionnaire, the service quality elements of the bike-sharing platform from the perspective of customers are examined, and the categorization of these quality elements is carried out. Based on these findings, relevant suggestions are put forward for the bike-sharing platform, along with suggestions for cultivating customers' habits to strengthen their intention to continuously use the service.

KEYWORDS

Bike-Sharing, E-Business, Kano Model, Service Quality, Sharing Platform

INTRODUCTION

The rapid development of the internet industry has significantly reduced transaction costs among participants (Frenken & Schor, 2019), making business transactions—such as purchasing goods and providing services—more convenient. A notable phenomenon arising from this context is the sharing economy (SE) (Wu, 2017). This model gained attention after the 2007–2008 financial crisis, as people reconsidered consumption patterns and ownership amidst environmental, social, and financial challenges (Böcker & Meelen, 2016). Advancements in network technology, particularly the rise of mobile devices and electronic services, further fueled this shift. The growth of internet technology has led to the rapid emergence of mobile-based business platforms offering digital services (Puschmann & Alt, 2016), reshaping consumer behavior and revealing new needs.

The SE originally centers on information technology-based platforms provided by third parties. These platforms allow users to rent idle resources, optimizing allocation and generating returns (Chang, 2018). The model, now globalized and diversified, spans industries such as transportation with Uber and Lyft, retail through Peerby and Shareyourmeal, hospitality via Airbnb and Couchsurfing,

DOI: 10.4018/IJEBR.383731

entertainment with Spotify and Deezer, finance through Kickstarter and Indiegogo, energy via Mosaic and Solar Share, and human resources with TaskRabbit and Sorted.

Wireko-Gyebi et al. (2024) argued that the SE has fundamentally transformed business operations, particularly through e-hailing transport services. Their study highlighted that customer satisfaction significantly impacts loyalty among e-hailing users. Individual dimensions of service quality and broader service quality models were found to play key roles in shaping user satisfaction, which in turn fosters continued use and recommendations of e-hailing services. Blut and Wang (2025) emphasized the need to explore why certain sharing platforms attract participation. Their research identified critical customer-related factors—such as motives, competence, satisfaction, and subjective norms—as key antecedents driving engagement in sharing platforms under specific conditions.

Value creation in the SE arises from synergy between supply and demand participants. Digital platforms enable suppliers to optimize resource allocation by monetizing idle assets or sharing intangible ones. Consumers, via platform intermediaries, access resources conveniently. These platforms reduce transaction costs by connecting buyers and sellers, profiting from exchange facilitation. Bike-sharing has rapidly developed in China, embodying green and collaborative concepts. Bicycles, supplied by governments or private firms, are offered for short-distance commuting—either freely or at low rental rates. This reduces pollution, traffic congestion, noise, and air contamination (Wu, 2017). China Internet Network Information Center. (2018). The 42nd statistical report on internet development in China. CNNIC. showed that, by June 2018, bike-sharing users reached 245 million, comprising 30.6% of internet users. There was an 11.0% half-year growth, with an increase of 24.32 million users (Wu, 2017). In 2022, the *Sharing Economy Blue Book* estimated 30 million daily orders for rental bikes. The China Sharing Economy Development Report (2023) revealed that the market transaction size reached RMB 383.2 billion in 2022, reflecting a 3.9% year-on-year growth.

OFO debuted at Peking University in late 2014, marking the beginning of China's bike-sharing market. The industry boomed in 2016, with companies like Meituan Bike, Hellobike, Xiaoming Bicycle, and Ubike competing intensely. By 2023, market consolidation left three dominant players: Meituan Bike, Hellobike, and DiDi Bike. Despite bike-sharing's popularity in China, quality issues persist. High bicycle failure rates, uneven parking distribution, and unclear deposit destinations remain challenges (Zuo, 2018). Bike-sharing services rely on the internet and mobile apps for rentals, emphasizing customer interaction with electronic platforms. Digital consumer behavior differs from physical-world behavior, making it critical for providers to address customer needs effectively in online environments (Iliachenko, 2006; Zuo, 2018).

Giuffrida et al. (2023) emphasized that bike-sharing services contribute significantly to sustainability efforts, while Park et al. (2022) identified a nonlinear relationship between rising air pollution levels and the number of cyclists. A key operational and marketing strategy for bike-sharing companies is to optimize their electronic service (e-service) platforms to seamlessly integrate people, processes, technology, and business activities. This ensures responsiveness to customer needs and the delivery of high-quality e-service. By leveraging the Internet and smartphone connectivity, companies can enhance customer satisfaction and loyalty, reduce costs, and ultimately improve profitability (Al-Momani & Noor, 2009).

Numerous studies highlight the growing recognition among online companies of the need to deliver high-quality electronic services (Yang & Jun, 2002; Zeithaml et al., 2002). Simultaneously, more consumers are willing to pay premium prices for excellent e-service (Schneider, 2002). Previous bike-sharing research has largely focused on business models (Lou, 2017), profitability (Ge, 2017), and facility management (Tan, 2018). However, studies assessing electronic service quality (e-SQ) remain scarce. For bike-sharing practitioners, stable user growth, along with enhanced customer satisfaction and loyalty regarding e-commerce service quality, is essential for long-term profitability. This study adopts a customer-oriented approach to construct an evaluation index for bike-sharing e-commerce service quality. Using the two-dimensional Kano quality model, it categorizes service attributes