Service Analysis of Delivery Services in the E-Commerce Era Based on the SERVQUAL Method in Bogor Regency

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Abstract. The rapid growth of e-commerce in Indonesia has led to a significant surge in demand for delivery service providers, accompanied by escalating customer expectations for service quality. This study, conducted in Bogor Regency, aims to identify gaps between customer expectations and perceptions of delivery service quality and to develop improvement solutions based on the SERVQUAL method. Employing a qualitative case study approach, data was collected through semi-structured interviews, passive participant observation, and documentation. The theoretical framework utilized is the SERVQUAL model, encompassing five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Analysis reveals the most significant gaps in reliability and responsiveness. These findings are corroborated by interview and observation data, highlighting customer complaints regarding delivery delays, lack of clear chronological information during issues, and insufficient contact details for problem resolution. Based on these critical findings, several solutions are formulated, including an automatic delivery proof verification system, real-time notifications for delay causes, integrated tracking systems with specific issue detection, and comprehensive, responsive service information. These solutions are tailored to the specific conditions in Bogor Regency and are expected to provide strategic recommendations for delivery service providers to enhance service quality in the e-commerce sector.

Keywords: E-Commerce, Delivery Service, SERVQUAL.

1 Introduction

Development of information technology has encouraged a shift in business activi-ties toward the digital space, including within the e-commerce sector [1]. Indonesia is projected to record the highest e-commerce growth rate in the world in 2024, reach-ing 30.5% [2]. This growth has led to an increase in demand for delivery services, while simultaneously presenting challenges in maintaining service quality. Surveys indicate that the primary factors influencing consumers in selecting courier services are affordable pricing, proximity of the expedition agent's location, and ease of prod-uct returns[3][4][5]

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Consumer complaints, in contrast, are primarily associated with missing packages, delivery delays, and damaged goods [6]. In a highly competitive environment with low customer loyalty, delivery service providers must understand consumer preferences in order to retain their customers. To help us understand the actual challenges faced by delivery services in the field, it is important to recognize the geographical conditions of areas with high e-commerce activity. The higher the e-commerce activity in a region, the greater the demand for delivery services. This high demand also creates several challenges. By understanding the regions actively using e-commerce, companies can more easily adjust their delivery services based on actual field needs. The research focuses on e-commerce customers aged 18–35 years in Bogor Regency, the region with the highest number of users e-commerce [7][8]

The research applies the SERVQUAL method to analyze the gap between customer expectations and perceptions of delivery service quality. The objectives of this research are to identify the gaps between customer expectations and perceptions regarding the quality of delivery services in Bogor Regency, to analyze the implementation of the SERVQUAL method in developing effective strategies for service quality improvement within the delivery service industry, and to recommend appropriate service enhancement solutions based on the SERVQUAL approach tailored to the specific conditions of Bogor Regency.

2 Methodology

This study was conducted from February to June 2025 in Bogor Regency, one of the regions with the largest number of e-commerce users in West Java. This study employed a qualitative research approach using a case study design. Data collected through semi-structured interviews, passive participant observation, and documentation. These methods were combined with triangulation techniques to enhance data validity. This research focuses on three main components: place, actor, and activity. The research was conducted in Bogor Regency, a region with a high level of e-commerce activity and a large population actively using delivery services. The informant involved were customers engaged in e-commerce transactions, acting as both buyers and sellers. The observed activities included the overall delivery service process, starting from order placement by buyers, order processing by sellers, pick-up and delivery by courier services, to the receipt of goods by customers. These activities were analyzed using the SERVQUAL approach to identify the gaps between customer expectations and their perceptions of the actual services received.

3 Results and Discussion

Service Gap Identification

This study employed the SERVQUAL model to analyze the service quality gaps in delivery services for e-commerce transactions in Bogor Regency, Indonesia. Service quality was assessed through five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Data were collected using semi-structured interviews, passive

participatory observations, and document studies involving six informants: e-commerce buyers and sellers.

The gap analysis revealed that the most significant service gaps occurred in the reliability and responsiveness dimensions. In the reliability dimension, delays in package delivery beyond the estimated time promised via e-commerce platforms were frequently reported. Customers expressed dissatisfaction over unnotified delays even though there is compensation in the form of a shopping voucher for the issue. These findings are consistent with the results of Darojah [19], who identified the reliability dimension as the primary service gap in the official bus agent services Patas AC/Executive PO. Ramayana Trayek Semarang-Magelang-Jogja.

In the responsiveness dimension, gaps emerged from limited accessibility to real-time tracking features and insufficient problem-handling responsiveness from customer service. Informants often encountered difficulties when contacting customer service, as they have to wait from 1x24 hours up to 3x24 hours for a response. Similar issues were observed regarding delayed responses and the lack of proactive notifications concerning delivery problems. Similarly, the results align with the study conducted by Widowati et al.[20],which revealed that the responsiveness dimension represented the largest service gap at PT SiCepat Ekspres Campaka Purwakarta.

Dimensions such as assurance, empathy, and tangibles demonstrated satisfactory performance. Customers perceived good vehicle condition, polite and helpful delivery staff, and proper packaging using protective materials like bubble wrap and sturdy boxes as adequately met their expectations.

SERVQUAL-Based Service Improvement Analysis

Based on the gaps identified in the 5 dimensions of SERVQUAL, this research proposed improvement solutions targeting the reliability and responsiveness dimensions, as these dimensions have gaps.

The reliability dimension, the data revealed two primary issues, inaccurate delivery addresses and delays in shipment. Based on the identified service gaps, the proposed solutions focus on two main strategies, that is strengthening the address validation system during the delivery process and integrating real-time notifications that inform customers of the causes of delivery delays. These solutions are relevant to the study conducted by Darojah [19], which emphasized the importance of timely information dissemination in passenger transportation services. The difference lies in the delivery mechanism. While information regarding delays in passenger transport is conveyed directly to passengers at the location, in the context of delivery service, delay notifications are provided through the e-commerce application.

The responsiveness dimension, the data indicated two key issues, the tracking system's inability to detect delivery problems and status updates that failed to address the root causes of delays. Based on these identified service gaps, the proposed solutions focus on integrating the tracking system with problem descriptions when issues occur, as well as providing more detailed tracking information accompanied by direct contact access to the relevant service center. These recommendations are in line with the findings of Tjandra et al. (2023), which highlighted the importance of prompt staff responsiveness to customers. The implementation differs, Tjandra's research addressed direct, in-person service interactions in a salon setting, this research proposes

responsiveness through an e-commerce application's integrated tracking feature, equipped with contact details for responsible service personnel, thereby eliminating customer waiting time for central customer service responses.

4 Conclusion

This research concludes that significant service quality gaps exist between customer expectations and their perceptions of delivery services in e-commerce transactions within Bogor Regency, particularly in the dimensions of reliability and responsiveness. These gaps are evident in delivery timeliness issues and insufficient clarity provided to customers when problems occur during the delivery process. Through the application of the SERVQUAL method, the study effectively identified areas of service performance requiring improvement and developed tailored solutions aligned with actual operational conditions. The findings indicate that improving reliability through an automatic delivery proof verification system and real-time delay notifications, as well as enhancing responsiveness by integrating tracking features with specific problem detection and providing direct contact access to service centers, are crucial steps in addressing customer concerns. These digital service enhancements are expected to reduce complaints, improve customer satisfaction, and strengthen the competitive positioning of logistics companies in the increasingly dynamic e-commerce market.

References

1. Krisnahadi, T., and B. Septiaka. "Pengaruh Kualitas Pelayanan Dan Kepuasan Konsumen Terhadap Loyalitas Konsumen Pada Jasa Kurir PT. 'X' Cabang Mataram." *Jurnal Ilmiah Sangkareang Mataram*, vol. 9, no. 3, 2022, pp. 38–42.
2. Santika. "ECDB: Proyeksi Pertumbuhan e-Commerce Indonesia Tertinggi Sedunia pada 2024." *Databoks*, https://databoks.katadata.co.id/.
3. Bayu, D. "Survei MarkPlus: Frekuensi Penggunaan Jasa Kurir Meningkat saat Pandemi." *Databoks*, https://databoks.katadata.co.id/.
4. Statista. "Most Preferred Benefits When Purchasing Online in Indonesia as of February 2022." *Statista*, https://www.statista.com/.
5. Naurah. "Sederet Layanan Jasa Ekspedisi untuk Belanja Online Pilihan Gen Z di 2023." *GoodStats*, https://goodstats.id/.
6. Rizati, M. "Perusahaan Jasa Ekspedisi dengan Aduan Konsumen Terbanyak (2021)." *Databoks*, https://databoks.katadata.co.id/.
7. Kredivo. "Laporan Perilaku Konsumen e-Commerce Indonesia 2023." *Kredivo*, https://kredivocorp.com/.
8. BPS. *Statistik E-Commerce 2023*. 2023.
9. Handayani, S., D. Isnaini, and N. Afrianty. "Strategi Pelayanan untuk Meningkatkan Kepuasan Konsumen Ditinjau dari Etika Bisnis Islam (Pada Toko My Lova Kota

Bengkulu).” *Jurnal Ekombis Review*, vol. 11, no. 2, 2023, pp. 1467–1476. https://doi.org/10.37676/ekombis.v11i12.
10. Cahyono, A. “Studi Kepustakaan Mengenai Kualitas Pelayanan terhadap Kepuasan Pasien Rawat Jalan di Rumah Sakit.” *Jurnal Ilmiah Pemenang*, vol. 2, no. 2, 2020, pp. 1–6. https://doi.org/10.53599.
11. Mariam, I., E. Wartiningsih, N. Sofa, and N. Latianingsih. “Optimalisasi Manajemen Pelayanan Staf Administrasi dalam Meningkatkan Kualitas Pelayanan Organisasi.” *Seminar Nasional Inovasi Vokasi*, vol. 2, no. 1, 2023.
12. Agustiani. “Sistem Informasi Ekspedisi Jasa Pengiriman Barang pada CV. Mandiri Trans Berbasis WEB.” *Skripsi, Universitas Semarang*, 2021.
13. Hervija, J. “Manajemen Jasa Pengiriman Barang di J&T Express Lamnyong Cabang Syiah Kuala Kota Banda Aceh.” *eSkripsi, Universitas Negeri Ar-Raniry*, 2023.
14. Handika, D. Wibawa, and Sumar. “Analisis Perbandingan Service Quality antara Jasa Pengiriman J&T Express dan JNE Express di Kecamatan Tempilang Kabupaten Bangka Barat.” *Jurnal Akuntansi Hukum dan Edukasi*, vol. 1, no. 2, 2024, pp. 302–311. *Top Brand Award*, www.topbrand-award.com.
15. Putri, T., and H. Riofit. “Artikel Strategi Pemasaran E-Commerce untuk Memaksimalkan Pertumbuhan Bisnis.” 2024.
16. Tukino, D. Abdullah, M. Amalia, Y. Supriadi, and T. Winarko. *Strategi Bisnis E-Commerce*. Yayasan Kita Menulis, 2023.
17. Yusuf, M., Sutrisno, A. Putri, M. Asir, and P. Cakranegara. “Prospek Penggunaan E-Commerce terhadap Profitabilitas dan Kemudahan Pelayanan Konsumen: Literature Review.” *Jurnal Darma Agung*, vol. 30, no. 1, 2022, pp. 786–801.
18. Tjiptono, F., and G. Chandra. *Service Quality & Customer Satisfaction*. 5th ed., ANDI, 2019.
19. Darojah, R. “Analisis Dimensi SERVQUAL untuk Meningkatkan Kepuasan Pelanggan.” *eSkripsi, Universitas Semarang*, 2020.
20. Widowati, I., K. I. Pratiwi, and D. A. Hermawan. “Analisa Kualitas Pelayanan Jasa Pengiriman Barang dengan Metode SERVQUAL di PT Sicepat Ekspres Campaka Purwakarta.” *Journal of Management and Industrial Engineering*, vol. 2, no. 1, 2023.

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