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LOGISTICS TRANSFORMATION IN INDONESIA FOR THE E-COMMERCE MARKET INDUSTRY

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ABSTRACT

Logistics in e-commerce is essential for efficient product delivery. Still, it faces challenges such as high shipping costs, inconsistent human resource performance, lack of transparency, and the need for improved efficiency. This thesis explores these challenges and strategies to enhance e-commerce supply chain efficiency. The study examines factors affecting e-commerce logistics performance, including shipping costs, service quality, and technological advancements, by reviewing relevant literature. Using case studies, surveys, and qualitative analysis, the research identifies effective strategies for improving logistics efficiency. Key findings highlight the benefits of focusing on the final delivery stage, adopting Forward Fulfilment, choosing appropriate third-party logistics (3PL) providers, and fostering industry collaboration. Specifically, Forward Fulfilment optimizes human resources by 20%, improves warehouse cost efficiency by 78%, and reduces shipping costs by 65% to Surabaya and 80% to Medan. These insights offer practical guidance for e-commerce companies and logistics providers to enhance performance and thrive in a competitive market.

1.0 Introduction

In a world increasingly connected through the internet, the concept of electronic commerce, or e-commerce, has become the backbone of buying and selling activities. This is no longer a new phenomenon, especially in the current era of information technology [1]. During the COVID-19 pandemic, e-commerce has further surged in popularity as the primary means of transaction [2], and in 2024, Indonesia has shown significant growth, as illustrated in Figure 1

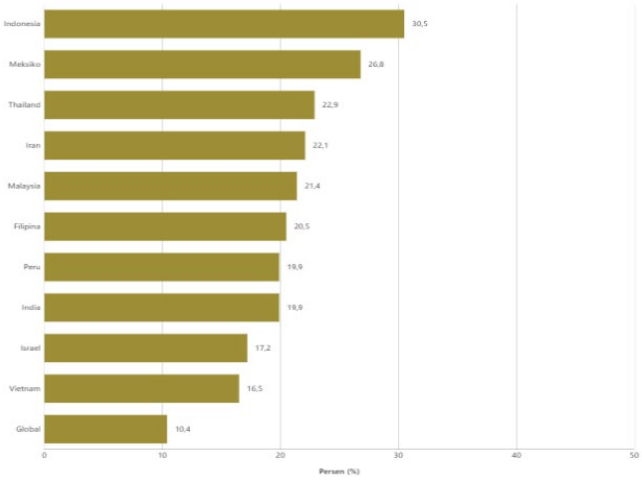

Figure 1. Projection of Indonesia's e-commerce growth as the highest in the world by 2024

Source: Databoks (2024)

According to the German e-commerce research institute, ECDB, Indonesia is projected to experience the highest e-commerce growth in 2024. With a growth rate of 30.5%, this projection far exceeds the global average of just 10.4%. Mexico ranks second in global e-commerce growth projections with a growth rate of 26.8%, while Thailand is in third place with a growth rate of 22.9%.

However, along with the rise of e-commerce in Indonesia, one of the dilemmas faced in the e-commerce business is how to deliver products to customers in a timely and flawless manner optimally. Logistics often becomes the primary concern in the e-commerce industry, especially when online shopping volumes peak during annual campaigns or large-scale promotions. Efficient and effective order processing is a major challenge that e-commerce players must address to enhance the overall shopping experience for their customers.

Moreover, the increasing volume of e-commerce transactions adds pressure to the existing logistics systems. In an effort to meet customer expectations for faster deliveries, e-commerce companies and third-party logistics (3PL) providers need to continuously innovate and improve operational efficiency [3].

Survey data indicates that 35% of consumers still consider delivery issues as the main challenge in their e-commerce experience. Over 90% of complaints and negative feedback received from customers relate to delivery delays or lack of communication about delivery status.

Indonesia's logistics GDP is at 24%, significantly higher compared to developed countries such as Singapore and the United States, which are both at 8%. As an archipelago, Indonesia's geographical conditions impact its logistics performance.

The consequence of all these factors is the high shipping costs. For example, shipping from Jakarta to several major cities is quite expensive because there are no express delivery service providers that have established fulfillment centers in various major cities in Indonesia. As a result, shipping costs borne by users are quite high, and they have to wait several days for their items to arrive.

SLAs are formal agreements between service providers and their clients that specify the expected standards of service performance[4]. The management of SLAs empowers service providers to deliver various levels of service assurances, setting them apart from their competitors. Consequently, 3PLs need to ensure their services meet and even exceed the predefined SLAs[5].

Therefore, a comprehensive study is needed on the role and transformation of the logistics industry, particularly in the context of express delivery services. The trend of digitalization in business sectors and delivery services is increasing the demand for this logistics industry. Hence, the author has chosen the topic titled

"LOGISTICS TRANSFORMATION IN INDONESIA FOR THE E-COMMERCE MARKET INDUSTRY."

2.0 Literature Review

According to [6] e-commerce refers to the distribution, purchase, sale, and marketing of goods and services through electronic systems such as the internet, television, the World Wide Web (WWW), or electronic data exchange networks. It involves the use of automated inventory management systems and automated data collection systems to facilitate electronic transactions.

According to Peter dan Olson As cited by [7] define electronic commerce or e-commerce as the process of exchanging information, money, and prices between buyers and sellers through electronic means, particularly via the internet.

2.2 Logistic Service Quality

Logistics Service Quality (LSQ) is a crucial aspect of logistics services that focuses on providing consumers with information about the goods they have ordered, such as the condition of the goods, delivery time, delivery satisfaction, and the reliability of the shipper to enhance consumer satisfaction. LSQ serves as a mediator between logistics capacity and consumer satisfaction, where consumer satisfaction is achieved when the goods are received in good condition; otherwise, returns may occur. The quality of logistics services is determined by the interactions among various logistics service providers[8].

According to research [9], LSQ is determined by several factors, including the quality of contact personnel (interaction between consumers and personnel), order conditions (the condition of goods upon delivery), timeliness, handling of order discrepancies (response to damages or shipping errors), and the sharing of operational information in logistics services (information regarding both internal and external logistics

activities). Other factors include consumer quality obsession, order fulfillment quality, timeliness, information quality, responsibility, and the company's reputation.

2.3 Logistics Transformation

Transformation refers to a structural change that occurs gradually and comprehensively, and it is irreversible. Transformation is the process of changing from an old form to a new one. Traditional logistics delivery methods are often inefficient and have a negative impact on the environment, making them unsustainable. Therefore, the shift towards sustainable logistics networks becomes crucial. This change involves the adoption of new technologies, improvements in supply chain management, and adjustments in policies and operational practices focused on sustainability [10]. Logistics plays a crucial role in a company's supply chain by managing the flow of materials from suppliers to customers and overseeing the movement of work-in-progress materials within the company[11].

3.0 Methodology

This research employs a qualitative research methodology. The selection of the qualitative method in this study is intended to examine the scientific object conditions more deeply and comprehensively. By using a qualitative approach, the data obtained is expected to be more complete, in-depth, credible, and meaningful [12].

The data sourced in this research consists of primary and secondary data. According to [13] Primary data is obtained through interviews and the distribution of questionnaires, while secondary data is gathered from various sources such as books, journals, annual reports, literature, and other related documents relevant to the research topic.

The data analysis technique used in this study refers to the theory adopted from [14]. The data analysis process in qualitative research encompasses several stages: interview transcription, data reduction, data analysis and interpretation, and triangulation. During the interview transcription stage, all conversations that occurred during the interviews are rewritten in text form. In the data reduction stage, raw data obtained from the field are selected, focused, simplified, and transformed. The reduced data are then analyzed and interpreted to identify patterns, themes, and meaningful relationships. Finally, the triangulation technique is employed to check the validity of the data by comparing data from various sources or different methods to ensure consistency and accuracy of the research findings.

4.0 Result and Discussion

The findings and results of this research were obtained using qualitative analysis techniques, which included conducting several interviews with experts, direct observations, and support from other relevant and related studies.

4.1 E-commerce Logistics Challenges

This research identifies several key challenges in e-commerce logistics in Indonesia that affect the efficiency and effectiveness of services, as supported by studies by [15]. These challenges are:

a. High Delivery Cost

Last-mile delivery is a crucial aspect of e-commerce logistics due to its high shipping costs, accounting for approximately 28% of the total shipping expenses. The demand for same-day delivery also increases costs, especially during purchase spikes during holiday seasons.

b. Human Resources

The performance of human resources in logistics remains a problem. Couriers often lack of understanding of SOPs and exhibit unprofessional behavior, while operational staff generally have insufficient knowledge about e-commerce logistics processes and the technologies required for work optimization.

c. Lack of Transparency

Transparency in tracking goods is still inadequate. Consumers desire real-time visibility of their items' location. Although some companies have made efforts to provide tracking codes, this is still insufficient to meet modern consumer expectations.

d. Lower Efficiency Level

Consumers drive the need for increased efficiency in e-commerce logistics, including demands for faster deliveries. On-demand business models require very rapid delivery, which intensifies the pressure for high efficiency throughout the supply chain.

To address these challenges, cooperation between logistics service providers, enhancement of human resource skills and professionalism, and the implementation of better technologies are necessary to improve transparency and efficiency.

Study case:

Price competition can be a significant challenge for companies aiming to capture market share. However, by focusing on differentiation, building brand loyalty, offering value-added services, nurturing partnerships, and developing pricing strategies, companies can avoid price wars and remain competitive in the market. In the research conducted on 3PL shipping prices in the e-commerce industry across three major cities in Indonesia (Jakarta, Medan, and Surabaya), the researcher obtained data on varying shipping costs and Service Level Agreements (SLAs).

It can be concluded that many efforts by the research subjects involve offering different shipping costs to lower prices and compete for e-commerce logistics market share. The shipping costs for the three cities (Jakarta, Medan, and Surabaya) are as follows:

A. Jakarta – Jakarta

Table 1. Jakarta - Jakarta.

3PL Provider	Delivery Cost (Rp)	SLA (Day)
JNE	10.000	1-2
J&T	8.000	1-2
Lion Parcel	7.500	1-2
TIKI	9.000	2

SiCepat	11.500	1-2
AnterAja	11.500	1-2
POS	7.000	2
Ninja	7.500	1-2
LazLog	7.200	1
Shopee Express	12.000	1-2

Source: Author (2024)

B. Jakarta – Medan

Table 2. Jakarta – Medan.

3PL Provider	Delivery Cost (Rp)	SLA (Day)
JNE	47.000	1-2
J&T	36.000	4-7
Lion Parcel	35.000	2-3
TIKI	36.000	2-3
SiCepat	40.000	1-3
AnterAja	43.000	2-4
POS Indonesia	37.000	4
Ninja	36.000	4-6
LazLog	31.000	3-5
Shopee Express	37.000	3-5

Source: Author (2024)

C. Medan – Medan

Table 3. Medan – Medan.

3PL Provider	Delivery Cost (Rp)	SLA (Day)
JNE	7.000	1-2
J&T	6.000	2-3
Lion Parcel	7.000	1-2
TIKI	7.000	2
SiCepat	9.000	1-2
AnterAja	8.300	2-4
POS Indonesia	7.000	2
Ninja	7.000	2-4
LazLog	7.000	1-2
Shopee Express	7.000	1-2

Source: Author (2024)

D. Jakarta – Surabaya

Table 4. Jakarta – Surabaya.

3PL Provider	Delivery Cost (Rp)	SLA (Day)
JNE	20.000	1-2
J&T	18.000	2-3
Lion Parcel	18.000	1-2
TIKI	19.000	2
SiCepat	21.500	1-2
AnterAja	22.400	2-4
POS Indonesia	18.000	2
Ninja	18.500	1-3
LazLog	16.500	2-3
Shopee Express	20.000	2-3

Source: Author (2024)

E. Surabaya – Surabaya

Table 5. Surabaya – Surabaya.

3PL Provider	Delivery Cost (Rp)	SLA (Day)
JNE	8.000	1-2
J&T	6.000	2-3
Lion Parcel	7.000	2-3
TIKI	7.000	2
SiCepat	8.000	1-2
AnterAja	8.300	2-4
POS Indonesia	7.000	2
Ninja	6.000	1-2
LazLog	6.500	1
Shopee Express	7.000	1-2

Source: Author (2024)

4.2 Strategies for Improving E-Commerce Logistics (Forward Fulfillment)

According to [16] innovation or strategy is a crucial aspect of modern business. Based on the analysis, literature, and the author's insights and experience, it has been concluded that the development of the forward fulfillment concept can be an effective solution for improving time efficiency and reducing logistics costs in e-commerce distribution. This concept is illustrated in Figure 2.

In this study, the author examined two case studies, namely Medan and Surabaya, due to significant differences in shipping costs and delivery times between these locations compared to other regions. Currently, shipping costs from Jakarta to Medan and Jakarta to Surabaya are relatively high, as shown in the previously presented table. This is because Medan and Surabaya lack forward fulfillment facilities to consolidate orders from Jakarta for delivery to customers in these cities. After sorting/fulfillment, goods are shipped via land or air cargo to the forward fulfillment facility and the nearest last-mile hub, and then delivered to customers by couriers in Medan and Surabaya.

By utilizing the forward fulfillment facility model, logistics companies can significantly reduce shipping costs, as goods are sent in advance to the forward fulfillment facilities in Medan and Surabaya before transactions occur. Logistics companies can predict which categories and items will be sold based on information received from each e-commerce platform. Stocking items in advance ensures faster shipping and minimizes shipping costs. On average, shipping costs will decrease by 65% for Surabaya and 80% for Medan, accelerating delivery times and enhancing customer satisfaction.

The author proposes two alternative solution models for logistics industry players in Indonesia. The first option recommends the use of forward fulfillment facilities for all logistics industry players to speed up delivery and reduce shipping costs, as illustrated in the figure below:

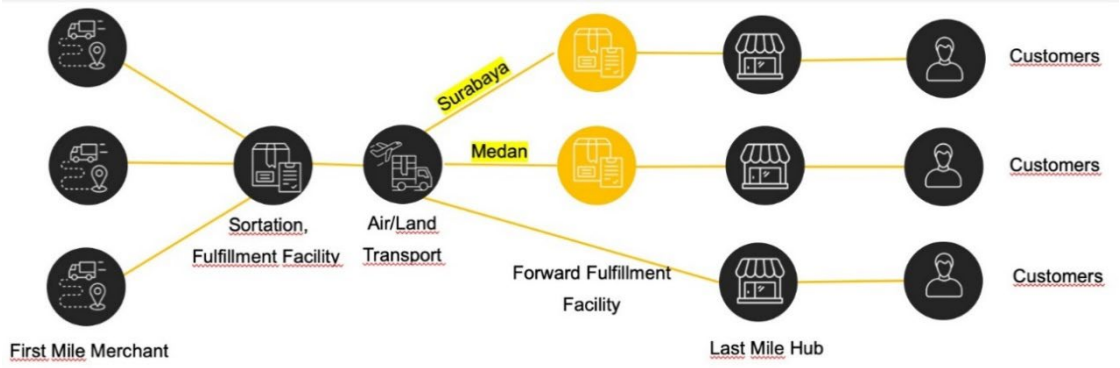

Figure 2. Model of Forward Fulfillment

The forward fulfillment strategy offers significant solutions to enhance e-commerce logistics efficiency in Indonesia. Here are some of its key benefits:

a. Reduction in logistics cost

Goods are shipped to fulfillment facilities in Medan and Surabaya before transactions occur, allowing for stock demand prediction and reducing shipping costs by up to 65% for Surabaya and 80% for Medan.

b. Optimization of human resources

By implementing operational consolidation, We can reduced the need for couriers from 5,000 to 2,000. This enhancement has significantly improved labor efficiency and productivity.

c. Reduction in warehouse facility costs

The number of rented warehouse facilities will be reduced, leading to a 78% decrease in rental costs and increased operational efficiency.

d. Increased customer satisfaction

Providing fast delivery and low costs would boosts customer satisfaction by up to 90%, encouraging repeat purchases [17].

e. Minimizing unhealthy competition among 3pl providers

Encourages collaboration among logistics service providers, reducing unhealthy competition and fostering a more cooperative and sustainable business ecosystem [18].

Overall, forward fulfillment enhances operational efficiency, lowers costs, and strengthens customer relationships, thereby increasing the competitiveness of companies in the dynamic e-commerce market.

4.3 Factors In Choosing 3PL Providers

According to [8] several key factors influence customers' decisions when selecting third-party logistics (3PL) providers in different regions. Competitive shipping rates, delivery speed, ease of tracking goods, reputation or brand image, delivery service coverage, and additional costs such as insurance are crucial aspects in decision-making[19].

Analysis of operational data and survey results shows that JNE and Lazada are prominent 3PL providers in these two regions. JNE excels in Medan due to its extensive service coverage and strong reputation for delivery speed, making it a top choice for customers. Meanwhile, Lazada is an attractive option in Surabaya because it offers competitive shipping rates and has a good reputation for delivery speed, although its coverage is more focused on the Java region

From the analysis, JNE achieved the highest score in Net Promoter Score (NPS), converted to a 1-5 scale, with a total of 20 points, followed by Lazada with 19 points. This indicates that both JNE and Lazada effectively meet logistics needs in their respective regions, Medan and Surabaya.

In conclusion, selecting the right 3PL provider based on these factors can enhance operational efficiency and customer satisfaction. By understanding local preferences and needs, companies can optimize their supply chains effectively.

3PL Provider	Delivery Cost	Delivery Time	Ease of Tracking	Brand Image	Delivery Coverage area	Extra Cost (Insurance, etc)	Total
JNE	1	5	3	5	5	1	20/30
J&T	3	1	3	5	5	1	18/20
Lion Parcel	4	4	3	3	3	1	18/20
Tiki	3	4	3	3	4	1	18/20
SiCepat	2	5	3	2	2	1	15/20
Anter Aja	2	3	3	2	2	1	13/20
POS	3	2	3	2	5	1	16/20
Ninja	3	1	3	1	5	1	14/20
Lazada	5	3	3	4	3	1	19/20
Shopee	3	3	3	3	3	1	16/20

Table 6. Assessments of 3PL Quality

4.4 Strategies for Enhancing E-Commerce Logistics (Consortium)

Enhancing e-commerce logistics through the formation of a consortium among several third-party logistics (3PL) companies can be a smart and effective strategy. This consortium allows each company to leverage its unique strengths while maintaining fair pricing, service level agreements (SLAs), and excellent customer service.

In a consortium, geographical regions can be allocated among participating companies to avoid redundancy and maximize efficiency by utilizing local expertise and infrastructure. This collaboration ensures broad coverage and resource optimization while maintaining competitive pricing for customers with high service quality standards.

To improve customer experience, the consortium can develop an integrated tracking system, seamless communication, and standardized operational processes. This will facilitate customers in using various services within the consortium, enhancing their satisfaction and trust.

Sharing resources such as technology, warehousing facilities, and transportation networks can streamline operations and improve cost-effectiveness for all participating companies. Regular meetings or regulatory bodies within the consortium will help address challenges, foster innovation, and ensure compliance with agreed-upon standards.

Additionally, the government is expected to support the growth of the logistics industry by adopting circular economy concepts, building infrastructure for repair and recycling, and utilizing the latest logistics technology. The government should also address infrastructure gaps to accelerate delivery times between

regions, increase customer density and transport volumes, and establish regional or provincial logistics centers to enhance coordination and efficiency.

By implementing the consortium model, logistics costs can be reduced, including both legal and illegal charges. The government must also ensure a healthy competitive business environment through competitive pricing policies and involve the Business Competition Supervisory Commission. Regulations should be created to facilitate risk-sharing among logistics industry players in the postal and transportation sectors.

5.0 Conclusion and Recommendations

The conclusion of this research is :

a. Level of Competition in E-Commerce Logistics

The logistics sector in Indonesia is crucial to the economy but could improve efficiency compared to developed countries. Rapid growth in e-commerce, particularly outside Java, faces intense competition. Logistics companies need to innovate and expand networks; however, excessive competition can impact market stability.

b. Challenges in E-commerce Logistics

Key challenges in e-commerce logistics include high shipping costs, varying service quality, lack of tracking transparency, and the need for increased efficiency to better compete.

c. Last Mile Delivery Strategies

Improvements in last-mile delivery are critical. Technology and innovation can optimize delivery routes and enhance customer satisfaction.

And for the recommendations:

a. Forward fulfillment

The concept of forward fulfillment can reduce costs and delivery times by keeping inventory closer to customers.

b. Selection of 3PL providers

Select 3PL providers that offer competitive pricing, fast delivery, easy tracking, a stellar reputation, and extensive service coverage.

c. Consortium

Creating a consortium involving multiple E-commerce third-party logistics (3PL) companies to ensure maximum efficiency and prevent redundancy, a consortium can divide geographic areas among participating companies, so they can leverage their local expertise and infrastructure. This collaborative approach will ensure comprehensive coverage, while optimizing resources and avoiding overlap. By working together on pricing structures and SLAs, the consortium can maintain competitive prices for customers while upholding service quality standards.

To improve customer experience, the consortium can build an integrated and uniform tracking system, seamless communication channels, and standardized operational processes. This standardized approach will make it easier for customers to transition between different services within the consortium, thereby increasing satisfaction and trust.

d. Human resource training

Provide training for operational staff and couriers to enhance performance and professionalism.

e. Collaboration with the government to improve regulations and policies

Government policies can have a significant impact on e-commerce logistics operations, both directly and indirectly, and therefore paying attention to and anticipating changes in government policies is crucial in designing strategies and managing supply chains.

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7.0 References

[1] Fabiana Meijon Fadul, “dengan Peran E-commerce untuk Meningkatkan Daya Saing Usaha Kecil dan Menengah (UKM),” vol. 21, pp. 1–15, 2019.

[2] A. Sabilla, C. S. Arum, N. Alfaridi, and J. Simarmata, “Logistic Service Quality (Lsq) on Shopeexpress,” *Malaysian J. Comput.*, vol. 8, no. 2, pp. 1472–1481, 2023, doi: 10.24191/mjoc.v8i2.24074.

[3] T. Safitri, “Penerapan E-Logistik dalam E- commerce,” *SupplyChainIndonesia*, pp. 3–7, 2019.

[4] D. Audia, “PROPOSAL OF FORMALIZED SERVICE LEVEL AGREEMENTS (SLAs) USING PROCESS MINING (CASE STUDY IN LOGISTIC COMPANY) PROPOSAL OF FORMALIZED SERVICE LEVEL AGREEMENTS (SLAs) USING PROCESS MINING (CASE STUDY IN LOGISTIC COMPANY),” 2024.

[5] E. Marilly, O. Martinot, H. Papini, and D. Goderis, “Service level agreements: A main challenge for next generation networks,” *2nd Eur. Conf. Univers. Multiservice Networks, ECUMN 2002*, pp. 297–304, 2002, doi: 10.1109/ECUMN.2002.1002118.

[6] H. Malau, *Manajemen Pemasaran Teori dan Aplkasi Pemasaran Era Tradisional Sampai Era Modernisasi Global*. Bandung: Alfabeta, 2017.

[7] C. Cesariana, F. Juliansyah, and R. Fitriyani, "Model Keputusan Pembelian Melalui Kepuasan Konsumen Pada Marketplace," *J. Manaj. Pendidik. Dan Ilmu Sos.*, vol. 3, no. 1, pp. 211–224, 2022.

[8] P. Ricardianto *et al.*, "Digitalization and logistics service quality: Evidence from Indonesia national shipping companies," *Int. J. Data Netw. Sci.*, vol. 7, no. 2, pp. 781–790, 2023, doi: 10.5267/j.ijdns.2023.1.011.

[9] H. Uvet, "Importance of logistics service quality in customer satisfaction: An empirical study," *Oper. Supply Chain Manag.*, vol. 13, no. 1, pp. 1–10, 2020, doi: 10.31387/OSCM0400248.

[10] D. H. Ninvika, R. R. Aulia, Y. P. Wulandari, and B. P. Pamungkas, "TRANSFORMASI JARINGAN LOGISTIK BERKELANJUTAN DI ERA MODERN – KELOMPOK 3," no. May, 2024.

[11] W. Rahmawati and N. Nofrisel, "Interrelation Third Party Logistic Risk Impact to The Performance in PT XYZ," 2020, doi: 10.4108/eai.11-7-2019.2298061.

[12] Agustini *et al.*, *Metode Penelitian Kualitatif (Teori dan Panduan Praktis Analisis Data Kualitatif) Agustini,* no. 1. 2023. [Online]. Available: http://repository.unpas.ac.id/30547/5/BAB III.pdf

[13] O. V. Ajayi, "Distinguish Between Primary Sources of Data and Secondary Sources of Data," pp. 1–5, 2017.

[14] J. Miles, M., Huberman, M., & Saldaña, *Qualitative Data Analysis: A Methods Sourcebook. In Zeitschrift fur Personalforschung*. 2016.

[15] S. Sutandi, Y. Evitha, and I. N. Purnaya, "Last Mile Delivery Collaboration Proposal to Achieve Delivery Cost Efficiency in E-Commerce," *J. Logistik Indones.*, vol. 5, no. 2, pp. 130–137, 2021, doi: 10.31334/logistik.v5i2.1884.

[16] A. Lussak, E. Abdurachman, I. G. So, and R. Setiowati, "Withdrawn," *Int. J. Recent Technol. Eng.*, vol. 8, no. 4, pp. 3944–3947, 2019, doi: 10.35940/ijrte.d8245.118419.

[17] F. R. Wilujeng, G. D. Rembulan, D. Andreas, and H. Tannady, "Meningkatkan Kepuasan Pelanggan pada Dua Bisnis E-Commerce Terbesar di Indonesia dengan Menggunakan Analisis Servqual dan IPA," *Pros. Semin. Nas. Sains dan Teknol.*, pp. 1–9, 2019.

[18] I. Wingdes, "Dampak Teknologi E-Logistic SCM Terhadap Distributor Busana Di Pontianak Selatan," *J. Eksplora Inform.*, vol. 10, no. 1, pp. 43–52, 2020, doi: 10.30864/eksplora.v10i1.392.

[19] I. U. Yulihapsari, J. Simarmata, Y. Pahala, Veronica, and Y. Keke, "Kualitas Pelayanan, Harga, Promosi dan Citra Merek : Pengaruhnya terhadap Keputusan Pembelian Jasa Pengiriman PT. Jalur Nugraha Ekakurir (JNE)," *Attract. Innov. Educ. J.*, vol. 5, no. 1, pp. 364–374, 2023, [Online]. Available: https://www.attractivejournal.com/index.php/aj/