



## Issues and Challenges of Logistics Inventory Post New Normal Covid-19

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### ABSTRACTS

Adapting to changes caused by natural disasters, crises, and pandemics like the Covid-19 pandemic makes it difficult to carry out operations as usual. The purpose of this scientific article is to inform and explain the issues and challenges in the logistics industry, particularly in the post-new normal Covid-19 inventory system, where logistics inventory is a crucial component of this industry. The types of arrangement used are literature review research and library research that focus on arrangement-related outcomes and variables. The results obtained from this research allow users to make non-cash payments as an effort to curb the spread of Covid-19, aligned with the implementation of digital transactions in pandemic and post-pandemic situations by Bank Indonesia. Therefore, it is expected that there will be a recovery of the industry after the Covid-19 pandemic, as well as economic productivity, while maintaining a balance between environmental sustainability and social justice to achieve the goals of the 2030 sustainable development agenda.

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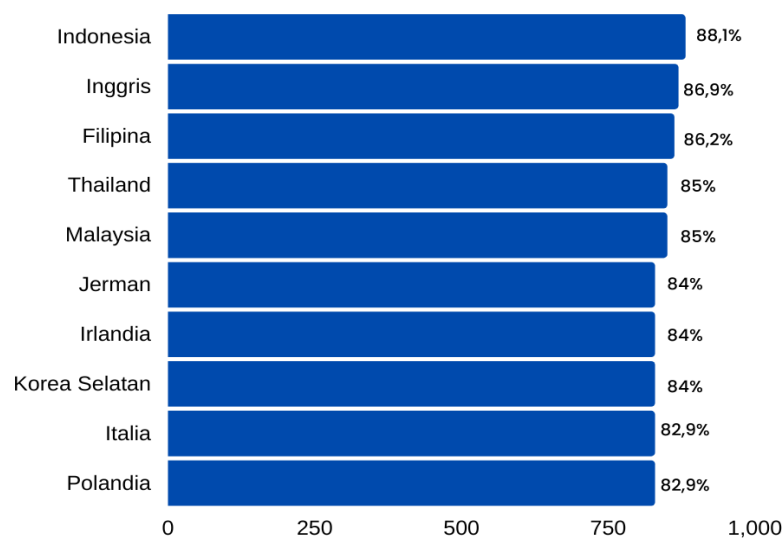
Covid-19,  
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## 1. INTRODUCTION

The rampant Covid-19 pandemic has impacted human lives and the operational aspects of businesses in manufacturing and general supply chains, including the logistics industry (Odunayo & Victor, 2020; Islam et al., 2022; Panwar & Pinkse, 2022). Adapting to changes caused by natural disasters, crises, and pandemics like Covid-19 makes it challenging to carry out operations as usual. Global logistics companies need to implement measures to mitigate the risks and losses that may arise from the pandemic, as well as ensure sustainability after the situation subsides (Craighead et al., 2020). Indonesia experienced the Covid-19 pandemic early in 2020, with various threats and challenges faced by companies in the logistics services sector that were also affected by the outbreak (Djalante et al., 2020; Gandasari & Dwidienawati, 2020). Despite experiencing rapid business growth during the pandemic, logistics companies simultaneously had to confront and overcome various emerging challenges to achieve full profitability (Czerny et al., 2021; Rothengatter et al., 2021)

The e-commerce sector in Indonesia has surged since the Covid-19 pandemic, with the average population using applications to purchase their needs through online shopping platforms due to restrictions on going out to reduce Covid-19 cases in Indonesia. Therefore, based on the We Are Social survey, Indonesia achieved the highest percentage in April 2021, with 88.1% of internet users in Indonesia using e-commerce for their daily needs.

10 Countries with the Highest E-Commerce Market Share in the World (April 2021)



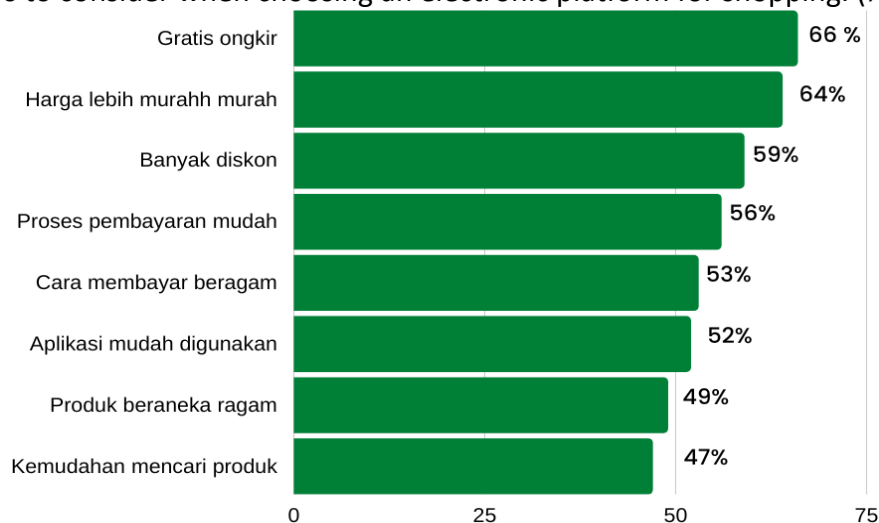
**Figure 1.** Countries with the highest e-commerce market share in the world (April 2021)

*Source: Katadata.co.id*

E-commerce also has an impact on the flow of goods distribution, as there is cooperation between e-commerce or e-marketplace platforms and external courier companies such as JNE, JNT, Pos Indonesia, Sicepat, Id Express, or Go-Send. This will make it easier for consumers to order anything online, and then the goods will be delivered to their doorstep.

Different reasons are chosen by e-commerce users when selecting their desired shopping destinations, considering various factors. Hence, the existence of strategies from each e-commerce platform is crucial to attract consumers' attention. For example, offering price reductions or discounts on items for sale, providing free shipping without a minimum transaction requirement, and offering a wider variety of payment methods to make it easier and more efficient for users to choose their preferred payment option.

8 factors to consider when choosing an electronic platform for shopping. (%) (2021)



**Figure 2.** Considerations in choosing an e-commerce platform.

*Source: Katadata.co.id*

Product quality and customer satisfaction are crucial factors in the advancement of online shopping. To meet customer needs, companies must remember to focus on quality in this highly competitive market. Customer loyalty to a product is also an achievement of customer satisfaction. Factors that can influence customer loyalty include satisfaction, commitment, habit, interest, and the cost of the product itself (Tumbelaka et al., 2022).

Certainly, there have been many changes since the pandemic occurred in Indonesia. This has impacted the logistics industry as it is closely related to daily life activities. The purpose of this scientific article is to inform and explain the issues and challenges in the logistics industry, particularly in the post-new normal Covid-19 inventory system, where logistics inventory is a crucial component of this industry (Leoni et al., 2021).

## 2. METHODS

The types of arrangements used are literature review research as well as library research focusing on the outcomes related to the topic and arrangement variables. The process of conducting a literature review is as follows:

1. Searching for journals using keywords. Some keywords used to find relevant journals for the literature review include: "Global Logistics Inventory Problems and Challenges" and "Challenges of Post (New Normal) Covid-19 Pandemic Logistics System in Indonesia."
2. Comparing the reference journals with the research framework, aligning the research results of those journals with the conceptual framework in this study, which revolves around problem-solving for each issue impacting logistics inventory during Covid-19.
3. Through daily searches, the researcher obtains 10 research articles, both regular scientific journals and national research journals. After several stages, the author narrows it down to 5 research articles that align with the theme being discussed.
4. Formulating the results from the reference journals to suit the goal of the literature review research, which is to analyze the significance of understanding the issues and challenges of logistics inventory.
5. The summary in this literature review research encompasses the problem-solving skills required for logistics inventory in the Covid-19 era and the importance of various changes resulting from logistical challenges, along with how to address these

challenges. The journals used in this study are drawn from prior research studies that have been tried and published in earlier journals. The researcher conducted searches for these journals through databases such as Mendeley, Research Gate, and Google Scholar. The search for national articles commenced in September 2022.

6. The total number of research articles used in this writing is 5 reference articles, which serve as the information to be organized and reviewed.

### **3. RESULTS AND DISCUSSION**

#### **3.1. Industries in the New Normal Era**

The World Trade Organization (WTO) estimated a 32% decline in global trade in 2020. International trade is a key economic indicator that shows that both Organisation for Economic Co-operation and Development (OECD) and non-OECD countries experienced fluctuations month by month. The total international trade of OECD countries was valued at \$899.33 billion USD in February and decreased to \$828.27 billion USD in March 2020, and then increased to \$860.60 billion USD in September (WHO, 2020a).

Indonesia, as a developing country, has undertaken at least 20 efforts to recover its industries after the Covid-19 pandemic. Some of these efforts include meeting primary and secondary demands, restructuring production facilities, facilitating production absorption, simplifying exports, as well as facilitating supply chains and businesses, among many others. Additionally, there has been guidance and support for the preservation of new entrepreneurs within the Small and Medium Enterprises (SMEs) sector that were affected by the pandemic, an increase in the population of startup companies in software content, and the development of disaster emergency management applications (Putri, 2020).

In the post-Covid-19 era, there has been a significant decrease in tourist visitors. Tourist behaviors have undoubtedly undergone changes, especially in decision-making related to travel. The experiences of tourists visiting destinations need to be taken into consideration to provide a sense of safety and comfort. Therefore, tourism destination management needs to formulate new strategies (Guridno et al., 2020; Orîndaru et al., 2021). Innovation for growth in the new normal era needs to be planned by the aviation industry. This action will be ongoing for a considerable period and will consistently be a priority for economic improvement in the future. The aviation industry has committed to halving carbon dioxide emissions by 2050. This is evidenced by the increasing flight efficiency in the near future, including the emergence of more fuel-efficient electric aircraft with zero-carbon fuels that will soon be in operation (Air Transport Action Group, 2020).

Manufacturing plays a crucial role in the post-Covid-19 situation, as this sector is one of the factors that influence basic human needs. The global logistics industry has to adapt to the work-from-home system. Furthermore, supply chains and manufacturing activities in the new normal era will be supported by healthcare systems.

The sustainability of digital technology is increasingly becoming a primary impact in the recovery of industries in the new normal era. This necessitates the accelerated implementation of Industry 4.0. Developing countries consider this leading to a "digital divide," as some segments of the population are less fortunate in terms of technology access, such as due to lack of internet infrastructure, connectivity, and capabilities. This situation further underscores that Covid-19 is a global pandemic that needs to be addressed swiftly and profoundly.

The new normal has long-term social effects in public spaces and workplaces, indirectly influencing the global economic transition. Therefore, it is expected that there will be an industry recovery after the Covid-19 pandemic, along with economic productivity, while still prioritizing environmental health and social harmony to achieve the Sustainable Development Plan by 2030.

### 3.2. E-commerce Development Post-Pandemic

The Covid-19 pandemic has transformed human lives over the past few years. Governments are seeking ways to revive the economy and establish a new normal way of life. The nature of business in the world has changed during the Covid pandemic and the post-new normal period. The solution for businesses that were forcibly closed due to government regulations could be utilizing social media and e-commerce applications as alternatives (Aminul et al., 2020).

The advantage of technology that can sustain economic activities both during and after the pandemic is the use of digital e-commerce applications. Given that people's habits during normal situations tend to persist. Throughout this period, business actors have had to formulate survival strategies. The digital transition process won't be successful if businesses aren't prepared to embrace change. This can become a challenge for business actors, putting them at risk of closing down during the pandemic (Redjeki & Affandi, 2021; Jiang & Stylos, 2021). E-commerce holds greater control over the market, leading to the growth of many businesses and digital platforms (Saragih et al., 2020; Rosário & Raimundo, 2021). This indicates that the development of the digital world requires e-commerce. Bank Indonesia has noted that the number of business transactions in e-commerce has doubled due to the Covid-19 pandemic. Here is the average data of e-commerce app visits in Indonesia for the second quarter of 2022.

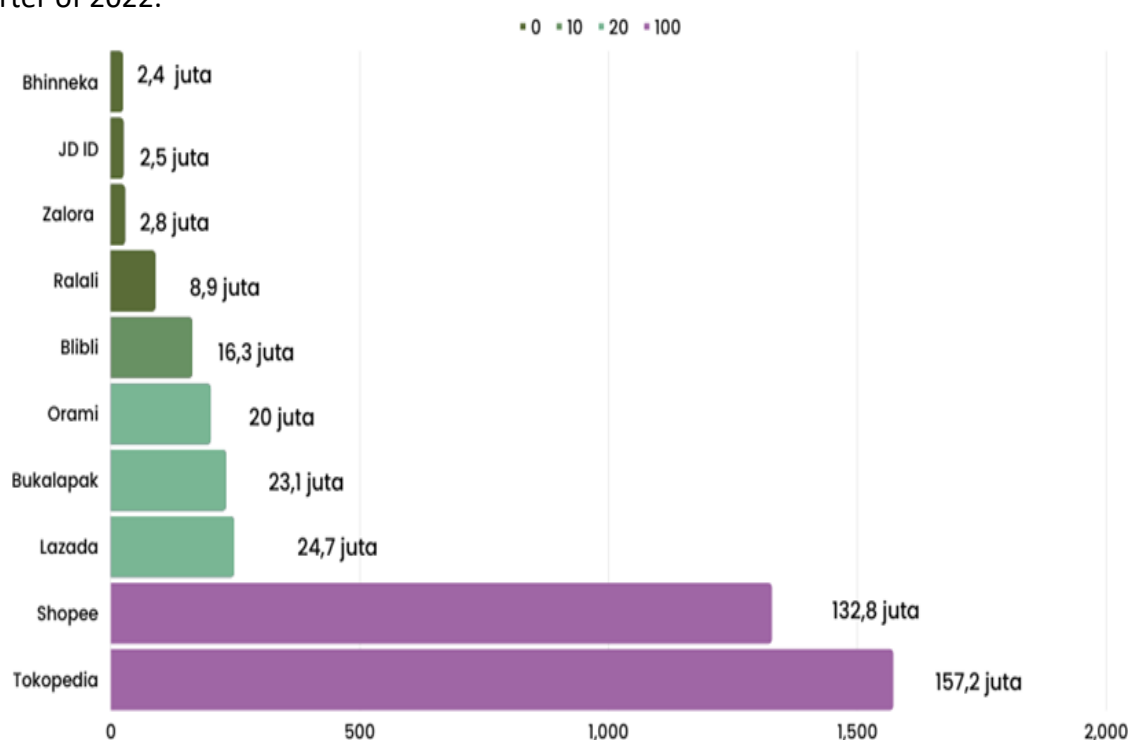
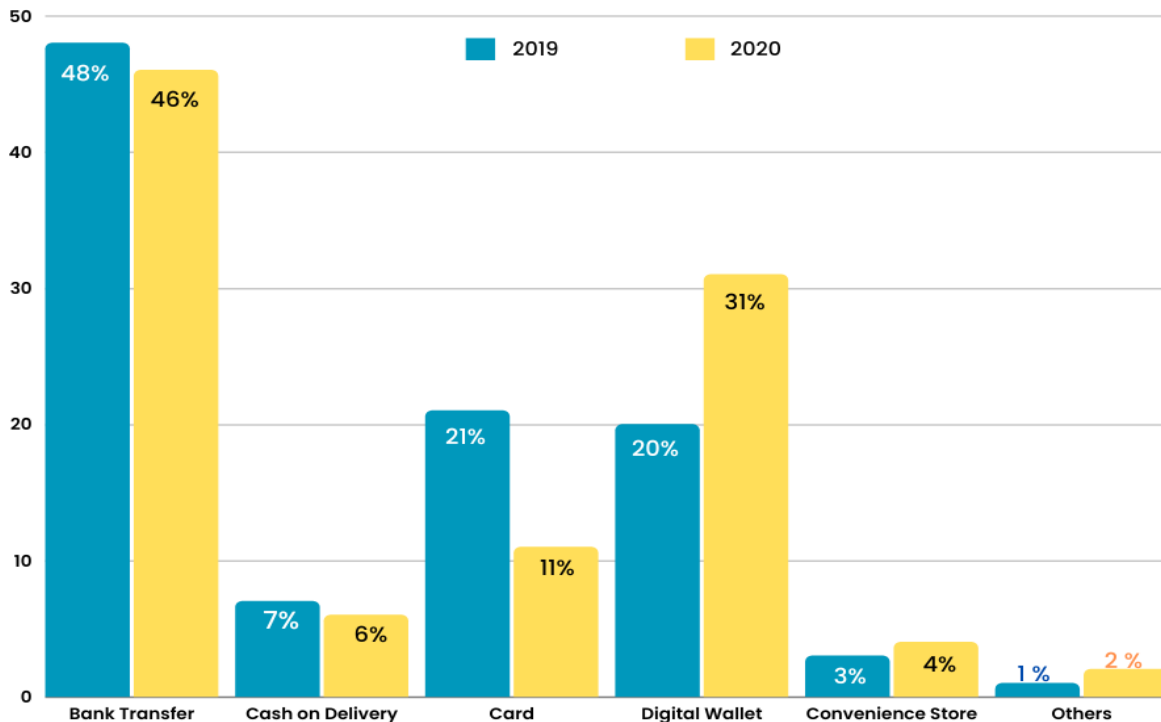


Figure 3. The average monthly e-commerce website visits for the first quarter of 2022.

Source: *Katadata.co.id*

The above data shows that the Shopee app has been consistently ranked at the top in terms of visits for some time. In Indonesia, E-commerce has seen a significant increase due to the rush of people checking out their desired items and businesses thriving, providing benefits to platform managers and entrepreneurs using e-commerce platforms. The increase in e-commerce users is driven by factors such as numerous free shipping offers and cashback incentives that are highly sought after by the public.

The Covid-19 pandemic has also brought changes to consumer actions and habits. Overall, around the world, consumers prefer using online platforms like e-commerce for shopping rather than physically going to brick-and-mortar stores (Salem & Nor, 2020). Additionally, payment methods have also undergone shifts in consumer behavior. The use of bank transfers saw a minor decrease of 2% compared to 2019. Similarly, the Cash On Delivery (COD) payment method experienced only a 1% decline from the previous year. On the other hand, payment using ATM cards (debit/credit) in 2020 experienced a significant drop of 10% when compared to 2019. In contrast to the aforementioned payment methods, digital wallets like Gopay, Ovo, Dana, and Link Aja saw a considerable increase of 11% from 2019, reaching 31%. This is followed by payment methods through convenience stores and others, which only saw a modest increase of 1%.



**Figure 4.** Changes in Payment Methods

*Source: Sirclo and Ravenry, 2020*

### 3.3. Access to the Shopee online shopping platform in the new normal era

The research conducted by Ivan et al. (2021) titled "Analysis of New Normal Features as Displayed by Shopee in Shaping Consumption Patterns during the Covid-19 Period" aims to understand how the e-commerce platform Shopee's strength lies in attracting customer interest to fulfill their needs in the post-pandemic era. The method employed in this research is qualitative with a social construction approach. The results obtained from this study indicate that users can make non-cash payments as an effort to curb the spread of Covid-19, aligning with the implementation of digital transactions during the pandemic and post-

pandemic situations by Bank Indonesia. The introduction of ShopeePay as a transaction payment method makes shopping and online business transactions more convenient for users. Shopee launched a channel named "New Normal" on the app's homepage to provide convenience for various needs, such as health products and essential items. This feature is intended to facilitate Indonesian society during the new normal era. The implementation of this idea is expected to support people in adhering to health protocols post-pandemic and also provide a safe platform for individuals interested in starting new businesses.

#### **3.4. Analysis of ID Express Logistic Delivery Service Quality in the New Normal Era**

The research conducted by Anita Dyah Ayu Setyorini and Soimun (2021), titled "Customer Satisfaction Analysis Regarding the Quality of Logistics Service Delivery in the New Normal Era: A Case Study on ID Express Users," aims to provide a description to the public regarding the quality of logistics distribution services by ID Express during the new normal period in Sarbagita. The method utilized in this study involved collecting survey data about the received services. The results obtained using the Customer Satisfaction Index theory indicate a score of 81.79%, denoting a highly satisfied evaluation. Furthermore, the study revealed results indicating relatively high levels of importance and satisfaction, such as the items being received in good condition, deliveries aligning with estimates, assurance of secure delivery to the recipient, and positive demeanor and behavior exhibited by the personnel.

#### **3.5. Recovery Strategies for E-commerce in the New Normal Era**

The research conducted by Suwandi et al. (2022), titled "Impact Analysis of the Covid-19 Pandemic on E-Commerce in Indonesia: Business and Recovery Strategies in the New Normal Era," aims to formulate appropriate strategies for E-commerce businesses to implement in the new normal era. The methodology employed in this study is qualitative with a descriptive approach. The obtained results are related to recovery strategies for E-commerce in the new normal era:

1. **Consumer and Marketplace Analysis** This strategy will impact the logistics system of e-commerce with inventory and facility requirements to achieve effectiveness and efficiency, conducted periodically. Furthermore, the objectives and purposes of each e-commerce platform need to be understood. E-commerce businesses that comprehend this will discover those that build engagement, promotion, and easy transactions.
2. **Supplier Selection** E-commerce businesses can benefit from supplier selection across various aspects. When choosing suppliers, e-commerce stakeholders must consider additional factors such as the quantity and origin of suppliers. Company priorities and needs are among the factors in determining the number of suppliers; hence, good and sustained collaboration between e-commerce players and suppliers is essential.
3. **Inventory Strategy** Each e-commerce business has distinct principles and strategies. If there is an excess of ordered goods, costs for inventory, risks of loss, damage, expiration, etc., can arise. Economic Order Quantity (EOQ), Lot-for-Lot (L4L), P-system, Fixed Order Quantity (FOQ), Periodic review, and visual aids are several commonly used order quantity methods (Martono, 2018). E-commerce businesses can utilize methods like Fixed Order Quantity (FOQ) or Periodic Review and implement the pyramid technique through the force-down method.

4. Facility and Goods Handling Strategy In the new normal era, e-commerce businesses need to maintain the sterility of items to be shipped. This can be achieved through routine disinfection, provision of masks, and handwashing facilities. Each company must adhere to established Standard Operating Procedures (SOPs) to ensure the cleanliness of items. Proper facilities are necessary to arrange items neatly and minimize damages. Slow Moving Inventory is stored farther away compared to Fast Moving Inventory, which is kept closest to the packaging area.
5. Distribution Strategy Distribution or delivery of goods can enhance efficiency and effectiveness in the logistics system. This decision can be made by utilizing service providers within the delivery market. The positive impact of e-commerce growth in Indonesia has benefited transportation companies with increased domestic and international shipping activities. The quantity of shipping companies has also risen, including well-known names like Pos Express, Tiki, JNE, J&T, Sicepat, Wahana, Ninja Xpress, Antaraja, Lion Parcel, Kargo Tech, and others.

E-commerce practitioners need to consider the chosen delivery services to be activated in the marketplace. They must consider product types and identify suitable delivery services. Understanding the nature of products is vital to ensure proper delivery to consumers. For products less susceptible to damage and without special requirements, there are services offering home pickup and roadside delivery points. E-commerce businesses tend to activate services with easier access to delivery points.

#### **4. CONCLUSION**

Covid-19 has led to new challenges in several logistics sectors, ranging from profit losses to job cuts. The pandemic has impacted all aspects of life, particularly in the logistics business. During the Covid-19 pandemic, people were restricted in purchasing daily necessities such as food, medical supplies, health products, and more. Therefore, the role of e-commerce greatly assisted society in meeting their needs and also helped boost their businesses during that time. In order to adapt to this new normal era, strategies are needed for the recovery of e-commerce businesses, including consumer and marketplace analysis, supplier selection, inventory management strategies, facility and goods handling strategies, and inventory strategies. Product quality and customer satisfaction are valuable aspects in determining the success of an e-commerce venture. To meet customer needs, companies must remember to focus on quality in this highly competitive market.

The new normal has lasting social effects in public spaces and workplaces, indirectly influencing the global economic transition. Hence, there is an expectation for the recovery of industries after the Covid-19 pandemic, as well as economic productivity, while maintaining a balance between environmental sustainability and social justice to achieve the goals of the 2030 sustainable development agenda.

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