

Sustainability of E Commerce Business through Logistic System in the COVID 19 Pandemic

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Abstract: This study aims to find out how the impact of the COVID-19 pandemic on e-commerce businesses, especially on changes to the logistics system for e-commerce businesses in Indonesia, and to find out strategies to overcome these problems. This study used a qualitative method with observations, interviews, and FGDs. The research subjects are e-commerce business people, logistics practitioners, and staff of shipping service companies. The results show that the COVID-19 pandemic has had a major impact not only on the Indonesian economy as a whole but also on the e-commerce business. The industrial, trade, and transportation & warehousing sectors experienced negative growth. E-commerce business players made various changes in the e-commerce business logistics system to adapt and survive the situation in the new normal era. Before the covid-19 pandemic, e-commerce business players had suppliers with different numbers depending on the needs of each business. The challenges and obstacles faced by the e-commerce logistics system in the new normal era were changes in consumer buying behavior and logistics inefficiency. E-commerce business people are advised to conduct regular market research to find out changes in consumer behavior patterns, consumer characteristics in the new normal era, and of course their preferences for products.

Keywords: E-commerce, new normal, logistics, covid-19.

INTRODUCTION

The impact of the Covid-19 pandemic on the Indonesian economy according to Yamali and Putri (2020) is the termination of employment (PHK) by companies for their employees, a decrease in imports, inflation, and it is undeniable that losses in the tourism sector experienced a decline in visitors as a result of restrictions. From various regions and regions. There are various losses that are felt by Indonesia, both national losses, sectoral losses, as well as individual and corporate losses (Hadiwardoyo, 2020). For business owners, the losses faced include the following: reduced income, damage to goods and penalties due to late delivery, the incurring of unexpected costs.

Indonesia's economic growth, like other countries, experienced a fairly poor realization in early 2020 (finance.detik.com). In the second quarter of 2020, economic growth was at minus 5.32%. Various policies issued by the government succeeded in boosting this figure so that it reached minus 3.49% in the third quarter of 2020. Although initially it was estimated that it would only reach minus 2.9% by the end of the year, the realization of Indonesia's economic growth showed a figure of minus 2.19% for the fourth quarter of 2020 (cnbcindonesia.com). Various sectors experienced ups and downs during the pandemic since the end of 2019, followed by the beginning of 2020 until the end of 2020.

The Covid-19 pandemic has changed the view of e-commerce from what was originally just an option to something that has to be done. The huge potential of e-commerce in Indonesia was even more evident during the Covid-19 pandemic with industry growth of 92% in 2020, which far exceeded the predictions of the previous year. The number of E-commerce transactions was recorded at 98.3 million transactions with a valuation reaching USD 1.4 billion.

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Tokopedia noted that there was an increase in the number of users who opened new stores throughout 2020 that focused on selling health products. (Sircolo and Ravenry, 2020).

One type of e-commerce that is widely known is the type of B2C or Business to Consumer (Kotler, 2012; Laudon and Traver, 2017) where e-commerce business owners reach individual consumers with different types of products. The variety of types of products, product origins, destination areas, and other factors, causes every e-commerce business to have a logistics system that is similar but not the same. Based on data compiled by BPS (2020) most e-commerce business players send their goods directly to final consumers and not through resellers (68.95%), while there are around 29.96% who choose to sell both to final consumers and receive purchases from resellers. with the aim of expanding the distribution of its products.

The very high development of Indonesia's digital business has made the government increasingly direct the public to switch to digital business. E-commerce is an online channel used by business owners to offer their products to consumers, and can be reached with the help of computers (Kotler and Armstrong, 2012). There are various types of businesses that are venturing into e-commerce as shown in the image below.

Conventional businesses that have not yet switched to digital businesses have experienced a significant impact from the Covid-19 pandemic and are therefore advised to switch to digital businesses (Awali and Rohmah, 2020; Taufik and Ayuningtyas, 2020). Although many conventional businesses are directed to move to digital businesses, it does not mean that active e-commerce business players do not feel the impact of the Covid-19 pandemic. Even though he has been in the e-commerce business since before the pandemic and it is said that there has been a change in consumer behavior from face-to-face shopping to online shopping (Sircolo and Ravenry, 2020), there is still upheaval in the e-commerce business, resulting in a decrease in income (85.83% of e-commerce businesses). Commerce).

One of the problems that occurred was due to the lack of smooth distribution of goods from upstream to downstream due to policies to prevent the spread of Covid-19 such as Large-Scale Social Restrictions (PSBB), appeals not to travel long distances so that the number of flights was reduced, and so on. As many as 76.91% of e-commerce players admit that there has been a decline in the smooth distribution of goods.

Based on the background of the problems above, this study aims to find out how the impact of the COVID-19 pandemic on e-commerce businesses, especially on changes to the logistics system for e-commerce businesses in Indonesia, and to find out strategies to overcome these problems.

LITERATURE REVIEW

Logistics Management

Logistics plays an important role in international trade because in the current era of globalization. So that logistics is not just a matter of moving goods from one point to another, but also about the added value and competitive advantage that can be provided (Salim, 2015). In logistics there are management functions that must be carried out as in management in general. There are approximately seven management functions. The planning function contains activities to prepare for future activities by calculating, researching or formulating plans. The planning function is also equipped with the determination of needs. Next are the budgeting function, procurement function, storage and distribution function, maintenance function, write-off function, and control function. In addition, there are other functions that are also important in logistics, namely recording to ensure that data is stored completely.

Logistics System

Logistics systems talk about the interaction between all logistics components from location and facilities, transportation, inventory, handling, storage, distribution of goods or services and information to the right place, in the desired condition and time. An effective and efficient logistics system is also indispensable in the event of natural disasters, political emergencies, or dangerous diseases (Singh, Kumar, Panchal, & Tiwari, 2020) including the Covid-19 pandemic. Integrated warehouses in each area are useful for meeting demand that comes during a pandemic and will be more effective if supported by high technology such as truck drones delivery systems. Traditional logistics systems are generally based on centralized resources (Gunasekaran, Ngai & Cheng, 2006) and must undergo changes in line with the demands of competition.

E-Commerce

E-commerce is any type of selling and buying or trading activities carried out via the internet. Meanwhile, according to the Organization for Economic Co-operation and Development (OECD) e-commerce is the sale or purchase of goods/services, which is carried out through a computer network with a method specifically designed for the purpose of receiving or placing orders, but the main payment and delivery of goods/services does not have to be done online (BPS, 2020). The Covid-19 pandemic has also changed consumer behavior and choices. In general, in almost all parts of

the world, 52% of consumers avoid visiting physical stores (brick and mortar) so that it encourages sellers to provide goods through E-commerce sites (Bhatti, Akram, Basit, Khan, Raza, Naqvi, and Bilal), (2020). Another changing habit of consumers is the choice of payment methods. The use of cards (debit/credit) to pay was reduced by 10% compared to 2019, on the contrary, the use of digital wallets such as Ovo, Gopay, and Link Aja increased to 31% in 2020 (Sirclo and Ravenry, 2020).

Research methods

To obtain information about the impacts and changes that occur to the logistics system for e-commerce players due to the Covid-19 pandemic and identify the challenges and obstacles faced and analyze the strategies that must be applied in the New Normal era, qualitative methods will be used in this study. The qualitative method is considered appropriate because with this method the author will be able to get more in-depth data about the problem being studied (Prastowo, 2011). The research loci are several provinces spread throughout Indonesia. The research was conducted from March 2020 to August 2020. The data that had been collected through interviews, observations, FGDs, and documentation were reviewed by researchers. Next is data reduction, where the researcher selects data to separate the data that are appropriate and those that are not in accordance with the research objectives.

ANALYSIS AND DISCUSSION

The Impact of the Covid-19 Pandemic on the Economy and E-commerce Business

Emergency PPKM implemented in Java and Bali in July 2021, the government limits the operating hours of all business places until 20.00, road closures, and prohibits dine-in or eating in places for restaurants and cafes. The impact of these tight restrictions is felt most heavily by MSMEs. According to MSME actors who sell food in the Semarang area, the turnover they get has decreased drastically during this emergency PPKM period. Based on data from BPS (2020) the industrial, trade, and transportation & warehousing sectors still experienced negative growth of -4.3%, -5.0%, and -16.7% (Ministry of PPN, 2020).

The impact of the COVID-19 pandemic on various categories of e-commerce businesses was found to be varied. Based on data from BPS (2020) since the COVID-19 pandemic hit Indonesia, there has been a decline in income for 85.83% of e-commerce business players. Other business actors (4.58%) experienced an increase in income and the remaining 9.59% were not affected. The increase in income for e-commerce business actors varies from approximately 25% to more than 75%. Meanwhile, the percentage decline in revenue of more than 50% occurred in around 45.55 percent of the total number of e-commerce players in Indonesia. The e-commerce business fields that experienced the largest decline in revenue (about 75%) were corporate services, education, as well as transportation and warehousing. There are at least 91.81% of business actors from the accommodation, food and beverage sector that experienced a decline in income. The same trend is also found if you look at the volume of transactions and also the smoothness of distribution.

Table-1: Percentage of E-commerce Businesses Based on Smooth Distribution

No	Province	% Number of Effort		
		Increase	Same	Decrease
1	DKI Jakarta	3.34	19.27	77.39
2	Central Java	2.60	25.10	72.30
3	Bali	1.36	13.95	84.69
4	North Sumatra	3.67	12.30	84.03
5	South Kalimantan	4.82	23.85	71.33
6	North Sulawesi	4.20	10.75	85.05
7	East Nusa Tenggara	3.89	22.73	73.38
8	Papua	-	7.69	92.31

(BPS, 2020, has been reprocessed)

From the table above, even the overall data shows that almost all of e-commerce business actors in Papua have experienced a decrease in the smooth distribution of their business, and none have even experienced an increase. Since before the pandemic, the smooth distribution of goods was quite low and logistics costs to the Papua region and even other areas in Eastern Indonesia were quite high. This situation was further exacerbated by the COVID-19 pandemic. For example, shipping goods to the Kupang area, East Nusa Tenggara from Manado City in North Sulawesi Province costs Rp. 100.000,-/kg and a longer estimated time (around 5-7) days since the covid-19 pandemic. Furthermore, when viewed from the business sector, it is not surprising that the number of business actors who experienced the most declines in distribution smoothness was the transportation and warehousing sector. At the same time, there is also a business sector in which almost 50% of the business actors have not experienced changes in the smooth distribution of products, namely agriculture, forestry and fisheries.

Changes to the E-commerce Business Logistics System during the Covid-19 Pandemic

Based on the results of the study, it can be found various kinds of changes that have occurred since the start of the COVID-19 pandemic until entering this new normal era

E-commerce Business Actors

E-commerce business actors in this study were recorded from at least sixteen (16) cities/districts in Indonesia. A total of 41% of all respondents have started their business since 2 years ago, some even have a business that is 5 years old. The remaining 59% started their business less than 2 years ago. Regarding the use of e-commerce, 93% stated that they had used e-commerce since the beginning of running their business. This can be understood because e-commerce has indeed begun to develop since 2000, followed by the start of shopping sites, electronic money, and even online transportation within 10 years (finance.detik.com, 2021).

In choosing a marketplace for their business, 31% of informants use at least 3 different marketplaces, followed by 28% of informants who use 2 marketplaces. Meanwhile, there are around 24% of informants who only use 1 marketplace to market their products. From the results of the interviews, it is also known what marketplaces are used by the informants. The most used marketplace is Tokopedia, followed by Shopee with 33% and 28% respectively. A number of informants stated that Facebook and Instagram still remained as their online shop promotion media but also did not rule out the possibility of orders or purchases from consumers made through the two platforms. This causes the percentage of use of Facebook (21%) and Instagram (11%) is still quite high.

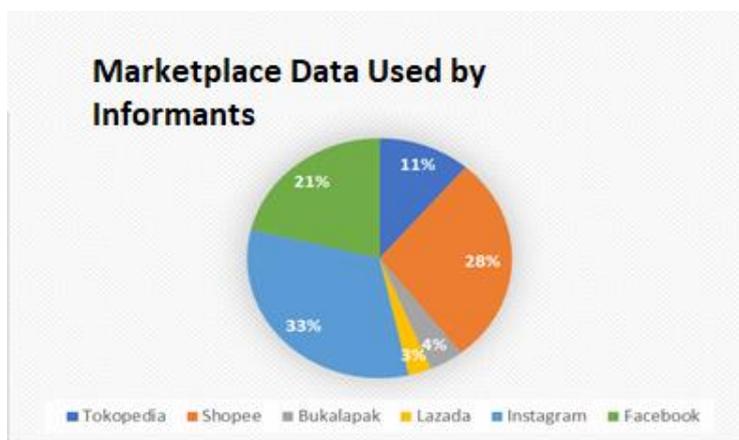


Fig-1: Marketplace Data Used by Informants

Product Type and Origin

Informants provide information about the products they market in the marketplace. Based on the data obtained, the authors classify these products into several major groups, namely Fashion & Accessories, Skincare & Cosmetics, Food & Beverages, Electronic Tools, Household Appliances, Service, Hobby Items/Collection, and Hampers. The products that are included in the Fashion & Accessories group range from casual clothing, children's clothing, shoes, to hijab products. Meanwhile, the Food & Beverages group is dominated by frozen food products. The percentage for each group in this study does not describe the overall population of types of products on the market but is limited to this study. The percentage of product types from the informants in this study are as follows:

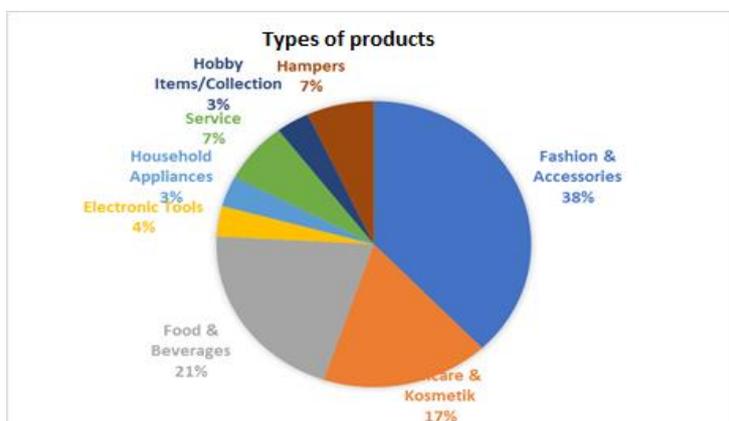


Fig-2: Percentage of Product Type

It can be seen from the pie chart above, that 38% of the informants sell products that are classified as fashion & accessories. The next types of products that are most widely sold are food and beverages as well as beauty products with percentages of 21% and 17% respectively. Another product that is also relatively new but is actually quite well known is hampers. Based on the informant's narrative, the hampers in question are in the form of gift packages with various displays and packaging, ranging from flower bouquets containing snacks, to cardboard boxes containing various items. Researchers also identify the source or origin of the products marketed by these e-commerce business people. From the results of the research, it is known that most (55%) of the informants get their products from suppliers. The products obtained from these suppliers are in the form of finished goods or ready-to-sell goods. Meanwhile, 35% of the informants produce the products they sell themselves. Other informants admitted that they make their own products but also buy suppliers. This is done to meet the needs of requests from buyers.

1) Suppliers

The position of the supplier cannot be eliminated from the business process of a business, be it a small business or a large business. Based on the data presented in the previous section, it is known that most of the informants run their business by taking or buying finished goods from suppliers and then reselling them. Others do their own production. To be able to carry out production activities, of course, producers need raw or semi-finished goods. Thus, these two groups definitely need suppliers for each of their business activities. Researchers identified the number of suppliers owned by each business owner and obtained the following results.

From the pie chart, it can be seen that most of the informants (business owners) have 2-5 suppliers who support their business. In general, businesses that runs fashion products such as headscarves, shoes, and clothes and skincare products. There are even businesses with fashion products that are recorded to have more than 10 suppliers. Some other businesses only have a single supplier, for example in businesses that sell skincare products. According to informants, the selection of a single supplier is done to ensure product quality is always consistent in the eyes of consumers.

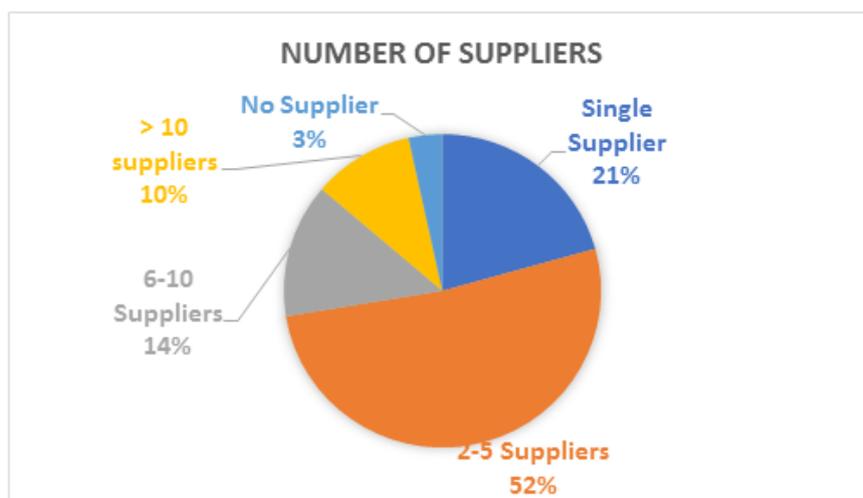


Fig-3: Percentage of Number of Suppliers

The suppliers selected by each of the businesses run by these informants come from various regions, both the same area and different areas from the place of origin of the e-commerce business actor. 39% of informants stated that their suppliers were from the same area as them. Upon closer inspection, it was found that the informants who answered so generally came from areas on the island of Java such as Bandung, Semarang, Tangerang, Malang, Banten, Klaten, and so on; and also several other cities such as Kabanjahe and Batam. Meanwhile, 50% of the informants stated that their suppliers were from different regions or cities from them. Some suppliers come from other cities but are still on the same island as the business owner, while some are from other cities in Indonesia and also from abroad.

On the other hand, several businesses that reduce the number of suppliers are generally businesses that fall into the fashion & accessories category. In the previous section, it was stated that several business categories or sectors experienced a decline in sales, one of which was the fashion sector. With reduced sales or demand from customers, business actors also decide to reduce the number of their suppliers. The decision to reduce the number of suppliers can be made easier in small and medium-sized businesses because cooperation with suppliers is not bound or in other words there is generally no cooperation agreement between the two parties. That way, e-commerce business actors can decide to no longer take goods from the supplier or only reduce the number of goods ordered from the supplier.

The number of goods ordered from suppliers is also influenced by the needs of each e-commerce business actor. Based on the results of the study, it is known that at least 20 business actors from the total informants involved in this study ordered goods in fewer quantities than before the pandemic. In line with previous findings regarding the business sector reducing the number of suppliers, the same business sector, namely fashion & accessories, is known to reduce the number of orders the most. Other product categories are skincare & cosmetics as well as service categories such as event organizer services. The decline in sales for these product categories could occur due to a rearrangement of the scale of customer needs. The COVID-19 pandemic has made people more concerned with health and the food they eat, and placing fashion needs on the umpteenth priority. This is in line with the results of this study which shows that business actors who do not reduce the number of orders in general are businesses in the food & beverages category.

2) Buyer

Buyers become an inseparable part of the e-commerce business and of course become the focus of the business logistics system. Every e-commerce business person has buyers from different origins.

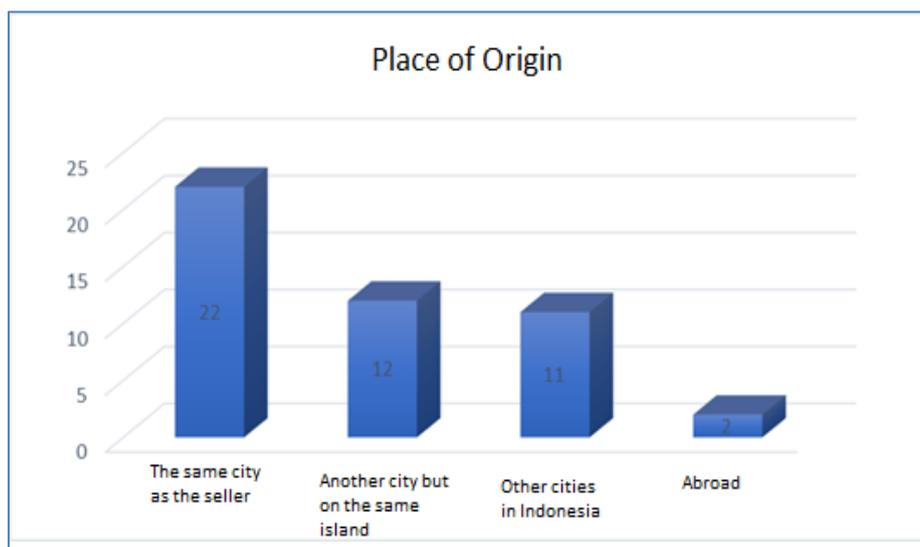


Fig-4: Buyer's Origin

A number of e-commerce businesses have buyers who only come from the same city as them; there are also those whose buyers come from different cities and even abroad. Every e-commerce business person can have buyers from the same city and also from different cities. In general, the buyers come from the same city. Close proximity will shorten delivery time and of course reduce shipping costs from the buyer's point of view. However, this does not rule out the possibility of buyers from other cities on the same island as well as buyers from other cities in Indonesia. The development of a logistics system in which there is transportation, infrastructure, and information systems makes inter-island shipping no longer an obstacle.

Changes in habits in the New Normal Era indirectly make people adopt new habits. Research results from Google, Temasek, and BAIN & Company (2020) state that there has been an increase in the number of internet users in Indonesia and an increase in the average time interacting with the internet to 4.7 hours per day. This increase was caused by the lockdown, or other forms of restrictions such as PSBB and PPKM which required most people to work from home. The touch of technology and the internet is considered very helpful for the community in carrying out their activities, as well as helping psychologically in dealing with the COVID-19 pandemic.

The situation and findings above are believed to have a sustainable impact, namely the increasing number of customers who buy goods through the marketplace. There are around 12 million new e-commerce users who use various marketplaces such as Shopee or Tokopedia. Shopee marketplace visitors in 2020 reached 96.5 million visitors, an increase of 72% since 2019. Meanwhile, Tokopedia visitors increased from 65.9 million in 2019 to 84.9 million in 2020. The addition of new e-commerce users encouraged an increase in e-commerce transactions in Indonesia up to reached 98.3 million transactions valued at approximately US\$1.4 million (Sirlo and Ravenry, 2020).

Based on the results of the study, it is known that during the COVID-19 pandemic, businesses run by e-commerce business people also obtained new customers who came from different areas from what they generally have. On the other hand, about 23% of the total respondents stated that the new buyers who made transactions with them generally came from the same area as the buyers they had served. This can be explained as follows. When a buyer enters

the marketplace and looks for the desired product, the first keyword to look for is the name of the product, and then use a filter to determine the price range or directly sort the prices of items available on the menu, as well as the quality of the seller. After that other filter menus such as the location of the seller will be selected. Then the prospective buyer continues the buying process.

With the scenario as described above, prospective buyers from all regions in Indonesia can find products from sellers from various regions in Indonesia. So it is not surprising that the informants in this study stated that there were new customers who came from new areas that they had never served before. Viewed from the side of what product categories are sold by the seller, it will be found that there are various products such as fashion. Food & beverages, skincare, services, and so on.

In this study, researchers also looked at changes that occurred in the number of transactions that occurred in the e-commerce business during the initial six months of the pandemic and six months -one year after the pandemic. This is to find out the impact of the COVID-19 pandemic on e-commerce transactions.

Table-2: Changes in Transactions in the First 1-6 Months of the Covid-19 Pandemic

1-6 months since the pandemic	Percentage of E-commerce Businesses	
	No Decrease in Transactions	Transaction Decrease
	48%	52%

From the table above, it can be seen that the statements from the respondents were evenly distributed. Some stated that there was no decline in transactions in their businesses, while others acknowledged that there was a decline in business transactions in the first 1-6 months of the Covid-19 pandemic. If we examine more deeply, we will find that e-commerce businesses whose businesses did not experience a decline in transactions in the first six months of the pandemic are businesses with special fashion product categories for Hijab, skincare and food. Meanwhile, businesses with fashion products such as clothing and shoes, event decoration rental services, household appliances and others stated that their transactions had decreased in the first 6 months of the pandemic. From these results it can be seen that businesses with food products still have stable transactions because they are basic needs needed by the community.

Table-3: Changes in Transactions in 6 Months -1 Years of the Covid-19 Pandemic

6 months -1 year since the pandemic	Percentage of E-commerce Businesses	
	No Increase in Transactions	An Increase in Transactions
	66%	34%

The next question to be answered is whether there has been an increase in transactions in the range of 6 months – 1 year since the pandemic. The results showed that most of the e-commerce business people admitted that there was no increase in transactions in their business in that time span. Meanwhile, e-commerce business people who stated that there was an increase in transactions in their business were 34% of the total respondents. The business is a business with the food & beverage and skincare product categories. In the previous paragraph, the product category was also found not to experience a decrease in transactions. Thus, businesses with these product categories at the beginning of the COVID-19 pandemic had stable sales transactions and their transactions increased in the following 6 months.

3) Inventory

Inventory becomes part of the logistics system of a business to ensure the availability of products to meet customer demands. Informants provide information about the existence of inventory activities in their business. From the data that has been collected, more than half of the informants practice inventory in their business. Informants who do not practice inventory in their business explained that they apply a pre-order (PO) system so that the goods ordered from suppliers or made themselves, the amount is in accordance with customer requests. Another reason is that the business scale is still classified as micro so that if you place too many orders, the possibility of losses will be even greater.

Informants who carry out inventory activities are given follow-up questions about when they will restock or refill. The answers that appear are different because the products they have are different. From the results of the interview, it was found that there was a trend in the fashion & accessories type of e-commerce business where restocking was carried out at a specific time that they specified, such as once every 1-2 weeks or once every 1-2 months. The same trend can be seen in e-commerce businesses that have skincare & cosmetics type products where restocking is done at least once a month. Meanwhile, other informants stated that restocking is generally done if the product will run out soon or the supply is running low and uncertain.

Information regarding the number of items ordered at the time of restock was also dug in more depth. Each e-commerce business person has different products, so the units of goods ordered are different. For items with small sizes

such as skincare products, the quantity ordered is quite large, reaching 1000-2000 pcs. Frozen food products classified as food & beverages are ordered in 100-150 packs at restock. Fashion products are ordered in quantities not exceeding 100 pcs per order.

Facilities and Goods Handling

The facilities used by e-commerce business people vary depending on the type of product they have.

Table-4: Product Category and Facilities

No	Product Category	Facilities used and their utilization
1	<i>Fashion & Accessories</i>	Cellphones, sewing machines, packaging (plastic), sacks, storefronts
2	<i>Skincare & Cosmetics</i>	Plastic and label
3	<i>Food & Beverages</i>	Applications for recording sales transactions, vacuum machines, Home cooking utensils, bottles, freezers
4	<i>Electronic Tools</i>	Vehicles and packaging
5	<i>Household Appliances</i>	Display
6	<i>Service</i>	Transport cars, laptops, property decorations
7	<i>Hobby Items/Collection</i>	Warehouse, physical shop, online shop, vehicle, production machine, communication electronic equipment etc
8	<i>Hampers</i>	Cardboard, packaging equipment

E-commerce business people who do their own production will generally need facilities and equipment that support the production process such as sewing machines, cooking utensils, as well as equipment for packaging. Meanwhile, both those who produce and those who don't, generally require electronic equipment such as computers/laptops or cellphones that are useful for online sales.

Table-5: Product Category and Product Handling

No	Product Category	Product Handling
1	<i>Fashion & Accessories</i>	-Storing fabrics at the production site, making designs, taking fabrics from storage, measuring fabrics, drawing according to patterns, cutting fabrics, packing, sending to buyers -Receiving goods, packing, sending to buyers
2	<i>Skincare & Cosmetics</i>	-Store goods, prepare orders, pack, use bubble wrap, ship orders
3	<i>Food & Beverages</i>	-Checking at least 2 times the goods that arrive from the supplier, stored in the refrigerator/freezer, packaged, sent to the customer
4	<i>Electronic Tools</i>	Checking goods from suppliers, packing goods, sending goods
5	<i>Household Appliances</i>	Checking goods from suppliers, packing goods, sending goods
6	<i>Service</i>	Receive goods from suppliers, count the number of goods and ensure physical condition (damage), carry out storage, issue goods when needed
7	<i>Hobby Items/Collection</i>	Receive goods from suppliers, count the number of goods and ensure physical condition (damage), do storage, package, send orders
8	<i>Hampers</i>	Packing goods, sending orders

Handling of goods is carried out in a manner that is generally the same for every e-commerce business with different types of products. When receiving goods from suppliers, what is done is to check the physical condition of the goods and ensure the number of goods ordered is appropriate or not. The next step is to save if it is needed to be stored or not immediately used / sent. The storage location itself varies depending on the type of item. Especially for food stored in containers or places that will maintain the freshness of the food ingredients such as refrigerators or freezers. The next stage is to prepare for delivery by packing the goods with the necessary packaging. There are different packaging standards for different types of goods or for each e-commerce business person, for example in one e-commerce business the packaging of goods is also done with bubble wrap to increase product security. After the goods are packaged and then sent via the courier that has been selected.

The main facilities and equipment used by e-commerce business actors in carrying out production, packaging, or marketing activities have not experienced significant changes. Because these facilities and equipment are standard requirements needed by each business actor. The changes that have occurred are the addition of facilities and equipment for the purpose of sterilizing equipment as well as the security and safety of human resources during the COVID-19 pandemic. Some of the equipment mentioned are disinfectant spray equipment, temperature gauges, hand sanitizer dispensers, additional hand washing facilities, masks, gloves, and so on.

These results are also in line with the findings on how to handle goods in the overall business activities of e-commerce business actors. The Standard Operational Procedure (SOP) owned by each business has not changed. Likewise, the way the product is handled is carried out on raw goods or finished goods. Changes are in the addition of activities or forms of handling goods that prioritize sterility. The above-mentioned sterilization equipment and facilities are used in every product handling process. Based on the results of interviews with business actors, it is known that they are trying to implement strict health protocols for each of their business processes. For example, officers spray disinfectant regularly at production sites, warehouses, offices, or other places. Business actors also maintain the sterilization of goods by spraying disinfectant on goods that have just arrived at the production site or at the storage area. If the goods are intended to be processed such as food or drinks, then they are washed before storage and before production. Employees are also ensured to implement health protocols in accordance with government regulations by ensuring the temperature of employees when they come to the office, providing masks, gloves and face shields, and asking them to always wash their hands or use hand sanitizer.

4) Distribution

The distribution process of e-commerce business products sold through the marketplace is carried out by the marketplace courier itself or 3PL (third-party logistics) services. In this study, informants mention the delivery service they choose or activate on the marketplace they use. Under normal conditions (before the Covid-19 pandemic), sellers have the freedom to activate whatever delivery service they want so that an e-commerce business can choose more than one delivery service.

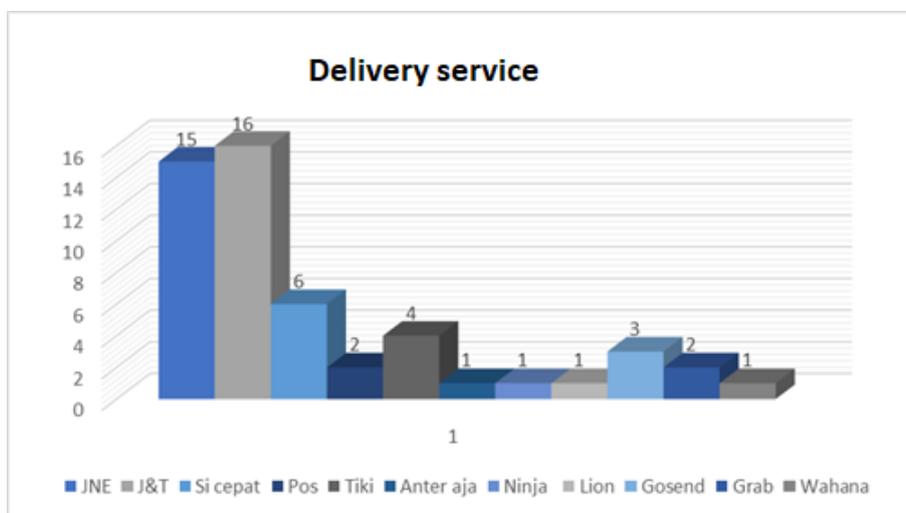


Fig-5: Delivery Services Enabled by E-commerce Businesses

Based on Figure 5, it can be seen that the JNE delivery service was used by 15 informants, J&T was used by 16 informants, Si Fast was used by 6, while other shipping services were used by at least 1-4 e-commerce businesses that became informants in this study. The decision to activate or choose a delivery service on the marketplace is based on various considerations. One of the considerations is the distance between the location of the e-commerce business and the delivery service in their respective cities. If the distance between the place of operation of the e-commerce business is far from the location of the delivery service, then of course it will cost more, so that e-commerce business people will tend to choose a delivery service that is close. Other considerations are also still the subjectivity of the e-commerce business people themselves, such as good or bad experiences with these delivery services. Freight forwarding services that are considered less professional in handling goods, causing the shipment to be damaged, will tend to be avoided by e-commerce businesses, and vice versa. Long delivery times, punctuality, and of course competitive prices are also important factors for business actors to consider.

The decision to activate any delivery service in the marketplace is the right of the seller. However, the decision to use which delivery service at the time of making a purchase or often called check out is the decision of the consumer himself. However, consumers can only choose based on what the seller has activated. As an example shown in Figure 5.9 below.

The example below is one of the merchants in the Tokopedia marketplace that sells cooking utensils. In the shipping options, it can be seen that the seller activates various options ranging from instant (3 hours), same day (6-8 hours), regular (2-4 days), cargo (22-30 days), and economy (2-5 days). Each of these shipping options is listed in the respective price ranges. When the buyer determines the shipping he wants to use, the courier choice will

automatically adjust. For example, if the buyer chooses 2-4 days regular, the courier options that will appear are AnterAja, SiCepat Reg, JNE Reg, and Tiki. Meanwhile, if you choose economy shipping, the choice of courier automatically adjusts and displays JNE OKE and SiCepat Halu, of course accompanied by their respective rates. The rate stated on the delivery and courier is taken from the distance between the city of the seller and the buyer.

Based on the narrative of one of the admins of the delivery service (J&T), since the COVID-19 pandemic, shipments from the marketplace have increased. However, there has been a change in one of the marketplaces, namely Shopee, where buyers cannot choose the courier they want. It is Shopee who determines which expedition will determine this. The shipping service company suspects that this is done because there are more and more new shipping services such as AntarAja, ID Express, and Ninja Xpress that offer delivery services, so the marketplace tries to divide it evenly so that there is no accumulation of one delivery service. In addition, the obstacle that often occurs during the Covid-19 period is that there are often long queues of about 1-3 days for packages to certain provinces because they are waiting for other packages with the same destination. For deliveries in Java, for example from Solo to Bandung, the transportation used is train. Meanwhile, for deliveries from Solo to Surabaya, Semarang, and Jakarta, J&T cars are used for inter-city transportation.

Strategies to increase Effective and Efficient E-commerce Business Logistics System in the New Normal Era

In this study, our focus lies on business people who already have products and have done their business through e-commerce. Even though you already have a business, it doesn't mean the research process has to stop because consumer changes happen very quickly and there is no other way to find out other than doing research. Therefore, the strategy that must always be applied by e-commerce business people to achieve the effectiveness and efficiency of the logistics system is to conduct research on a regular basis.

Business people need to focus on the channels that are used for certain purposes. Like the example given above, for example Instagram or Facebook are used as promotional media so that consumers are more familiar with the product. When consumers want to buy, then direct consumers to the marketplace. This will also help facilitate payments and later bookkeeping activities. That way the e-commerce business logistics system will run more effectively and efficiently.

CONCLUSIONS

The COVID-19 pandemic has had a major impact not only on the Indonesian economy as a whole but also on the e-commerce business. The Indonesian economy is contracting due to weak public consumption due to restrictions on community activities such as PSBB and PPKM issued by the government. The industrial, trade, and transportation & warehousing sectors experienced negative growth.

E-commerce business people make various changes in the e-commerce business logistics system to adapt and survive the situation in the new normal era. Before the COVID-19 pandemic, e-commerce business players had suppliers with different amounts depending on the needs of each business.

The strategy to realize an effective and efficient E-commerce Business Logistics System in the new normal era is already a comprehensive set of suggestions that can be practiced by e-commerce business people in running their business. However, in this section, the researcher suggests that e-commerce business actors always carry out regular evaluations of the strategies implemented both as a whole and in each part of the e-commerce business logistics system.

Suggestion

The impact of the COVID-19 pandemic on the Indonesian economy will continue even though it has entered the new normal era. The same impact will continue to be felt by e-commerce business people as well as consumers involved in it. Therefore, the advice that can be given to the government is to continue to pay attention to small businesses, including e-commerce business actors.

Changes that occur in the e-commerce logistics system during the COVID-19 pandemic are unpredictable. However, e-commerce business people should be able to adapt to all changes that occur in their business logistics system.

The challenges and obstacles faced by the e-commerce logistics system in the new normal era are changes in consumer buying behavior and logistics inefficiencies. E-commerce business people are advised to conduct regular market research to find out changes in consumer behavior patterns, consumer characteristics in the new normal era, and of course their preferences for products.

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