

# Buyers-sellers' value of courier services: assessment in the Indonesian C2C e-commerce

Buyers-sellers'  
value of courier  
services

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## Abstract

**Purpose** – The quality of service provided by a courier service plays an essential role in the success of online shopping. Meanwhile, buyers and sellers tend to choose a vendor that meets their expectations. This study aims to show how buyers and sellers value the decision to select a courier service based on online shopping experiences.

**Design/methodology/approach** – A focus group discussion involving eight participants was used to gather consumer preferences and seller perspectives. Kansei Engineering principles were applied to organize these variables into a priority-scaled survey question. Furthermore, 200 respondents were simple-randomly selected and categorized based on age, gender, transaction frequency, average monthly transaction value and their role in online transactions.

**Findings** – This study found that buyers and sellers do not consider the delivery costs when the courier service guarantees the service quality. In contrast, the service quality offered is determined by problem-solving responsiveness, delivery accuracy and tracking systems. They also consider the short delivery time, wide delivery coverage area, couriers' attitude and scattered pick-up/drop point services. However, the order of priority is different for specific demographics.

**Practical implications** – In the rapid development of the online shopping trend, courier services are urgent to reconstruct their business model and maintain the quality of service. The proper understanding of online consumer preferences and seller perspectives will form the basis of appropriate strategies.

**Originality/value** – The role of a courier service is significant in the supply chain of online shopping transactions that connect buyers and sellers. The differences in consumer preferences and seller perspectives are attributed to the diverse objectives, even though they are still related to the service quality of the courier service.

**Keywords** Courier service, Online shopping, Service quality, Consumer preferences, Seller perspectives

**Paper type** Research paper

## Introduction

Advancement in digital technology continues to have a significant effect on different business models and current human life patterns. Previously, people would physically walk to stores to purchase items, but virtual stores are more common currently. According to [Flavián et al. \(2020\)](#), consumers who shopped online perceived that they saved time and effort. Online global retail spending is projected to rise from 15% in 2020 to 25% in 2025. The value of online transactions is also expected to yield United States dollar (USD) 6.4 trillion, up from the current USD 4.9 trillion ([Mohsin, 2021](#)).

Online shopping can be conducted through marketplaces such as B2B/Business-to-Business, B2C/Business-to-Customer, and C2C/Customer-to-Customer or digital applications owned by retailers, suppliers or other shopping channels. [Coppola \(2021\)](#) observed that 47% of purchases were made through the marketplace in 2019. This phenomenon has dramatically impacted other related business elements, including courier services as believed by [Haag and Sandberg \(2020\)](#).

With the dense population, Indonesia continues to witness increased online business transactions. This country recorded revenue of around USD 29 billion from the e-commerce



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market in 2020 (Nurhayati-Wolff, 2021c). There are prospects that a minimum of 65 million people will be shopping online by 2022 (Nurhayati-Wolff, 2021b). Furthermore, the growth rate of online shopping in Indonesia continues to increase by about 37.4% annually due to the changed consumption behavior during the COVID-19 pandemic (Nurhayati-Wolff, 2021a).

Even though consumers have the prerogative to select their courier service for the transactions, sellers should be selective in listing the right vendors. Smart shopping experiences strongly influence consumer satisfaction that is leading to establishing long-term buyer-seller relationships (Flavián *et al.*, 2020). This will ensure that customers are not disappointed, which will, in return, provide a positive impression for online sellers. Kawa and Światowiec-Szczepańska (2021) and Rajendran *et al.* (2018) believed that courier service quality determines user satisfaction, implying that it should compete to meet users' expectations.

Coşar *et al.* (2017) found that courier service performance contributed 31% to online shopping consumer satisfaction. In addition, Hafez *et al.* (2021) stated that the quality of logistics services affects 44% of consumer satisfaction and 62.5% of transaction loyalty in online shopping. Likewise, Kawa and Światowiec-Szczepańska (2021) noted that e-commerce businesses need courier services that can provide services as expected. They moderated the effect of perceived logistics value on consumer satisfaction by 36.5%. This statistical analysis shows that courier services are essential for online shoppers, both buyers and sellers.

Online buyers and sellers consider many factors besides relatively similar delivery costs. Considering that the quality of courier services used in online transactions has a significant positive effect on buyer and seller satisfaction (Rajendran *et al.*, 2018; Widayat and Irfani, 2019), an in-depth understanding of courier services is vital in e-commerce. The factors prioritized and ignored are equally important to investigate. This study pursues the following questions to achieve this goal:

- RQ1. What factors do online buyers and sellers consider when selecting a courier service based on their previous transactions?
- RQ2. What are the demands of courier services from the assessed factors?
- RQ3. How big is the contribution of each request in assessing courier services?

Although several studies had conducted on the same topic, this study remains important because the behavior of buyers and sellers in online shopping is dynamic and identified as changing simultaneously. This will be a topic worthy of discussion when the gathered data and findings differ from those of past studies.

This study focuses on the C2C platform in marketplaces because 92% of online shopping in Indonesia occurs on these platforms, instead of retailer or brand websites as found by Nurhayati-Wolff (2022). The reconstruction is carried out to unravel the decision of selecting a courier service, including the considered order of priority, based on online shopping experiences. Understanding online consumer preferences and seller perspectives are very beneficial. Moreover, these findings will form the basis of appropriate strategies in line with the rapid development of online shopping trends.

## Literature review

### *Role of supply chain in online shopping*

Supply chain management has become the main concern in distribution, specifically in the retail business (Randall *et al.*, 2011; Sandberg and Jafari, 2018). The movement from one point to another is carried out by courier services, which can be internal or outsourced from

vendors. [Kempa et al. \(2020\)](#) believe that the smoothness of the supply chain is not only determined by the availability of products on time, right quantity and proper specifications but also depends on the quality of the delivery service used. Therefore, various systems and functionalities need to be more integrated across the omni-channel of retail.

The supply chain in the e-commerce chain plays a strategic role in increasing the ability to compete in business, specifically for sellers who market their products online ([Reis et al., 2014](#)). According to [Mruma et al. \(2020\)](#), logistics costs are constantly a topic of interest since they make it more difficult for online sellers to compete in the market. They need a smooth supply chain when sending their products. From these two opinions, it is clear that there is a relationship between the performance and service of courier services in the supply chain.

The tremendous development rate of online shopping has made the presence of delivery service firms, which in this case are third parties, a significant factor in facilitating the seamless movement of products in the supply chain network ([Siali et al., 2018](#)). Regretfully, from the study conducted by [Haron et al. \(2017\)](#), 38% of online buyers have delivery issues that negatively impact the brand and store. This is because an online consumer will only be satisfied when receiving the products purchased ([Cao et al., 2018](#)). Therefore, there is a need for better and more efficient measures to ensure products reach buyers as expected.

#### *Service quality of courier service*

The service quality (ServQual) model aims to assist businesspeople in increasing the company's value to compete better and achieve the highest consumer satisfaction. However, the service quality is only limited to discourse and is not implemented optimally. Many studies in different countries identified and measured service quality, including modifying and proposing service quality models for the delivery business. [Table 1](#) presents a summary of the study results.

The determinant factors that influence quality service, as shown in [Table 1](#), indicate that cost, speed, accuracy, security, data traceability and delivery responsiveness are the most discussed features.

Researchers	Location	Measured factors of service quality in a courier industry
<a href="#">Zhou et al. (2016)</a>	China	Individual Character Function, Speediness and Punctual, Safety Specification, Economically Priced, Service Attitude, Fast and Comfortable
<a href="#">Li and Lee (2020)</a>	China	Reliability, Convenience, Cost, Specialty of Distribution
<a href="#">Appiah (2018)</a>	Ghana	Assurance, Empathy, Tangibility, Responsiveness, Reliability
<a href="#">Restuputri et al. (2020)</a>	Indonesia	Safe, Friendly, Rapid, Innovative, Reliable, Professional
<a href="#">Kang and Kim (2009)</a>	Korea	<ul style="list-style-type: none"> <li>- Service Outcome Quality (delivery reliability, product quality, cost savings, lead time)</li> <li>- Service Delivery Quality (claim handling, product visibility, communication, order convenience)</li> <li>- Service Capacity Quality (cargo handling, IT system, professional, stability)</li> </ul>
<a href="#">Valaei et al. (2016)</a>	Malaysia	Promptness, Convenience, Accuracy, Safety, Tangibles
<a href="#">Libo-on (2021)</a>	Philippines	Tangible, Reliability, Assurance, Responsiveness
<a href="#">Gulc (2020)</a>	Poland	Reliability, Visual Identification, Service Complexity, Relational Capital, Social Responsibility, Responsiveness, Technical Quality
<a href="#">Uvet (2020)</a>	USA	Personnel Quality Contact, Order Condition, Timeliness, Order Discrepancy Handling, Operational Information Sharing

**Table 1.** Summary of service quality studies in a courier industry

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### *Consumer preferences in online shopping*

Online shopping offers many conveniences for consumers since they can shop without time or location limitations. However, online shopping has a greater risk than physical shopping in retail stores (Daroch *et al.*, 2021). This is because online shopping limits access to the products and lacks direct one-on-one interaction, including the uncertainty of money that has been paid (Katawetawaraks and Wang, 2011).

According to Gulc (2020), online buyers are more worried about the delivery process than the product quality. On the other side, delivery service is often focused on logistics and operational only, not as an effort to meet customer expectations (Olsson *et al.*, 2022). Though, it is an integral part of their journey in online shopping experiences.

Restuputri *et al.* (2020) noted that trust is crucial since it strengthens loyalty, and as a result, people continue shopping online. This is also shown in Wirapraja *et al.* (2021) findings that 76% of consumers whose expectations are met while shopping online feel satisfied and their loyalty increases by 67%. Consumers are ready to share their online shopping experiences, would always come back for more shopping and recommend online stores to others (Wirapraja *et al.*, 2021).

According to Restuputri *et al.* (2020), consumer confidence in online shopping is triggered by the delivery process quality. Along with these preferences, Rajendran and Wahab (2019) suggested that online sellers provide alternative delivery options, besides unattended and traditional delivery to avoid consumer frustrations. Consumers demand adequate security in the delivery process (Olsson *et al.*, 2022). It should be facilitated by the courier service, as previously advised by McKinnon and Tallam (2003).

The facts show logically that consumers as online buyers expect courier services to provide services according to their preferences. They expect certainty, not only related to quality but the expectation that the product purchased is received on time and in good condition. Sacrifices in terms of cost and reasonable effort can still be a consideration to obtain quality service.

### *Seller perspectives in online shopping*

The rise in the need for consumers to shop online has led to a surge in online sellers. Online sellers who offer their products through the marketplace expect ease and practicality in the transaction and administration process (Svatosova, 2020). Immense potential can be realized if the marketplace pays attention to the speed and accuracy of information delivery from online buyers to online sellers and vice versa. Consequently, the online seller can send the purchased product accurately through the selected courier service. In short, with the support of third parties such as courier services and marketplaces, online sellers are possible to meet customer satisfaction.

According to Kumar and Anjaly (2017), online sellers can improve the online shopping experience and increase repeat purchases from online buyers when they properly focus on delivery, product-in-hand, return and exchange, consumer support, benefits, and feel-good factors. Therefore, the courier service that becomes a marketplace partner should have an integrated system that makes it easier for online sellers to entrust their consumers' orders, including having procedures to ensure packages are delivered safely, quickly and accurately.

The perspective of online sellers is also related to the guarantee of the quality of courier services. Cooperation in the delivery services is expected to support and improve e-commerce sales performance. Logically, online sellers will ignore the sacrifices that should be made to achieve these expectations. Online retailers are more inclined to accept and think about a courier service that charges more but makes up for reliability and helpful amenities.

*Courier services' value*

Several pieces of literature have been reviewed to show the importance of courier services in online shopping. Online buyers value courier services from their preferences and online sellers assess it as a seller perspective. **Table 2** summarizes these assessments from the results of the literature review conducted in this study.

**Table 2** shows that both online buyers and sellers assess courier services from various aspects. However, this reviewed literature has not simultaneously examined the assessment from the point of view of online buyers and sellers. In fact, courier services that are involved as third parties in online shopping transactions need to understand the elaborated values of both parties, either same or different, specifically in the C2C model. This is the identified research gap in this study.

**Research methodology**

This study was started by gathering as much information as possible related to the quality of delivery services. Eight participants were selected as a sample of relevant people with the online shopping experience. They, who have the role as an online seller, online buyer, or even both, joined in the forum group discussion (FGD) to uncover the consumer preferences and seller perspectives. The discussion was carried out without interruptions and debating, but the discussion topic was ensured still be maintained.

The gathered information through the FGD was analyzed and grouped according to its relevance using the Kansei Engineering approach. The main themes as considered factors in

Researchers	Courier services' value Consumer preferences	Seller perspectives
Gulc (2020)	Timely delivery, lack of damage	–
Restuputri <i>et al.</i> (2020)	Ease of use, a certainty of product forecasts, locations that are within reach, long operational times, extra services for packaging, reasonable delivery costs, a guarantee of product safety, delivery tracking, payment methods choice and compensation for damaged or undelivered products	–
Rajendran and Wahab (2019)	Provide alternative delivery options	–
Olsson <i>et al.</i> (2022)	Adequate security in the delivery process	–
McKinnon and Tallam (2003)	Guarantee for the undelivered package	–
Sutrisno <i>et al.</i> (2019)	The clarity of information	–
Svatosova (2020)	–	Easy and simple in the transaction and administration process
Coppola (2021)	–	Add the competitive advantage value in online shopping
Salminen <i>et al.</i> (2022)	–	Provide a consumer protection policy
Lee <i>et al.</i> (2018)	–	Integrated with the marketplace
Kumar and Anjaly (2017)	–	Has a better understanding with the nature of online shopping and supports sellers in their business

**Table 2.** Courier services' value from reviewed literature

choosing the courier service were then arranged into a priority-scaled survey question. The random respondents were asked to choose the most and least prioritized factors when choosing a courier service for their online shopping. Their answers were marked valid if they had purchased or sold products online at least once in the past month through a marketplace in Indonesia.

The respondents were identified based on age, gender, transaction frequency, average monthly transaction value and their role in transactions. However, they had to choose whether to act as an online buyer or an online seller, and not both. The answers were analyzed using descriptive statistics to find the composition of each priority and compare each other by the demographic of respondents. Figure 1 shows the process and stages of this study.

### Result and discussion

General observations were carried out through FGD as the planned stages. This study involved eight people with experience in online shopping transactions for at least 2 years to obtain consumer preferences and seller perspectives on courier services. Meanwhile, four of them are online buyers who have purchased products from the marketplace. The other four are online sellers selling their products and still managing their business online. They are selected and invited to discuss and share experiences, according to their respective roles, when buying or selling products in a marketplace that uses the C2C platform.

On June 20, 2021, FGD was conducted online using Zoom media in an objective, neutral and directed manner. The 2-h discussion recorded 56 variables that online buyers and sellers assessed on courier services with different level of concern (Table 3). The result was raw data for survey materials that does not have points in this stage and will be processed and analyzed later.

The topic discussed in FGD produced 56 values about a courier service from consumer preferences and seller perspectives. The hierarchical-cluster analysis measured those values that were interpreted as themes using the single linkage method (Figure 2). Furthermore, they combined into 9 clusters referring to the rescaled distance. Further analysis grouped them into 4 groups based on the proximity of their respective interests. However, 1 out of 4 groups have interests that are not very close to the other 3 and tend to be independent. These 3 groups show the closeness of interests as psychological demands. Kansei Engineering then decided the further action for this study (Table 4).

The result of Kansei Engineering in Table 4 indicated three psychological demands of both online buyers and sellers in selecting the courier service for their C2C e-commerce. They were formulated into the conceptual framework as shown in Figure 3. In C2C

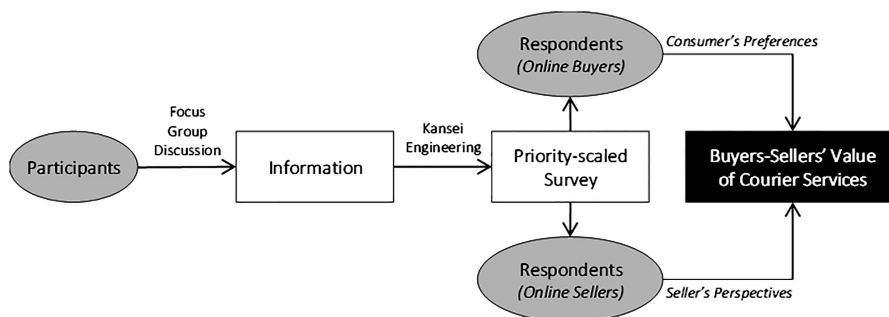
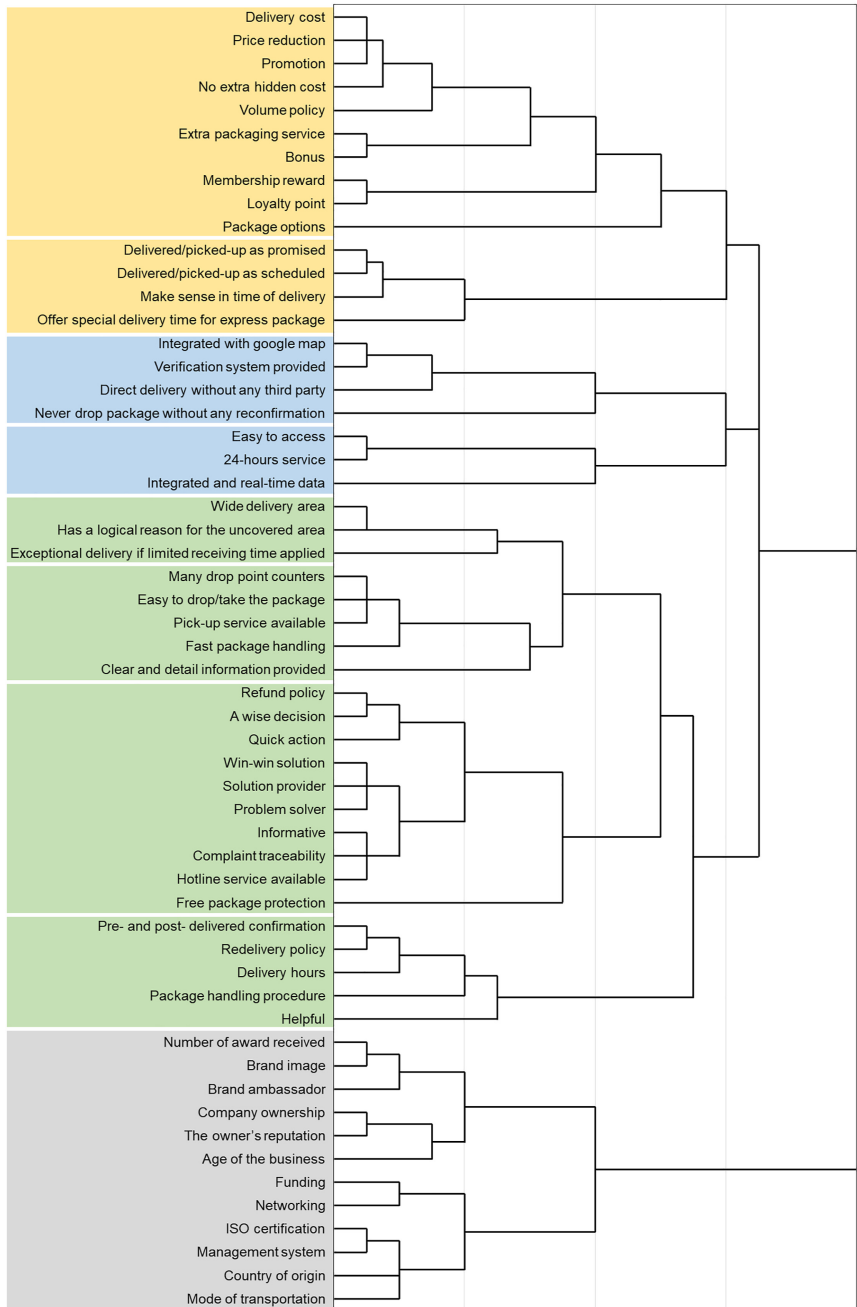


Figure 1.  
Research process

Information	Level of concern		Buyers-sellers' value of courier services
	Online buyer	Online seller	
Delivery cost	////	////	
Price reduction	////	///	
Promotion	////	////	
No extra hidden cost	////		
Volume policy	///	////	
Extra packaging service		////	
Bonus		///	
Membership reward		///	
Loyalty point		///	
Package options		////	
Delivered/picked-up as promised	////	////	
Delivered/picked-up as scheduled	///	////	
Make sense in time of delivery	////	///	
Offer special delivery time for express package	///		
Integrated with Google map	////	////	
Verification system provided	////	///	
Direct delivery without any third party	///		
Never drop package without any reconfirmation	////		
Easy to access	///	////	
24-h service		///	
Integrated and real-time data	///	///	
Wide delivery area		////	
Has a logical reason for the uncovered area		///	
Exceptional delivery if limited receiving time applied		///	
Many drop point counters		///	
Easy to drop/take the package		////	
Pick-up service available		////	
Fast package handling		////	
Clear and detail information provided	////		
Refund policy	////		
A wise decision	///		
Quick action	////		
Win-win solution	////	////	
Solution provided	////	////	
Problem solver	///		
Informative	////	///	
Complaint traceability	////	///	
Hotline service available	///		
Free package protection	///	///	
Pre- and post-delivered confirmation	///	///	
Redelivery policy	////		
Delivery hours	////		
Package handling procedure		///	
Helpful		////	
Number of awards received		///	
Brand image	///	///	
Brand ambassador	///		
Company ownership		///	
The owner's reputation		///	
Age of the business		///	
Funding		///	
Networking		///	
ISO certification		///	
Management system		///	
Country of origin		///	
Mode of transportation		///	

**Table 3.**  
FGD results

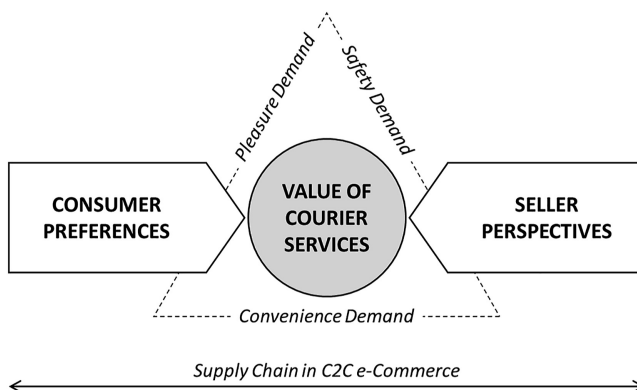


**Figure 2.**  
Dendrogram of cluster  
analysis from FGD  
results



Information	Theme	Psychological demand	Action	Buyers-sellers' value of courier services
Delivery cost, price reduction, promotion, no extra hidden cost, volume policy, extra packaging service, bonus, membership reward, loyalty point, package options	Delivery Cost	Pleasure	Taken	<hr/>
Delivered/picked-up as promised, delivered/picked-up as scheduled, make sense in time of delivery, offer special delivery time for express package	Lead Time	Pleasure	Taken	
Integrate with Google map, verification system provided, direct delivery without any third party, never drop package without any reconfirmation	Delivery Accuracy	Safety	Taken	
Easy to access, 24-h service, integrated and real-time data	Tracking System	Safety	Taken	
Wide delivery area, has a logical reason for the uncovered area, exceptional delivery if limited receiving time applied	Coverage Area	Convenience	Taken	
Many drop point counters, easy to drop/take the package, pick-up service available, fast package handling, clear and detail information provided	Pick-up/Drop Point Service	Convenience	Taken	
Refund policy, a wise decision, quick action, win-win solution, solution provider, problem solver, informative, complaint traceability, hotline service available, free package protection	Problem Solving Responsiveness	Convenience	Taken	
Pre- and post-delivered confirmation, redelivery policy, delivery hours, package handling procedure, helpful	Courier Attitude	Convenience	Taken	
Number of awards received, brand image, brand ambassador, company ownership, the owner's reputation, age of the business, funding, networking, ISO certification, management system, country of origin, mode of transportation	Company Portfolio	Result	Ignore	

**Table 4.** Information selection process



**Figure 3.** Conceptual framework

e-commerce's supply chain, consumer preferences and seller perspectives shaped the value of courier services which is driven by pleasure demand, safety demand and convenience demand.

There are eight factors from three psychological demands namely delivery cost, lead time, delivery accuracy, tracking system, coverage area, pick-up/drop point service, problem solving responsiveness and courier attitude. Furthermore, they are evaluated according to their different priority levels. Respondents scored 1 to 8 for the survey highly and less prioritized factors. In addition to the priority scale, they should also provide demographic information in the form of age, gender, number of online shopping transactions per month, the average value of online shopping and their role in online transactions. The survey to obtain data and information was conducted randomly online to respondents through social media and digital chat groups in July–August 2021. This dissemination method has the opportunity to increase the coverage of respondents and their diversity.

The use of online forms in this survey can eliminate invalid answers automatically. The process of screening and validating the answers to the questionnaire is conducted by determining the data and information determined in the online form. The form is considered invalid when the respondent does not provide all required data/information, has an incorrect answer or has more than one answer. Therefore, the number of incorrect/invalid answers and the response rate cannot be known because only valid questionnaires can be submitted. The first 200 surveys were selected for study from the valid questionnaires returned by respondents. The demographics of respondents are detailed in [Table 5](#).

In this study, the priority scale given by respondents was averaged for every factor to obtain a priority order. The average scale close to 1 means the factor is more prioritized and vice versa. It is proportionally converted into the three psychological demands and each contribution is calculated. Since the scale is in the range of 8 units, every 1 scale rise implies an increase in the contribution by 2.78%, and [Table 6](#) summarizes the survey results.

[Figures 4 and 5](#) visualize the order of priority of the factors considered and their contribution to the psychological demands.

Demography of respondent	Numbers	Proportion
<i>Age</i>		
below 20 y.o.	16	8%
20–30 y.o.	76	38%
30–40 y.o.	81	41%
40–50 y.o.	20	10%
above 50 y.o.	7	3%
<i>Gender</i>		
Male	92	46%
Female	108	54%
<i>Number of Monthly Transactions</i>		
less than 4 times	77	39%
5–8 times	54	27%
more than 8 times	69	34%
<i>Average Transaction Value</i>		
less than USD 50	70	35%
USD 50–100	98	49%
more than USD 100	32	16%
<i>Role</i>		
Online Buyer	100	50%
Online Seller	100	50%

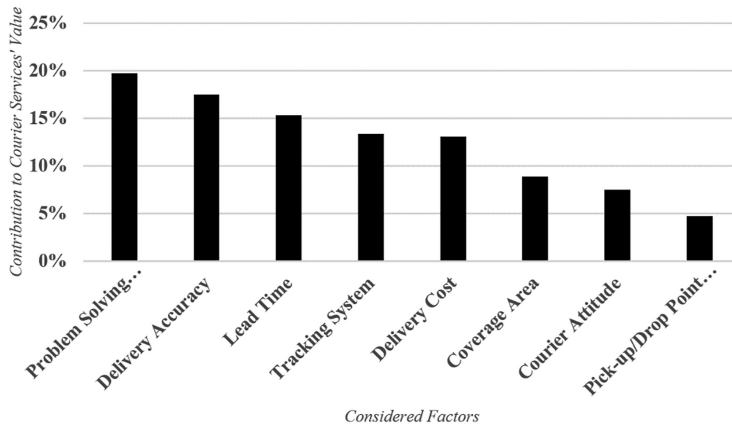
**Table 5.**  
Descriptive of  
respondents

*Convenience demand in choosing a courier service*

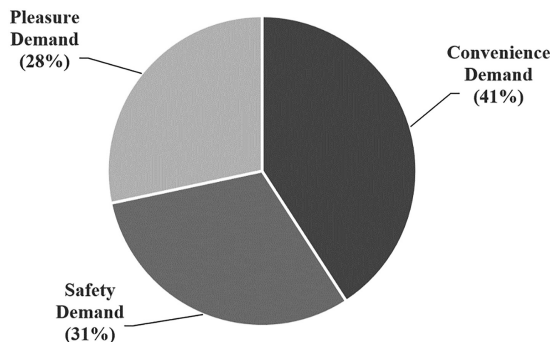
The surge in e-commerce results from online buyers looking for convenience while purchasing products (Xu et al., 2013). Similarly, online sellers seek to conveniently sell their products online to anyone at any time and place. The psychological urge by online buyers and online sellers to seek convenience is the same when choosing a courier service. Prompt, friendly and helpful services are all that they need that build a positive impression of a courier service.

Considered factors	Average scale	Priority order	Psychological demand	Contribution	
Delivery Cost	4.3	5	Pleasure	13%	28%
Lead Time	3.5	3		15%	
Delivery Accuracy	2.7	2	Safety	18%	31%
Tracking System	4.2	4		13%	
Coverage Area	5.8	6	Convenience	9%	41%
Pick-up/Drop Point Service	7.3	8		5%	
Problem Solving	1.9	1		20%	
Responsiveness					
Courier Attitude	6.3	7		7%	

**Table 6.** Survey result



**Figure 4.** Priority order of considered factors in choosing a courier service



**Figure 5.** Contribution of psychological demand in choosing a courier service

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Zhang *et al.* (2019) found that implementing sophisticated logistics management systems, including physical facilities, distribution networks and intelligent order processing methods, has resulted in greater convenience for online buyers and sellers. Online sellers prefer courier services that can deliver to many destinations, have many pick-up/drop point services and effectively solve complaints. This intent is in line with Xiao *et al.* (2018) who believed that final delivery solutions affect online shopping usage behavior.

Although not significantly different, the demands of convenience when choosing a courier service have the most contribution, where 41% of decisions come from the convenience demand. However, problem-solving responsiveness is dominant compared to coverage area, courier attitude and pick-up/drop point services. This indicates that the guarantee of post-transaction services primarily determines the service quality and not just by offering the capacity of the vendor. This finding is supported by Ejdys and Gulc (2020) who noted that the sender and receiver would be worried when there is a risk of failure to deliver the products, particularly if the courier service is not responsible and helps find a solution wisely.

Convenience demand in choosing courier services as logistics partners in C2C e-commerce are also mainly considered in other markets, both B2B and B2C. However, they have some differences due to their business complexity. The courier service works as a third-party logistics (3PL) in the business process of B2B and B2C under an official agreement or a working contract. Due to consumer expectations about services from the logistic partner in B2B and B2C increasing each time, strategic planning can be prepared together by both parties to improve their business performances (Yunus, 2021). This situation cannot be realized in C2C e-commerce.

This study showed findings that contradict those of Vyt *et al.* (2017), where the pick-up location was found to be a sine qua nonsuccess condition in the grocery pick-up system. The findings may occur due to differences in product characteristics and consumer perceptions when shopping at physical and online stores. The purpose of taking the ordered product is to attract consumers to shop for grocery products. This is because of its convenience and certainty, specifically in the overstore area in France, which is the study object by Vyt *et al.* (2017). In this study, the distinction between the importance placed on courier services is that the pick-up/drop-off is not a priority because the location is easily accessible within a fair amount of time. Online buyers and sellers are not worried about the product journey because of the safe package. This can be seen from the assessment, and when there is damage, the response to problem-solving is more critical than pick-up/drop point services.

Milioti *et al.* (2020) found that click-and-collect services were attractive to e-commerce consumers, but in contrast, it was the least priority for online buyers and sellers who participated in this study. These findings cannot be compared with each other because the study conducted by Milioti *et al.* (2020) does not provide other options as a comparison to e-commerce consumers who are respondents. In summary, buyers and sellers still give credit points for the provided pick-up/drop-off services, although it contributed only 5% of their considered decision.

The results are also attractive when compared with the findings of Zhou *et al.* (2020). Self-service package deliveries have been favored by e-commerce retailers, promoting consumers to adopt them. The presence of a pick-up/drop-off point will be beneficial for courier services, which is different from the findings of this study. According to Zhou *et al.* (2020), consumers do not mind picking up their order at the courier service's designated location due to performance expectancy, effort expectancy, social influences and facilitating conditions. This condition contradicts the demand for convenience that significantly contributes to assessing courier services in this study.

#### *Safety demand in choosing a courier service*

In the delivery process, the products from the seller are in the hands of a third party. At this point, the risk is relatively high since the products are being outdoor and not within their control, implying that they may be damaged or not even delivered to the intended party. Therefore, online buyers and online sellers demand a sense of safety when entrusting their delivery to a courier service. It is covered by easy-access and user-friendly technology that the vendor facilitates to track the product's position in real-time (Vivaldini *et al.*, 2012). Verification with the intended party is highly encouraged to avoid delivering the product to the wrong address and reconfirming the delivery address (McKinnon and Tallam, 2003; Karcz and Ślusarczyk, 2016).

Related to online buyers' and online sellers' concerns about products entrusted to a courier service, the safety demand contributed 31% to the decisions taken. From the survey results, delivery accuracy and a system that can track the movement of products are a top priority. Courier services should have tracking systems to assure clients of their products' safety and a competitive edge. According to Clinton (2008), this should no longer be a hurdle for courier services with technical support and system enhancements, even though substantial investment and effective data management are required. Moreover, McKinnon and Tallam (2003) convinced courier services to prioritize the security aspects of delivery, including when unattended delivery.

Compared with other e-commerce models, safety demand in C2C e-commerce has a significant difference. As found by Haryanto and Chang (2018), the safety factor in technology utilization is a major consideration for B2C related to logistic matters. A company as an online seller is concerned with its brand image and needs to maintain trust from online buyers, unlike online sellers in C2C.

#### *Pleasure demand in choosing a courier service*

Psychologically, it is normal for buyers and sellers to worry about the delivery services vendors provide. In the past, low prices and fast delivery have been the primary considerations in selecting a courier service. They also asked to get a special fare, discounted rate or free delivery cost. However, additional costs that appear suddenly or special tariffs are not expected due to the package volume out of the provisions. Milioti *et al.* (2021) stated that in certain cases, buyers are willing to pay additional fees provided delivery can be faster and safer. The loyalty points and membership rewards can be more valuable to the vendors. Furthermore, fast and on-time delivery is a psychological pleasure that attracts online transactions. Consistent with the work of Olsson *et al.* (2022), this study verified the expectation of online buyers and sellers to save time, gain flexibility and benefit from the service's ease of use.

Unlike the demands that previously prioritized cost and time efficiency, the price and speed of delivery are no longer the most preferred aspects, but they cannot be ignored. These findings relate to the demands of convenience and safety that contribute more than pleasure when selecting a courier service. Low costs and fast delivery cannot be achieved in case the responsibility and commitment of the vendor are doubted, leading to inaccuracies. This is in line with Razak *et al.* (2016) who stated that modern consumers are willing to pay more when they receive services that exceed their expectations.

The findings of this study indicated that price and time efficiency are less considered by online sellers and buyers that play in the C2C market. Contradictively, they are primary factors in choosing a B2C logistics partner. Due to tight competition in the B2C e-commerce model, online sellers prefer to have a mutual relationship with courier services that are reliable in cost delivery, dedicated resources and consumer services (Simangunsong and Subagyo, 2021). These factors' potential to support the sustainability of their business in the long term which is usually not considered by online sellers in C2C.

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### *Demographic analysis in choosing a courier service*

As predicted by [Kembro and Norrman \(2019\)](#), courier services have opportunities to create new knowledge in retail distribution management. Therefore, these services need helpful information from the survey results regarding the priority order of considered factors. There are differences in the order of priorities in specific demographics, but some tend to be the same ([Table 7](#)). This is a concern since it provides valuable input for the courier services to prepare their business strategies. The respondents' demographics related to age, gender, frequency of transactions, average monthly transaction value and role in online transactions need to be analyzed to determine the basis for their considerations.

Based on age and gender, the order of priority does not show a significant difference, as indicated in [Table 7](#). All age groups and gender consider how the vendor would respond when a problem occurs in the delivery process. The next priority is how the package can be sent to the intended destination properly and quickly. The results strengthen the findings of [Valaei et al. \(2016\)](#) that age and gender do not show differences in consumer preferences for service quality assessments of courier services.

The difference in priority is seen in respondents who frequently and rarely shop online. Those who transact online less than 4 times a month prioritize delivery accuracy and prefer vendors with a tracking system. In contrast, those who make more than 8 online transactions in a month prioritize lead time and delivery costs. This proves the argument of [Goldstein \(2011\)](#) that experiences are directly proportional to learning curve patterns. Therefore, respondents who frequently transact online no longer demand convenience but pleasure. This shows that they have confidence in the quality of services the selected courier service offers and are looking for additional benefits through cheaper and faster delivery.

Differences in the priority order also occur in respondents' demographics with the average value of the transactions made. Respondents whose average transaction is less than USD 50 prioritize cost and time, while those who transact for more than USD 100 are concerned about problem-solving responsiveness and delivery accuracy. This is logical considering the loss when the product is not delivered. This phenomenon agrees with the argument of [Shavitt and Barnes \(2020\)](#) that the previous condition experienced by consumers shapes behavior on their future journey.

According to [Ejdys and Gulc \(2020\)](#), the business resilience of the courier service depends on the seller perspective on its ease and usability, while the consumer preference is on confidence and service quality. Online buyers are more demanding of safety while online sellers seek convenience. This is seen from the respondents who are online buyers who prioritize delivery accuracy and lead time. Meanwhile, respondents who are online sellers are more dominantly considering problem-solving responsiveness and tracking system factors. Specifically, this study adds to the seminal work of [Olsson et al. \(2022\)](#) by demonstrating that courier services need to understand online buyers' personal needs, technology literacy and situational factors as these determinants affect service expectations.

### **Conclusions**

Online shopping is predicted to increase with changes in the lifestyle of modern society supported by technological sophistication. It offers various advantages over traditional shopping at physical retail stores. However, there are risks experienced, such as the delivery process carried out by courier services. The consumer preference for the courier service is on the work process, while the seller perspective is as a business support partner. They may look different but are similar because the objective is to provide quality service in the online transaction process.

The eight factors of consideration were identified in this study. The survey showed the priority factors are problem-solving responsiveness, delivery accuracy, lead time, tracking

Demography of respondent	Problem solving responsiveness	Considered factors in choosing a courier service						Pick-up/Drop point service
		Delivery accuracy	Lead time	Tracking system	Delivery cost	Coverage area	Courier attitude	
<i>Age</i>								
below 20 y.o.	2.0	2.5	3.5	4.4	4.4	5.7	6.3	7.2
20-30 y.o.	1.8	2.8	3.4	4.2	4.3	5.9	6.3	7.3
30-40 y.o.	1.9	2.7	3.6	4.3	4.4	5.6	6.3	7.2
40-50 y.o.	1.9	2.9	4.0	4.0	4.2	5.8	6.4	7.3
above 50 y.o.	1.9	2.7	3.6	3.9	4.3	5.9	6.2	7.5
<i>Gender</i>								
Male	1.9	2.7	3.5	4.3	4.4	5.8	6.3	7.1
Female	1.9	2.8	3.4	4.2	4.3	5.8	6.2	7.4
<i>Number of Monthly Transactions</i>								
less than 4 times	2.3	1.5	4.2	2.1	5.7	5.8	6.9	7.5
5-8 times	1.3	2.6	4.5	4.9	5.0	5.1	5.6	7.0
more than 8 times	2.2	4.1	1.7	5.6	2.1	6.4	6.5	7.4
<i>Average Transaction Value</i>								
less than USD 50	2.6	3.4	2.5	4.4	2.3	6.1	7.3	7.4
USD 50-100	1.5	2.8	4.5	4.7	5.0	5.1	5.2	7.2
more than USD 100	1.6	2.0	3.4	3.4	5.5	6.2	6.5	7.4
<i>Role</i>								
Online Buyer	2.6	1.4	2.3	4.9	4.3	6.4	6.6	7.5
Online Seller	1.2	4.1	4.7	3.5	4.4	5.2	5.9	7.0

Buyers-sellers' value of courier services

**Table 7.**  
Priority order by demography

system, delivery cost, coverage area, courier attitude and pick-up/drop point service. Notably, differences in age and gender do not change the priority of consideration, unlike changes in the frequency and total transactions. This is due to the experiences of past transactions and the anxiety that arises. Meanwhile, differences in consumer preferences and seller perspectives are also seen in priority orders. Online buyers expect products to be received undamaged and quickly, while online sellers expect courier services that have solutions when problems are experienced. Therefore, the role of technology is vital in the delivery process since the demands for convenience are dominant, followed closely by safety and pleasure.

The credibility and track record of the courier service is more critical than promotional offers, unfair competition and excessive perks. Integrated technology is predicted to become a top priority for both online buyers and sellers when selecting a courier service for their online shopping transactions. Therefore, these services need to maintain data management and continually improve the quality of the delivery system to achieve the optimal flow of product movement. Data mining and operational research algorithms are recommended to achieve the optimal level in the supply chain. This involves determining the track of distribution and the products movement point in the relay delivery system.

These results indicated that there are similarities and differences with previous studies. They can also be generalized and have the same opportunity to occur elsewhere. However, some variables may be contradictory due to differences in e-commerce conditions/policies and shopping interests. Online sellers who own and manage the e-commerce allow different judgments because of their authority. This dynamic is the consideration in concluding and recommending study results, including paying attention to the limitations of courier services to meet all the demands of convenience, safety and pleasure.

Considering the importance of consumer preferences and seller perspective on the courier services selection, there is a need for continuing study on this topic. The findings can differ due to different locations, times, and objectives. However, studies with varying points of view will further enrich the empirical results. Analyzing other demographics, such as educational background, monthly expenses, location of residence and related issues, is highly recommended, including a review of the theories and previous studies.

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