UNVEILING THE IMPACT OF LOGISTICS SERVICE QUALITY ON CUSTOMER SATISFACTION AND DEMOGRAPHIC FACTORS AS MODERATOR: INDONESIA QUICK COMMERCE PERSPECTIVE

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Abstract:

Background: Quick commerce is one of the biggest opportunities in the COVID-19 pandemic. In Indonesia, quick commerce has increased due to the trend of purchasing groceries online. Even though shopping activities are shifted online, customers still demand a service as excellent as they would order at a physical store.

Purpose: This study aims to determine the factors of logistics service quality that improve customer satisfaction and examine the demographic factors that enhance the relationship between logistics service quality and customer satisfaction.

Design/methodology/approach: This study employed a survey method to achieve broad data coverage. The data analysis techniques used in this study included hierarchical regression analysis and moderated regression analysis (MRA).

Finding/Results: The findings show that logistics service quality positively affects customer satisfaction for quick commerce on Java. This also indicates that age is a significant moderating variable in the relationship between logistics service quality and customer satisfaction.

Conclusion: Quick commerce companies should focus on younger customer satisfaction levels. Moreover, companies can increase customer satisfaction based on several logistics service quality factors, such as arranging courier training regarding how to treat customers, providing recommendations for similar products if a particular product is not available, or ensuring that the order will arrive in the customer's hands in a short time and safely.

Originality/value (state of the art): One of the important factors that could be a competitive advantage for a company is logistics service quality; however, research related to quick commerce in an emerging economy is still limited. This research enriches studies related to customer satisfaction, logistics service quality, and demographic factors (gender, age, and income level) by analyzing the perceptions of quick commerce customers.

Keywords: demographic factors, logistics service quality, quick commerce, physical store, customer satisfaction

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INTRODUCTION

Quick commerce is a new model of e-commerce that refers to quick deliveries, usually in less than an hour. Quick commerce focuses on providing express delivery services for a variety of groceries, including meat, fish, vegetables, etc. Customers also want to be convinced that fresh goods will be delivered in an undamaged state. In Indonesia, the trend of online shopping, typically for fresh products, has been increasing. Based on the survey conducted by We Are Social (2023), it indicates that the percentage of customers buying groceries via online stores increased by 38.1%. Moreover, the quick commerce market worldwide is projected to achieve a revenue of USD 195 billion by the year 2025 (Statista, 2024). It proves that customers still have a high demand for quick commerce even after the pandemic. There are some quick commerce in Indonesia include Shopee Express, Tokopedia NOW!, HappyFresh, TaniHub, Astro, Bananas, GrabMart Kilat, AlloFresh, Radius, Dropezy, Segari, and Sayurbox. Even though shopping activities are shifted online, customers still demand the same level of service as excellent as they do when ordering at a physical store.

On the other hand, the quality of logistics service is one of the important keys that can be used as a competitive advantage for companies, especially in the online shopping industry (Jiang et al. 2021). E-commerce companies need to improve the quality of their logistics services to ensure product freshness and speed of the distribution process, so that they can fulfill and increase customer satisfaction (Hong et al. 2019). Logistics service quality was first proposed by Mentzer (2001). The result of that study is that nine factors of logistics service quality can evaluate customer satisfaction, including personnel contact quality, order release quantities, information quality, ordering procedures, order accuracy, order conditions, order quality, order discrepancy handling, and timeliness. Bowersox et al. (1995) explained that a logistics service effectively builds closer customer relationships.

Several previous studies on logistics service quality with various approaches have been conducted. One of them is related to logistics service quality on customer satisfaction. As an example, Choi et al. (2019) researched the relationship between logistics service quality and customer satisfaction of e-commerce in China. Whereas, Akil & Ungan (2022) are about e-commerce customers in Türkiye and Sutrisno et al. (2019) are about FedEx customers in Indonesia. In addition, this study also investigates demographic factors as moderators. This refers to some studies that have been conducted previously, including Nyarku et al. (2018) on University of Cape Coast students in Ghana with customer satisfaction, banking status, and gender as moderator on the relationship between service quality and customer loyalty, Perera and Sachitra (2019) on internet users in Sri Lanka with income level as a moderator variable between the relationship customer satisfaction and online shopping, and Pitchayadejanant and Nakpathom (2016) examined several demographic factors as moderator including gender, age, education and income level relationship between service quality, customer satisfaction and customer loyalty low cost carriers passengers in Thailand. However, these studies are still limited in the population examined. Hence, there is a need for conducting a new study to address this gap.

Besides, research related to quick commerce by using logistics service quality in an emerging economy is still limited. The novelty of this study lies in employing demographic factors as moderators between logistics service quality and customer satisfaction of quick commerce in Indonesia. This research only focuses on eight dimensions, without using order dimensions for quality. This decision is considered because of the object of this research, quick commerce, that do not produce its products directly and only sells goods for daily necessities.

Therefore, this study aims to comprehensively investigate how logistics service quality impacts customer satisfaction within Indonesian quick commerce. Also, the purpose of this study is to determine whether demographic factors have a significant effect as a moderating variable of the relationship between logistics service quality and customer satisfaction. The need to understand and predict events that occur in quick commerce companies is also the main reason for this study. This research can provide insight into quick commerce companies regarding logistics service quality that can increase customer satisfaction.

METHODS

This study is basic research using the quantitative method. The data sources were obtained from online-based questionnaires. The questionnaires were designed using two types of scales, including the nominal scale

and the interval scale. A nominal scale is used for questions related to the respondent demographics. Meanwhile, the interval scale is used to measure each of the variables. The type of interval scale used is the Likert scale with five categories of answers, namely: 5 (strongly agree), 4 (agree), 3 (neutral), 2 (disagree), and 1 (strongly disagree). This survey was conducted online by sending the link to the survey platform via social media, including WhatsApp, LinkedIn, Twitter, and Instagram.

The population of this study is the end consumers who have used quick commerce services, including Shopee Express, Tokopedia NOW!, HappyFresh, TaniHub, Astro, Bananas, GrabMart Express, and AlloFresh. Moreover, this study mainly focuses on consumers located on Java Island since it has the most internet users in Indonesia (CNN Indonesia, 2021). To determine the sample size, this study used the Isaac & Michael table (1981) at a 5% error rate. With a total of 8,202,390 internet users located in Java (CNN Indonesia, 2021), the sample size is 349 respondents. The sampling technique used in this study is non-probability sampling with the purposive sampling method. It means that all respondents who were chosen as a sample were selected based on the criteria that were determined from the target population. In this case, the consumers who have used quick commerce at least three times in the last six months were selected.

Before the formal questionnaire, a pre-test was conducted with thirty participants to validate and verify the reliability of the questionnaire. This validity test method uses Confirmatory Factor Analysis (CFA). CFA is a tool used to measure how well the variables being measured represent several constructs (Hair et al. 2010). The criteria for decision making using the CFA model are that if the factor loading value is > 0.7, then the instrument is stated to be valid. Apart from that, another purpose of using the CFA model is to find out whether the data fits the model that has been previously formed. This can be seen from several measurement criteria, including Chi Square, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), and Goodness of Fit (GFI).

In addition, research instruments also need to be tested for reliability. The purpose of a reliability test is to determine whether the results of a measurement are permanent, reliable, and accurate (Darma, 2021). The criteria for reliability testing use Cronbach's Alpha

that if the Cronbach's Alpha value is ≥ 0.7, then the instrument is considered reliable. Hierarchical regression analysis is used to analyze the data. Furthermore, to examine the moderating effect of demographic factors on the relationship between logistics service quality and customer satisfaction, this study employed moderated regression analysis (MRA). This data was processed using JASP software version 18.

Many studies have shown that logistics service quality affects customer satisfaction. Research conducted by Jiang et al. (2021), Fernandes et al. (2018), Versa & Subagio (2014), and Tedjakusuma et al. (2020) concluded that logistics service quality and customer satisfaction have a positive relationship. According to Nugroho et al. (2020), if the company can provide high logistics service quality to meet customers' expectations, then customer satisfaction will increase as well. Moreover, research conducted by Japarianto (2018) stated that providing the best logistics services for customers is one of the goals of companies so that customers feel satisfied. Based on previous research on the relationship between logistics service quality and customer satisfaction, the following hypotheses can be proposed in this study:

H1: There is a significant positive effect of the quality of logistics services on customer satisfaction

The first factor of logistics service quality is personnel contact quality. The factor is used to determine whether the courier from quick commerce has good ethics when delivering orders to customers. This dimension is crucial, especially for last-mile delivery, because the courier will be in direct contact with the customer (Jiang et al. 2021). According to Ho et al. (2012), contact personnel play an important role in customer satisfaction. By recognizing this factor, companies can provide training for employees to provide better quality for customers. Improving the quality of personal contact will increase customer satisfaction (Jiang et al. 2021). Based on previous research on the relationship between personnel contact quality and customer satisfaction, the following hypotheses can be proposed in this study:

H1a: There is a significant positive effect of personnel contact quality on customer satisfaction.

The second factor in logistics service quality is order release quantities. This factor is also an important component in logistics service quality. Order release quantities refer to the ability of quick commerce to fulfill the quantity ordered by the customer. Research conducted by Versa & Subagio (2014) showed that

there is a positive effect of order release quantities on customer satisfaction. According to Mentzer et al. (2001), customers will feel satisfied if they get the desired quantity of the product. Based on previous research on the relationship between order release quantities and customer satisfaction, the following hypotheses can be proposed in this study:

H1b: There is a significant positive effect of order release quantities on customer satisfaction.

Another factor that can affect customer satisfaction is information quality (Ho et al. 2012; Choi et al. 2019). In online shopping, information plays a big role in helping customers decide the products they need. This factor also refers to the ease and accessibility of product and location searches. Information regarding product specifications, visual images, and product descriptions must be available to facilitate customer decisions in purchasing. According to Handoko (2016), online shopping customers can not directly assess the quality of the products they order, so they rely on the information provided by the online shop. If the information about the product is available and adequate, then customers can use that information to make purchasing decisions (Mentzer et al. 2001). Based on previous research on the relationship between information quality and customer satisfaction, the following hypotheses can be proposed in this study:

H1c: There is a significant positive effect of information quality on customer satisfaction.

Ordering procedures are related to how easy the procedure is to make purchases in quick commerce. In addition, ordering procedures are used to determine whether the process of ordering at quick commerce is running efficiently and effectively. Research conducted by Tambunan (2020) concluded that the food ordering procedure greatly affects guest satisfaction and the smooth operation of the restaurant. Benny & Rekarti (2017) also stated that customer satisfaction would be increased if the company provided website services that make it easier for consumers to make purchases. Otherwise, poor ordering procedures might cause customers to leave the online shop even before they decide to buy products. Based on previous research on the relationship between ordering procedures and customer satisfaction, the following hypotheses can be proposed in this study:

H1d: There is a significant positive effect of ordering procedures on customer satisfaction.

Furthermore, the accuracy of the type and number of products sent also affects customer satisfaction. This refers to the order accuracy factors. According to Akil & Ungan (2022), customers who do not receive the product they ordered correctly will remember that unpleasant experience. They will likely not order from the same company again. Research conducted by Ho et al. (2012) and Versa & Subagio (2014) explained that order accuracy and customer satisfaction have a positive relationship. Based on previous research on the relationship between order accuracy and customer satisfaction, the following hypotheses can be proposed in this study:

H1e: There is a significant positive effect of order accuracy on customer satisfaction.

Then, the company also needs to be concerned about the conditions of products that are ordered by the customers. Customers anticipate that no damage will occur during the delivery process. Research conducted by Sutrisno (2016) stated that companies need to provide special packaging for each type of good so that the condition of the goods sent by the company is maintained and in good condition. Akil & Ungan (2022) also stated that to ensure the products are delivered in good condition, they should be stored in good packaging so that no damage occurs during the handling and transportation process. Based on previous research on the relationship between order conditions and customer satisfaction, the following hypotheses can be proposed in this study:

H1f: There is a significant positive effect of order conditions on customer satisfaction.

The next factor that can affect customer satisfaction is order discrepancy handling. This order discrepancy handling typically occurs when customers have problems with the order. Budiarti (2011) concluded that customers could feel satisfied if the company could handle their complaints thoroughly and appropriately. This is supported by Artanti & Ningsih (2010), who state that handling complaints effectively can provide an opportunity to turn a dissatisfied customer into a satisfied customer. Based on previous research on the relationship between order discrepancy handling and customer satisfaction, the following hypotheses can be proposed in this study:

H1g: There is a significant positive effect of order discrepancy handling on customer satisfaction.

Lastly, according to Akil & Ungan (2022) and Ho et al. (2012), another factor that has a positive effect on satisfaction is timeliness. This refers to whether the delivery duration is as promised. Research conducted by Jiang et al. (2021) in the fresh product e-commerce industry showed that companies could improve the quality of punctuality. This could be done by increasing transportation capacity, reducing delivery times, and responding to customer service requests quickly that which can have implications for increasing customer satisfaction. Based on previous research on the relationship between timeliness and customer satisfaction, the following hypotheses can be proposed in this study:

H1h: There is a significant positive effect of timeliness on customer satisfaction.

Furthermore, this study also used demographic factors as a moderator variable in the relationship between logistics service quality and customer satisfaction. Those demographic factors are gender, age, and income level. According to Zhong & Moon (2020), who researched fast-food restaurants in China, gender differences are related to how male and female customers evaluate restaurant quality. Razak (2017) conducted research on banking customers in Southeast Sulawesi, Indonesia, and stated that age has a stronger effect on customer loyalty, where younger customers tend to be more loyal and continue to use banking services. On the other hand,

Pitchayadejanant & Nakpathom (2016) also stated that consumers who have low incomes will need the right information to increase satisfaction. Based on previous research on the relationship between timeliness and customer satisfaction, the following hypotheses can be proposed in this study:

H2: Gender has a significant effect as a moderating variable of the relationship between logistics service quality to customer satisfaction.
H3: Age has a significant effect as a moderating variable of the relationship between logistics service quality to customer satisfaction.
H4: Income level has a significant effect as a moderating variable of the relationship between logistics service quality to customer satisfaction.

Based on the literature review, the conceptual framework of this research can be determined. This conceptual framework shows the relationships between the variables studied. Figure 1 shows the conceptual framework of this research.

RESULTS

Before proceeding to the hypothesis testing, we performed an instrument check to ensure it has good psychometric properties, namely, it is valid and reliable.
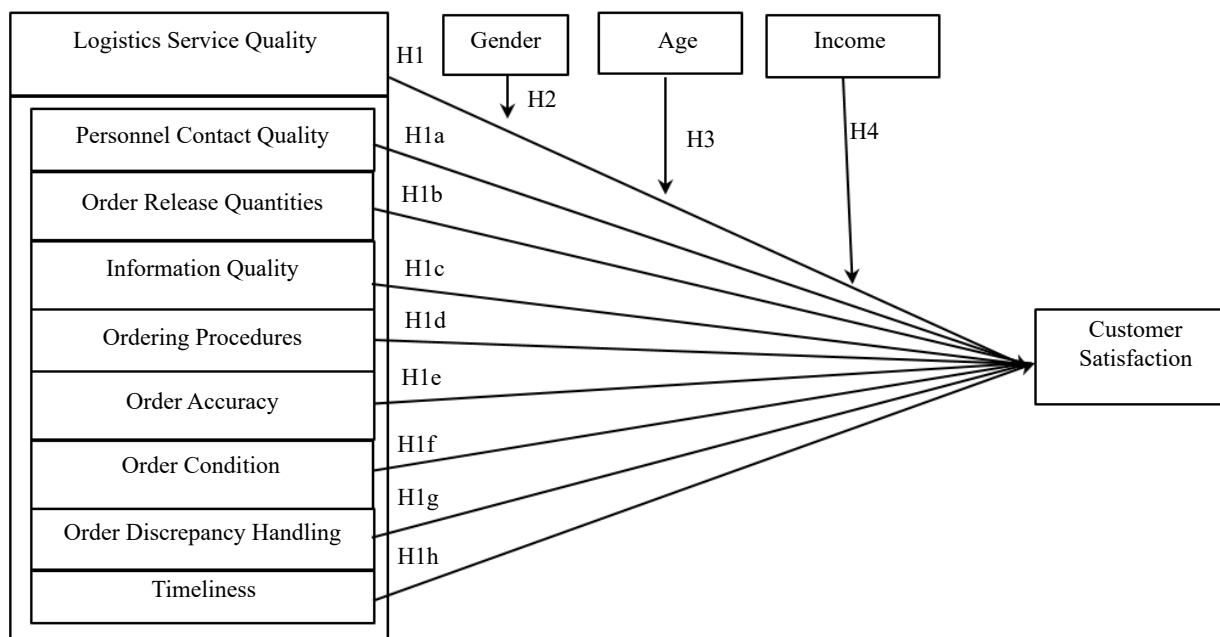

Figure 1. Reseach framework

Instrument Test

The validity test was done using the CFA (Confirmatory Factor Analysis). The results are shown in Table 1. All instruments of customer satisfaction have a factor loading value > 0.7. Thus, it can be concluded that all items are valid. In addition, to find out whether the data fits the previously formed model, we tested its goodness-of fit, including Chi-Square, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), and Goodness of Fit (GFI). The results of each measurement of the Absolute Fit Test can be seen in Table 2.

It shows that measurements using the Chi-Square test, CFI, TLI, SRMR, and GFI match the criteria based on Hair et al. (2010). The value of RMSEA was 0.104, which is above the acceptable threshold. However, this limitation could be due to the number of samples. So, it can be said that the model is quite good and acceptable.

Descriptive Analysis

Respondents' descriptions are grouped based on demographic factors, including gender, age, income level, and residence. Further explanation can be seen in Table 3. We run an ANOVA test to find out if there is a difference in satisfaction between male and female customers, among different ages, and different income levels, on customer satisfaction. Table 4 shows that only age could further serve as a moderating variable in the relationship between logistics service quality and customer satisfaction. From Table 4, it indicates that there is a significant difference between older and younger customer satisfaction. Furthermore, these differences can be illustrated in Figure 2.

Table 1. Results of Validity Test

Item	Variable	Standardized	Cronbach's alpha
KPL1		0.896	
KPL2	Customer Satisfaction	0.905	0.937
KPL3		0.889	
PCQ1		0.914	
PCQ2	Personnel Contact Quality	0.929	0.894
PCQ3		0.752	
ORQ1		0.740	
ORQ2	Order Release Quantities	0.891	0.823
ORQ3		0.713	
IFQ1		0.756	
IFQ2	Information Quality	0.819	0.814
IFQ3		0.756	
ODP1		0.904	
ODP2	Ordering Procedures	0.932	0.924
ODP3		0.853	
OAC1		0.792	
OAC2	Order Accuracy	0.880	0.754
OAC3		0.708	
ODC1		0.753	0.787
ODC2	Order Condition	0.710	
ODC3		0.804	
ODH1		0.835	0.916
ODH2	Order Discrepancy Handling	0.932	
ODH3		0.892	
TLS1		0.758	0.828
TLS2	Timeliness	0.924	
TLS3		0.734	

Table 2. Absolute Fit Test

Metric	Value	Criteria	Conclusion
Chi Square	0.259	p-value > 0.05	Acceptable
CFI	0.967	$0.90 \leq CFI < 0.97$	Acceptable
TLI	0.916	$0.90 < TLI$	Acceptable
RMSEA	0.104	$0.05 < RMSEA \leq 0.08$	Not Fit
SRMR	0.057	$0.05 < SRMR$	Fit
GFI	0.938	$0.90 \leq GFI < 0.95$	Acceptable

Table 3. Descriptive Analysis

Demographic Factors	Category	Frequency	%
Gender	Male	136	38.97%
	Female	213	61.03%
Age (years old)	10 – 25	173	49.57%
	26 – 41	168	48.14%
	42 – 57	8	2.29%
Income Level (per year)	> 120 mio	40	11.46%
	60 – 120 mio	83	23.78%
	36 – < 60 mio	79	22.64%
	< 36 mio	147	42.12%
Residency	Java Island, Indonesia	349	100%

Table 4. Descriptive analysis of demographic factors and customer satisfaction

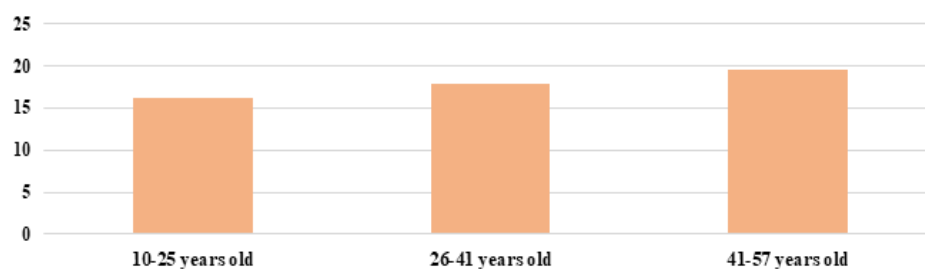| Variable	Sum of Squares	df	Mean Square	F	p-value
Gender	0.984	1	0.984	0.164	0.686
Age	339.202	2	169.601	33.604	< .001
Income Level	2.208	3	0.736	0.122	0.947

Figure 2. Customer satisfaction level by age group

It shows that there are differences in average satisfaction between age groups. Customers aged 42-57 years have the highest average satisfaction of 19.625. Meanwhile, customers aged 26-41 years have an average satisfaction of 17.935, and customers aged 10-25 years have the lowest average compared to other groups, which is 16.104.

Assumption Test

The normality of the data was tested using the Normal Probability Plot test. The result showed that the data spread around the diagonal line and followed the diagonal direction. This means that the data is normally distributed. We also tested the assumption of homoscedasticity using Spearman's Rho correlation. Each independent variable has a significant value (p-value < 0.05). Thus, no heteroscedasticity is evident.

Furthermore, the multicollinearity test was performed using Tolerance and VIF statistics. Each independent variable has a Tolerance value of greater than 0.1 (ranged 0.419-0.802) and a VIF value of less than 10 (ranged 1.247-2.386). Thus, drawing from Hair et al. (2010), it can be concluded that the regression model does not have symptoms of multicollinearity.

Hypothesis Testing

In this study, the tests carried out were the influence of personnel contact quality (X1a), order release quantities (X1b), information quality (X1c), ordering procedures (X1d), order accuracy (X1e), order condition (X1f), order discrepancy handling (X1g), and timeliness (X1h) simultaneously on customer satisfaction (Y). It can be seen in Table 5. The result of the F-test shows a significant value (F = 57.888, p-value < 0.001), indicating that the model (X1a to X1h) significantly predicts customer satisfaction. Thus, hypothesis 1 is accepted.

The R-square value is 0.519; thus, the ability of the logistics service quality, which consists of personnel contact quality (X1a), order release quantities (X1b), information quality (X1c), ordering procedures (X1d), order accuracy (X1e), order condition (X1f), order discrepancy handling (X1g), and timeliness (X1h), to explain customer satisfaction (Y) simultaneously is 51.9%, while the remaining 48.1% is influenced by other factors that are not investigated in this study. Furthermore, to find out which of the logistics service quality dimensions are significantly related to customer satisfaction, we performed a regression test. The result is shown in Table 6.

Table 6 shows that Personnel Contact Quality (X1a), Order Release Quantities (X1b), Information Quality (X1c), Ordering Procedures (X1d), Order Condition (X1f), and Timeliness (X1h) result in a *p*-value of < 0.05. It means those dimensions have a significant effect on customer satisfaction (Y). Thus, hypotheses 1a, 1b, 1c, 1d, and 1h are supported.

From the results of the regression analysis above, the result of the regression model is as follows:

The result of the regression model:
$$\hat{Y} = 0.138\ X1_a + 0.357\ X1_b + 0.161\ X1_c + 0.346\ X1_d + 0.140\ X1_f + 0.123\ X1_h$$

In this study, three variables are predicted as moderators in the relationship between logistics service quality and customer satisfaction, namely gender, age, and income. The results of the moderated regression analysis are displayed in Table 7.

Table 5. Result of Regression Analysis of LSQ on Customer Satisfaction

Variable	B	t-score	p-value	Conclusion
LSQ (X1)	0.142	19.364	< 0.001	H1 supported

Table 6. Result of Regression Analysis of Dimensions of LSQ on Customer Satisfaction

| Variable	B	t-score	p-value	Conclusion
Personnel Contact Quality (X1a)	0.138	3.677	< 0.001	H1a supported
Order Release Quantities (X1b)	0.357	6.230	< 0.001	H1b supported
Information Quality (X1c)	0.161	2.291	0.023	H1c supported
Ordering Procedures (X1d)	0.346	5.086	< 0.001	H1d supported
Order Accuracy (X1e)	0.024	0.431	0.667	H1e not supported
Order Condition (X1f)	0.140	1.975	0.049	H1f supported
Order Discrepancy Handling (X1g)	0.033	0.683	0.495	H1g not supported
Timeliness (X1 h)	0.123	2.040	0.042	H1h supported

Table 7. Results of the Moderators Influencing the Relationship between Logistics Service Quality and Customer Satisfaction

Model	Standardized Coefficients	t	p-value
LSQ	0.208	1.221	0.223
LSQ x Gender	-0.073	-1.927	0.055
LSQ x Age	0.805	3.064	0.002
LSQ x Income	-0.542	-1.899	0.058

Aligned with the ANOVA test, only Age influences the relationship between Logistics Service Quality and Customer Satisfaction. There is no difference between genders (male and female), as well as among different incomes. The differences among age groups are depicted in Figure 3.

The X-axis in Figure 3 shows logistics service quality, while the Y-axis shows customer satisfaction. It can be seen that there are differences between age groups in moderating the relationship between logistics service quality and satisfaction. Customers aged 10-25 years old weaken the relationship. This is proved by the orange diagonal line representing logistics service quality on customer satisfaction. Then, for customers aged 10-25 years, the satisfaction level changed lower, which is represented by a red diagonal line. Contrast with the customers aged 26-41 years old tend to be

constant (no changes). This result can be seen in the millennial column, where the line of satisfaction level shows no changes before and after adding customers aged 26-41 years old. It can be concluded that customers aged 26-41 years old have no effect in moderating the relationship between logistics service quality and customer satisfaction. On the other hand, customers aged 42-57 years old proved strengthened in the relationship between logistics service quality and customer satisfaction. It can be seen that the orange diagonal represents the level of customer satisfaction. By adding customers aged 42-57 years old, the level of satisfaction becomes higher, which is shown by a red diagonal line. Based on these results, Hypothesis 3 (H3) regarding Age as the moderator was supported, while there is not enough evidence to support H2 (Gender) and H4 (Income).
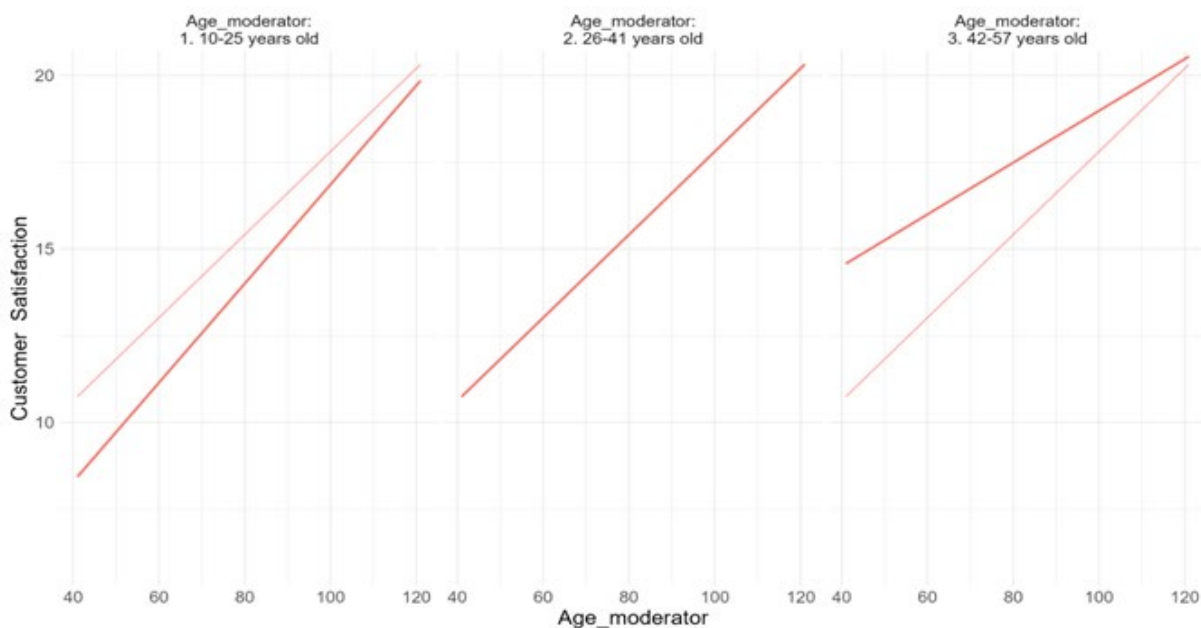
Notes:
• An orange diagonal line indicates the level of customer satisfaction before the effect of the moderating variable
• A red diagonal line indicates the level of customer satisfaction after the effect of the moderating variable

Figure 3. Age As The Moderating Variable in the Relationship of LSQ to Customer Satisfaction

The Impact of Logistics Service Quality on Customer Satisfaction

The results of this study indicate that Logistics service quality positively affects customer satisfaction for quick commerce in Java, especially personnel contact quality, order release quantities, information quality, ordering procedures, order conditions, and timeliness. Two factors were insignificant, namely, order accuracy and order discrepancy handling. These final results are a bit puzzling since order accuracy and order discrepancy handling seem to determine consumer satisfaction when shopping online. However, this can also be understandable if the quick commerce company has guaranteed an appropriate product replacement if something goes wrong. In this case, consumers will remain happy as long as they get good experiences in the event of a service failure.

The Role of Demographic Factors in Moderating the Impact of Logistics Service Quality on Customer Satisfaction

Furthermore, age moderates the relationship between logistics service quality to quick commerce customer satisfaction in Java. This result is supported by Pitchayadejanant & Nakpathom (2016). According to the results of this study, older customers (41-57 years) have a higher level of satisfaction than younger customers. This finding is not surprising because older people tend to be fussier than younger people, so the positive relationship between logistics service quality and customer satisfaction is more pronounced.

Meanwhile, gender and income do not serve as moderators in the relationship between logistics service quality and customer satisfaction in quick commerce in Java. That aligns with research conducted by Sufi & Suharti (2021) that gender is not a moderator between the effect of intrinsic motivation on digitalization readiness and ICT knowledge on MSME digitalization readiness. The level of satisfaction between male and female customers is similar (not too significantly different), so the effect of the moderator variable is insignificant.

However, based on the results of this study, the satisfaction of quick commerce customers with higher and lower incomes is the same. Both higher and lower-earning customers are similar in satisfaction levels. These results contrasted with the research by Pitchayadejanant & Nakpathom (2016) and Perera & Sachitra (2019), which found that income has a moderating role.

The Impact of Personnel Contact Quality on Customer Satisfaction

This study determines the logistics service quality of quick commerce that can further improve customer satisfaction. Firstly, personnel contact quality has a positive effect on customer satisfaction. This result aligns with the research conducted by Uvet (2020). The attitude and ability of couriers to respond to emergencies, professional skills in delivering products to customers, and understanding of customer needs are very important (Jiang et al. 2021). Even though consumers purchase products online, customers expect direct interaction.

In this case, a quick commerce company can provide training and procedures to couriers, such as implementing 5S (Japanese housekeeping method). By giving a smile and greeting customers in a friendly manner, the company can make them happy. Happy customers will give a good impression and experience of the company.

The Impact of Order Release Quantities on Customer Satisfaction

Order release quantities influence quick commerce customer satisfaction. This is consistent with the research viewpoint of Versa and Subagio (2014). If a quick commerce company cannot provide a particular amount of a product, then the company can provide recommendations for similar products to meet customer needs. Information quality affects quick commerce customer satisfaction. This result is supported by the viewpoint put forward by Choi et al. (2019), Ho et al. (2012), and Lin et al. (2010).

Customers make purchases online, so they rely on the information provided. Therefore, companies need to provide adequate information and can represent product catalogues, such as visuals that represent the product, product expiration, size availability, and other information that is considered important to assist customers in determining the selected product.

The Impact of Ordering Procedures on Customer Satisfaction

The ordering procedure has a positive effect on quick commerce customer satisfaction. This result is consistent with the viewpoint of Mentzer et al. (2001). Customers expect transaction processes in quick commerce to be easy, fast, and efficient. Customer satisfaction will increase if they feel comfortable with the purchase procedure in quick commerce.

The Impact of Order Accuracy on Customer Satisfaction

Meanwhile, order accuracy does not affect quick commerce customer satisfaction. This is contradictory to the results of research conducted by Akil & Ungan (2022) and Versa & Subagio (2014). Even though the ordered product is unavailable, customers do not have a problem if a quick commerce company gives a similar product. Customers will feel satisfied as long as they get the product they need.

The Impact of Order Conditions on Customer Satisfaction

Order conditions have a positive effect on quick commerce customer satisfaction. This result is supported by Uvet (2020) and Versa & Subagio (2014). Suppose the company cannot maintain the product properly during the delivery process and reach the customer's hands.

In that case, the customer will most likely choose another company for the next purchase because they are unsatisfied (Akil & Ungan, 2022). Order discrepancy handling does not have a positive effect on quick commerce customer satisfaction. This result is consistent with the viewpoint put forward by Uvet (2020). Although a quick commerce company cannot quickly respond to problems that occur in the delivery of orders, it will not affect customer satisfaction.

The Impact of Timeliness on Customer Satisfaction

Timeliness has a positive effect on quick commerce customer satisfaction. This result aligns with the research conducted by Ho et al. (2012), Khairi & Cahyadi (2023), and Akil & Ungan (2022). Quick commerce provides daily products, so customers who buy the products at quick commerce want the goods

to arrive at their destination in a short time. Therefore, companies need to increase their transportation capacity and reduce the delivery duration to have implications for increasing customer satisfaction (Jiang et al. 2021).

Managerial Implications

The findings of this study can be an initial guide for managers in managing quick commerce businesses. The following factors significantly affect customer satisfaction in instant online shopping: personnel contact quality, order release quantities, information quality, ordering procedures, order conditions, and timeliness. All factors are under the manager's control, so with good management, quick commerce businesses will be better able to compete through satisfied consumers. In general, satisfied consumers will recommend others and tend to purchase from the same seller in the future.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the results of this study, the conclusions are as follows: Logistics service quality has a positive effect on customer satisfaction for quick commerce in Java Island. Furthermore, several dimensions of logistics service quality influence customer satisfaction, including personnel contact quality, order release quantities, information quality, ordering procedures, order conditions, and timeliness.

In addition, order release quantities are one of the dimensions of logistics service quality that has the biggest effect on customer satisfaction. Meanwhile, the other two dimensions, order accuracy and order discrepancy handling, do not affect customer satisfaction. In addition, the demographic factor that has a moderating role in the relationship between logistics service quality and customer satisfaction is age. Meanwhile, gender and income have no role in moderating the relationship between logistics service quality and customer satisfaction.

Recommendations

Based on this study, several recommendations can be put forward: Firstly, Quick Commerce must focus on its logistics service quality since some of these factors can increase customer satisfaction. The company should

be able to arrange courier training regarding how to treat customers, provide recommendations for similar products if the particular product is not available, or ensure the order will arrive in the customer's hands in a short time and safely. Additionally, quick commerce companies should pay attention to older customers' satisfaction level because older customers tend to be treated better than younger customers.

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