

The Impact of Logistics Service Quality in Satisfaction of Fresh Food E-Commerce Sayurbox

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ABSTRACT

Currently E-commerce is considered an important platform for consumers. In 2019, the e-commerce model, namely fresh food e-commerce, experienced stable growth of 29.2% or reached a value of USD 162 billion. The new model of e-commerce is fresh food e-commerce which is revolutionizing the online market by changing the way fresh products are distributed. Fresh food e-commerce services in Indonesia began to appear in 2013. With the development of technology, more and more fresh food e-commerce is emerging in Indonesia. Some fresh food e-commerce in Indonesia are Sayurbox, Happy Fresh, TaniHub, Segari, and others. This research was conducted to determine the influence of logistics service quality on user satisfaction of the Sayurbox e-commerce fresh food service in Indonesia. This research is quantitative in nature and uses a questionnaire as a data collection instrument which was distributed to 212 respondents. There are 3 variables in this research, namely perceived importance, satisfaction with the quality of logistics services which consists of 5 dimensions, namely the quality of personnel contact, quality of delivery, quality of information, quality of timeliness and quality of empathy. This research uses SPSS and SEM AMOS software. The results of this research show that perceived importance has a significant effect on satisfaction and there are dimensions in the quality of logistics services that do and do not have an effect on satisfaction.

Keywords: Logistic Service Quality, Perceived Importance, Satisfaction.

1. INTRODUCTION

The new model of e-commerce is fresh food e-commerce which revolutionizes the online market by changing the way fresh products are distributed (Zhang, 2019). Fresh produce has the characteristic of being easily damaged which causes its value to decrease exponentially after harvest. This makes the supply chain important for fresh food e-commerce. The most common business model in agricultural e-commerce is business-to-business (B2B). An important component in product marketing and maintaining market competitiveness in the fresh food e-commerce sector is logistics service quality, which is closely related to consumers. Therefore, consumer purchase evaluations determine how much they value logistics service quality. The core task of fresh food e-commerce is to improve logistics service quality based on customer satisfaction. (Huang, 2022; Hong, 2019)

Fresh food e-commerce services in Indonesia began to appear in 2013. However, of the several services that existed at that time, only one has survived until now. Daily Social assesses that fresh food e-commerce will continue to develop in Indonesia because people are becoming more familiar with technology. Although fresh food e-commerce is currently mostly only found in big cities in Indonesia. (Social, 2020). Fresh food e-commerce is used as a mainstay by the Indonesian people because it only requires an application on a smartphone. With fresh food e-commerce, people can buy food ingredients and they will be sent by the service that provides them. As technology continues to develop, more and more fresh food e-commerce is emerging in Indonesia. Some fresh food e-commerce in Indonesia are Sayurbox, Happy Fresh, TaniHub, Segari, and others.

Sayurbox is one of the fresh food e-commerce in Indonesia. Sayurbox is managed by PT Kreasi Nostra Mandiri. Sayurbox is an application that provides fresh products for household (B2C) and restaurant (B2B) needs. Sayurbox makes it easy for consumers to buy fresh produce directly from regional farmers. Sayurbox implements a Farm-to-Table system which allows delivery from farmers directly to consumers' homes, and offers affordable prices for consumers but remains friendly for farmers. Sayurbox uses websites and applications to market its products, where consumers can buy fresh kitchen necessities, such as vegetables, fruit, spices, meat and fish. Sayurbox is here to help by selling the harvests of farmers in Indonesia and is available in several cities in Indonesia, such as Jabodetabek, Surabaya and Malang (Sayurbox, 2018).

Research conducted by Jiang Y et al. (2021) in China has fresh food e-commerce as the background. Researchers feel that more research is needed that discusses the relationship between customer satisfaction and last-mile logistical services. The aim of this research is to determine quality variables that increase customer satisfaction with fresh food e-commerce logistics services. To build a logistics service quality evaluation system for e-commerce fresh food, this research combines previous research on the logistics service quality model and the SERVQUAL model, by adding differentiating factors from network platforms, and integrating the characteristics of fresh food e-commerce.

2. RESEARCH METHODS

This research is included in basic research, because this research tests, changes, and develops theories from previous research. The first level constructs used in this research are personnel contact quality, delivery quality, information quality, timeliness quality, empathy quality, perceived importance and satisfaction. This scale consists of Strongly Disagree with a score of 0 and Strongly Agree with a score of 5.

The population used in this research are users of the Sayurbox application, which is a fresh food e-commerce in Indonesia. The respondent criteria used were Indonesian citizens domiciled in Indonesia with a minimum age of 17 years who had used Sayurbox services at least once in the last 6 months and had experienced problems using Sayurbox services. A total of 212 respondents were obtained through distributing questionnaires using Google Form.

This research uses Structural Equation Model (SEM) analysis, a statistical approach used to test and model the relationship between complex variables in a model. Basically, the SEM method integrates two main components, namely confirmatory factor analysis (CFA) and structural equation modeling (SEM). The software used in the SEM method is AMOS 22. CFA is used to test the validity and reliability of the constructs, while SEM is used to test the relationship model between these constructs.

3. RESULTS AND DISCUSSIONS

The results of distributing the questionnaire using Google Form obtained valid responses from 212 respondents. Based on the data obtained, Sayurbox service users are dominated by women aged 21-30 years with employee status with an income of more than 5 million in one month. Respondents' perceptions of logistics service quality as a whole show positive, especially in the dimensions of Personnel Contact Quality and Empathy Quality. This can be interpreted as meaning that the majority of respondents assess Sayurbox's logistics services as good.

Validity and reliability tests were carried out through Confirmatory Factor Analysis (see Table 1). Standardized Factor Loadings (λ) describe the level of correlation between each measurement variable and the proposed construct. Average Variance Extracted (AVE) indicates how well the variance of each construct can be explained by the related measurement variables. Meanwhile, Composite Reliability (CR) measures reliability in measuring this construct.

Table 1. Confirmatory Factor Analysis (CFA) Results

Variabel	Item	λ	AVE	CR
Personnel Contact Quality (PCQ)	Good service attitude	0,735	0,543	0,855
	Friendly in answering questions	0,692		
	Understand customer service needs	0,772		
	Couriers have a sense of responsibility	0,666		
	Courier has good behavior	0,810		
Delivery Quality (DLQ)	Packaging guarantees product freshness	0,763	0,571	0,841
	products are delivered on time	0,764		
	guarantee product freshness	0,768		
	Has complete packaging	0,727		
Information Quality (IMQ)	accurate logistics distribution information	0,693	0,531	0,817
	easily ask for information	0,849		
	sufficient feedback about the information	0,672		
	feedback with complete information	0,686		

Table 1. Confirmatory Factor Analysis (CFA) Results (cont.)

Variable	Item	λ	AVE	CR
Timeliness Quality (TLQ)	Short time from message to delivery	0,784	0,629	0,871
	Send goods quickly	0,845		
	short delivery delay time	0,781		
	If delivery is not on time it will be arranged again quickly	0,761		

Empathy Quality (EPQ)	high sympathy when something goes wrong	0,598	0,541	0,823
	special attention when there is a problem	0,791		
	The service provider will pay special attention	0,826		
	When a problem occurs, the Sayurbox service will quickly provide assistance to resolve the problem	0,708		
Perceived Importance (PI)	Detailed shipping information	0,771	0,544	0,827
	Guarantee the security of personal information	0,798		
	There are alternative services for customers	0,775		
	Speed and on time delivery.	0,586		
Satisfaction (SAT)	Overall, Sayurbox service is good	0,763	0,565	0,866
	Provide a satisfying experience	0,799		
	have good customer service	0,788		
	The service to the final consumer is satisfactory.	0,754		
	The information provided by Sayurbox is good	0,662		

Notes: Model fit indices: CMIN/DF = 1,994; GFI = 0,830; CFI = 0.902; TLI = 0.887; RMSEA = 0.065

The results of data processing show that the CMIN/DF, CFI, and RMSEA values have met the goodness of fit criteria with the description of good fit. Meanwhile, GFI and TLI meet the goodness of fit criteria with marginal fit information.

Table 2. Hypothesis Testing Results

Hypothesis	Path	Std. Estimates	C.R.	P	Results
H1a (+)	PCQ → SAT	0,510	6,441	***	Hypothesis supported
H1b (-)	DLQ → SAT	0,066	1,488	0,137	Hypothesis not supported
H1c (-)	IMQ → SAT	0,022	0,246	0,806	Hypothesis not supported
H1d (-)	TLQ → SAT	0,019	0,344	0,731	Hypothesis not supported
H1e (+)	EPQ → SAT	0,113	2,531	0,011	Hypothesis supported
H2 (+)	PI → SAT	0,820	6,782	***	Hypothesis supported

Table 2 shows the results of hypothesis testing which have been calculated using AMOS 22 software. Based on this table it can be seen that H1a, H1e, and H2 have hypothesis results that are supported with critical ratio (C.R.) ≥ 1.96 and p-value ≤ 0.05. Meanwhile, H1b, H1c, and H1d were declared unsupported because they did not meet the established criteria.

Figure 1 shows that the structural model testing results have a good fit with a p value of p < 0.05; CMIN/DF = 1.927; GFI = 0.836; CFI = 0.901; TLI = 0.885; RMSEA = 0.066. Among the 5 dimensions of logistics service quality, the dimensions of personnel contact quality and empathy quality have a positive and significant impact on satisfaction, however delivery quality, information quality and timeliness quality show insignificant results. Apart from that, perceived value has a positive and significant impact on satisfaction with a CR of 6.782 and a p value of 0.001 (***), so that H2 can be accepted.

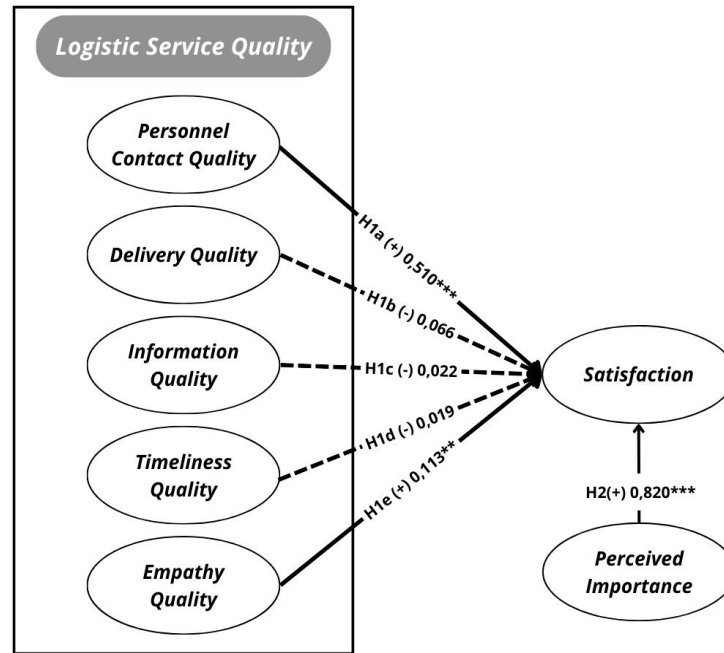


Figure 1 Structural Model Test

Hypothesis testing shows that personnel contact quality has a significant positive influence on customer satisfaction at fresh food e-commerce Sayurbox in Indonesia. The findings in this study are in line with research by Japarianto (2018), Jiang Y, et al. (2021), and Paulina (2023), who state that personnel contact quality has a positive impact on satisfaction. This shows that the couriers or personnel owned by Sayurbox are good according to Sayurbox service users. The hypothesis about empathy quality is also proven to have a significant positive influence on customer satisfaction at fresh food e-commerce Sayurbox in Indonesia. This shows that Sayurbox employees can provide sympathy and attention to Sayurbox service users. Fresh produce is susceptible to the risk of reduced quality, so consumers need attention and more detailed product information to overcome potential dangers that may occur during the delivery process. This research is also supported by Tjakra (2019) and Hafez (2021), who stated that empathy influences customer satisfaction. This is because customers feel that the service provided can understand customer needs personally.

The test results regarding perceived importance also show that it has a significant positive influence on customer satisfaction at Sayurbox fresh food e-commerce in Indonesia. This shows that customers evaluate the quality of the Sayurbox service they receive and they are satisfied and this will have an impact on purchasing behavior. Final stage logistics services (last mile logistics) are important because they relate directly to consumers. This involves various important personal information such as addresses and customer contacts. Thus, perceived importance is crucial for fresh food e-commerce logistics services. When service providers can implement last mile logistics well, the perceived importance of the service will have a positive and significant impact on customer satisfaction. Meanwhile, delivery quality, information quality, and timeliness quality have no influence on customer satisfaction with Sayurbox fresh food e-commerce in Indonesia.

These results are different from research conducted by Phan, T. H., Huynh C. M (2023), which stated that delivery quality has a positive and significant impact on satisfaction. When customers receive the goods they purchased on time, with careful and well-maintained packaging, and properly maintained to maintain quality, they will naturally feel a higher level of satisfaction with the service provided. Research conducted by Kartika R., F.N. Widjaja, & J.D. Trisnawati (2019) shows different results, namely that information quality has a positive and significant impact on satisfaction. Information quality that is effective, accurate and timely is very important for customers and can influence customer satisfaction with fresh food e-commerce Sayurbox. This research is supported by Ardila and Irawan (2022) who state that timeliness quality has no effect and is not significant on customer satisfaction. If the company has an efficient distribution system and channels, then customers will not worry about the products they order.

4. CONCLUSION

Based on the results of this research, it can be seen that from the 6 research hypotheses, it shows that 3 hypotheses give results that have a positive influence, namely personnel contact quality and empathy quality have a positive and

significant impact on satisfaction with SayurBox services. Likewise, perceived value has a positive and significant impact on satisfaction. However, the test results prove that satisfaction is not influenced by delivery quality, information quality, and timeliness quality.

The research results show that perceived importance has the greatest influence in shaping the satisfaction of Sayurbox fresh food e-commerce users. So it is necessary to consistently provide complete information and reassure customers about the security of personal information, as well as create an accurate delivery schedule so that the product arrives on time. Another result that needs to be considered is the attitude and behavior of personnel, service standards need to be applied to each personnel, so as to increase consumer satisfaction. Future research can use fresh food e-commerce other than Sayurbox so that it can see whether the market in Indonesia still has online shopping behavior for fresh food products.

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