

SAME DAY DELIVERY (TERRA): COURIER SERVICE QUALITY, FAST DELIVERY AND CUSTOMER SATISFACTION

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Doi: <https://www.doi.org/10.58257/Ijprems34020>

ABSTRACT

Technology in digital platforms of courier service companies developments have improved. This certainly increases the level of competition among courier service providers. The research aimed at evaluating the construct of the Courier Service Loyalty (CSL) model as described by indicators measured from the Courier Service Quality (CSQ) variable related to Timeliness, Quality, Accuracy of Order, and Order Discrepancy Handling, which is associated with the Customer Loyalty (CL) variable through Customer Experience (EX) and Customer Satisfaction (CS). A quantitative method with the PLS-SEM technique was used to test the correlation between constructs of the CSL model. This study used 189 respondents spread across the islands of Java, Sumatra, Kalimantan, Bangka Belitung, Sulawesi and NTT. The results of this study are that all variables CSQ, EX, CS, and CL had an indirect effect in the form of partial mediation. This indicated that another intervening variable appeared, which could be an intervening variable for other models not examined in this study

Keywords: Courier Service Quality, Customer Loyalty, Customer Experience, Customer Satisfaction.

1. INTRODUCTION

India's digital economy business continues to grow even during the pandemic. It contributed 54% year-on-year in 2020 to India's total e-commerce GMV. [1], combined with various home-based online businesses, which increased the growth of the Courier Service Delivery (CSD) business. The number of courier service companies is increasing, and each of them provides varied services. Goods can be shipped in bulk and take a few days for delivery, or real-time delivery for the same time service period, such as Same Day, Instant, and InterCity delivery. The technological developments have already helped in improving the digital service platform of the courier service company to satisfy customers by providing a better quality of services. It affected how customers choose a courier service company, home-based business actors, and marketplace tenants. Based on Central Statistics Agency (BPS) regarding e-commerce 2019, 19.66% of the public have used direct delivery services to customers using online courier services in all provinces in Indonesia. [2].

Based on a search via Google Play store, more than 20 courier service companies are installed in it. Various products and functions in the application provide convenience and benefits for every customer and business actor, including pick-up and delivery facilities overseas and discount offers and COD (Cash on Delivery) payment system facilities.

Therefore, it increases the competition among these courier service companies, including those with only 50 thousand and 10 million customers who installed the application. Unfortunately, the application service's average rating only gets 3 out of 5 stars from customer rating, with reviews dominated by customer complaints. Customers may have more than one application installed, so they could quickly move to another one if they feel disappointed with an application service. One alternative solution to keep customer loyalty is to increase customer satisfaction.

As a third party, courier service companies deal with business customers (B2B) and final customers (B2C), so the courier service must satisfy both parties. For service companies, consumer behavior and experience will be the basis for setting strategic goals

[3] and courier service companies. Based on the explanation described above, this study discusses the Effect of Courier Service Quality and Customer Loyalty mediated by customer experience and customer satisfaction on courier services. The purpose of this study is to determine and analyze the relationship between Courier Service Quality and Customer Loyalty mediated by customer experience and customer satisfaction in courier services.

1.1. Courier Service Quality (CSQ)

Changes in service quality are constantly changing, except for the price. These changes are related to technology, rapidity, convenience, packaging [4], and the development of technology and courier service applications. The advances in technology improve the quality of service, which ultimately satisfies customers [5]. So that it has appropriate product service quality standard, quantity, condition, place, time, customer, and price [6]. Bien stock et al. (1997) measured the quality of physical distribution services (Physical Distribution Service Quality/PDSQ) by using timeliness, availability, and condition. PSDQ is a type of logistics service which includes transportation activities,

facility structure management, inventory management, and material handling [7]. The three components of the PDS are availability, timeliness, and quality, which can be referred to as the LSQ component.

Mentzer et al. (2001) revealed nine concepts that customers pay attention to, i.e., Personal Contact Quality, Order Release Quantity, Information Quality, Order Procedure, Order Accuracy, Order Condition, Order Quality, Order Non-conformance Handling, and Timeliness [8]. Courier services are the basis of the logistics process organization, whose delivery method can be received from any place and sent to any destination. Nowadays, customers demand high-quality service from courier services. Expected quality is related to timeliness, delivery (delayed delivery), the effectiveness of delivery (number of returns from shippers and refusals to receive goods), and the number of shipping defects and complaints[6].

1.2 Customer Experience (CE)

The continuous process of interaction among customers and the company through various communication channels, both functional and emotional directions, will result in a customer experience [3]. In the digital era, it is crucial to integrate digital (platforms that support the market for goods and services, including information services), physical (a variety of things or functions related to comfort and convenience), and social (interaction) to achieve a holistic customer experience, in the form of cognitive, emotional, Sensory, Social (Relational) and Value (lifestyle, spiritual) [9]. Klaus and Maklan (2013) introduce the scale of Customer Experience Quality (EXQ). The EXQ dimension comprises service experience, outcome focus, moments of truth, and peace of mind. These four dimensions can be easily adapted by different types of service providers [3]. Service Experience refers to the customer's perception of having a choice of multiple alternatives and the ability to compare offerings from service providers. Outcome focus refers to the customer's attitude towards the number of transaction costs and how service providers help in reducing them. Moments-of-truth refers to risk management and service recovery procedures and the flexibility of service providers in dealing with customers once complications occur.

Peace-of-mind refers to assessment by the customers of all their interactions with service providers before, during, and after service[3], [10].

Customer Loyalty (CL)

Customer loyalty is an alignment among elements of attitude, behavior, or both that systematically supports or benefits one entity compared to its competitors [11] [12]. Element of attitudinal loyalty is the fulfillment of pleasant service, impact on influence, preference, and warmth. The element of behavioral loyalty is a repeat purchase that comes from desire. This behavioral loyalty can be in the form of Purchase, repurchase, repurchase intentions, retention, return [12]. Many studies on customer loyalty conduct measurement through behavioral loyalty dimensions, such as word-of-mouth communication (WOM), purchase intentions, and price insensitivity. WOM can be in the form of face-to-face WOM (fWOM) or electronic WOM (eWOM), such as Facebook, Twitter, WhatsApp, and other electronic media commitment are seen as antecedents of customer loyalty [14]. Word-of-mouth communication can be in the form of saying positive things, sharing experiences, and providing recommendations.

Courier service quality, customer experience, customer satisfaction, and customer loyalty

In this study, courier services are related to the use of information technology in these services, which service quality has a positive and significant effect on customer satisfaction [15]. Customer loyalty could be achieved if service quality can be maintained to achieve a sustainable business. Customer loyalty is influenced by customer satisfaction, and the antecedent of customer satisfaction is LSQ [16]. Service quality in the courier service is part of the LSQ. Customer satisfaction has positive and significant effects on customer loyalty [15]. The LSQ is related to the level of customer satisfaction in services and also to the level of customer loyalty in the context of SCQ [17]. Customer experience management builds customer loyalty (attitudes) and leads to repetitive buying behavior [18]. Roy et al. (2019) stated that in the B2B service quality, research results showed that service experience on B2B customers has a more substantial influence on satisfaction and ultimately impacts B2B customer loyalty and words of mouth [10]. Based on previous studies, the following hypotheses are proposed:

H1: CSQ has a positive effect on EX

H2: CSQ has a positive effect on CS

H3: CSQ has a positive effect on CL mediated by EX

H4: CSQ has a positive effect on CL mediated by CS

H5: CSQ has a positive effect on CL mediated by EX and CS

Based on the hypotheses above, the construct model of the Courier Service Loyalty (CSL) from this study show by Figure 1 as follows:

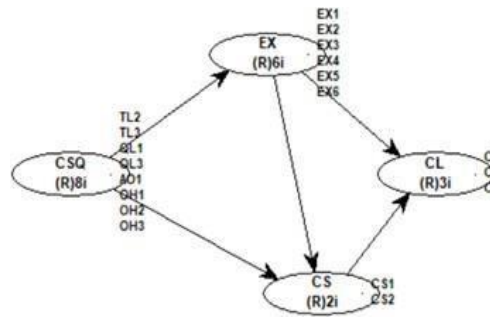


Figure 1. Construct Model of Courier Service Loyalty

Based on the construct model in Figure 1, the variables, parameters, and indicators are arranged to measure customer loyalty to courier services based on these CSQ, EX, CS, and CL variables. CSQ is an adaptation of LSQ measurement, Ho et al. (2012) divided CSQ into four dimensions [19], as described in Table 1:

- Timeliness, including the timeliness of taking and sending orders to the customer according to the promised location
- Accuracy of order, including delivery of the customer's order on arrival (right item, correct item quantity, lack of item damage) and exact order address
- Quality, including quality of information, quality of contact personnel: courier contact and customer care
- Order discrepancy handling, including the efficiency and effectiveness of delivery procedures and problem handling
- Table 1 shows parameter, and indicator measurements of the courier service customer loyalty as follows:

Table 1. Variable, Parameter, and Indicator Measurements of the Courier Service.

Variable	Parameter	Indicators
Courier Service Quality (CSQ)	Timeliness (TL)	The total score of this model uses a 5-point Likert scale
		Frequency of receiving late shipments (TL2) Promised duration of delivery of goods (TL3)
	Quality (QL)	Goods Tracking (QL1) Customer service contact information in Case of A problem (QL3)
	Accuracy of Order (AO)	Frequency of having problems with sending Wrong goods (AO1)
	Order discrepancy Handling (OH)	Ease of delivery order request procedures (OH) Ease of complaint handling procedures (OH) Ease of handling complaints on the Number and items received (OH3)
Customer Experience (EX)	Customer perception of having many alternative options and the ability in comparing offers from service providers	Choosing A courier service among other courier services (EX1) Receiving profit/promotion offers from courier services (EX2) Courier service provides what is needed
		Courier service takes care properly when an error/complaint takes place (EX 5) Courier service will fulfill the needs for a long time (EX 6)
Customer Satisfaction (CS) Satisfactions (CS)	Customer satisfaction in using courier services	Positive things about courier service (CS1) Satisfied with the courier service (CS2)

2. METHODOLOGY

The method used in the research was a quantitative approach. Testing hypotheses have been set to determine the correlation of parameters between CSQ and CL through CE and CS. Questionnaires were used for data collecting in quantitative/statistical data analysis. The multivariate analysis method was used to analyze data from survey results by using the Structural Equation Modeling (SEM) approach. [20]. Meanwhile, the PLS- SEM technique was used to test the relationship among CSL construct models.

There were two types of data in this research, primary and secondary data. Primary data were obtained from the distribution of questionnaires comprised of two parts: Part A described customer profiles in using courier services, while Part B was measurement indicators from the construct model. Meanwhile, secondary data was obtained from references and various information, including reviews on Google Playstore.

Part A was a general question about the type and length of use of the service from the company used. Part B focused on the relationship of CSQ to CL mediated by CE and CS. Each construct was measured using a Likert Scale, with a point value of SD (Strongly Disagree); D (Disagree); SwA (Somewhat Agree); A (Agree); and SA (Strongly Agree).

3. RESULTS AND DISCUSSION

3.1 Characteristics of respondents

Data analysis results of the questionnaires are presented in Table 2. Respondents were distributed in 28 regions, both cities and regencies: West Java, Jakarta, Central Java, East Java, South Sumatra, East Kalimantan, Banten, Bangka Belitung, North Sumatra, Riau, South Sulawesi, and East Nusa Tenggara/NTT, which dominated by West Java and Jakarta. All respondents used more than one courier service application, wherein MyJNE and J&T Express were preferred for more than 50% by customers, followed by Gosend. Various purposes in using courier services selected by customers, such as sending personal items or souvenirs, sending ordered goods (merchandise), and sending work-related goods (documents and others), which all needs are part of the importance for courier services. It shows that courier services were not only used for e-commerce but also personal needs and sending goods in a customer- friendly environment. Although in terms of frequency, most of them still notice the urgency of the need in using courier services, while 61.4% of them only use 1-3 times a month. Probably, it was influenced by tariffs (63% choose the service Rp. 0 – Rp. 25,000). For instance, customers get free shipping or discounted courier services from several e-commerce services. It considered that customers were quite sensitive to the prices imposed by each courier service. Based on the courier service.

This research population was customers who use courier services, as either marketplace tenants, home businesses, and non-business customers. The number of population samples determined in this study was ten times (of size) related to the highest number of indicators used to measure one latent variable, and this condition is widely used by PLS-SEM users [21].

Based on minimum data requirements from PLS-SEM, there were 190 respondents determined in the research.application often used, out of the 12 courier service application companies, Gosend, J&T express, and MyJNE were the most accessed by customers, as described in Table 2.

Table 2. Characteristics of Respondents

Profile of Respondents :	Number of Resp	Weight (%)
Domicile City:		
chunchale	95	50.3
Gangapur	27	14.3
College-road	14	7.4
Dhatrak Nagar	45	6.4
Mahajan Nagar	35	6.0
Hirawadi	35	6.0
Panchwati	35	6.0
Mhasrul	55	7.1
Nashik-road	35	6.0
Deolali	45	6.4
Bhagur	50	27.6

Other	45(appox)	6.5
Courier services that have been/often used (more than one choice) My JNE	108	57.1%
J&T Express Go send Si Cepat	101	53.4%
Express TIKI Grab Express Paxel	93	49.2%
QPOSin Aja Help Othres	68	36%
(Pos/NonApplication, Ninja, Wahana, Ante raja, Cek ongkir v2, Lion Parcel, Sentral Cargo, Pandu Logistik, Westbike)	45	23.8%
	44	23.3%
	33	17.5%
	6	3.2%
	4	2.1%
	14	7.2%
The need to use a courier service application (more than one choice)	141	74.6%
Sending personal goods or souvenirs	91	54.1%
Sending ordered goods (merchandise) To deliver work-related goods (documents, etc.)	73	38.6%
Customers usually used the courier service application in a month: 1 – 3 times >3 – 6 time More than six times.	116	61.4%
	32	16.9%
	41	21.7%
Average cost/rate in 1 delivery Rp.0 – Rp.25,000.- > Rp. 25,000.- – Rp. 50,000.- > Rp. 50,000.- – Rp. 100,000.- More than Rp. 100,000.-	119	63%
	52	27.5%
	14	7.4%
	4	2.1%
The most used courier service application:	56	29.6%
Gosend	50	26.5%
J&T Express	42	22.2%
MyJNE	12	6.3%
Si Cepat Express Grab Express	11	5.8%
TIKI	7	3.7%
Paxel	5	2.6%
Others (QPOSin Aja, Help, Ninja, Cek Ongkir v2, Westbike)	6	3.2%

3.2 Assessment of the Measurement

Model Before testing the hypothesis, each CSL variable and indicator in Figure 1 were tested. Based on the construct model tested in Figure 2, the average block VIF (AVIF)=2.205 and Average full collinearity (AFVIF)=2.391 have a value below or not equal to 3.3 (≤ 3.3), so that the model does not have multicollinearity and fit. Based on the measurement of Goodness of Fit Test that Average path coefficient (APC)=0.453, $P \leq 0.05$) so that the model is Fit; Tenenhaus GoF (GoF)= 0.586, has significant value (≥ 0.36), so then it has a great predictive ability.

Based on the loading factor, all indicators in construct CSQ, EX, CS, and CL regarding Table 3 show values above 0.6 (>0.6), meaning it fulfills the reliability indicators criteria. Based on the AVE value, although variable CSQ has a value of 0.486, the other variables had a value above 0.5 to fulfill the criteria of convergent validity. Likewise, the composite reliability value resulting from each construct was above 0.7; thus, it fulfilled internal consistency reliability as mentioned in Table 3.

Table 3. Standardized Regression Weights

Variable & Indicator	FL	CR	AVE
Courier Service Quality		0.883	0.486
TL2	0.622		
TL3	0.737		
QL1	0.619		
QL3	0.708		
AO1	0.679		
OH1	0.747		
OH2	0.713		
OH3	0.739		
Customer Experience		0.889	0.573
EX1	0.732		
EX2	0.608		
EX3	0.785		
EX4	0.830		
EX5	0.768		
EX6	0.797		
Customer Satisfaction		0.927	0.843
CS1	0.930		
CS2	0.930		
Customer Loyalty		0.873	0.780
CL1	0.892		
CL2	0.849		
CL3	0.757		

FL=Factor Loadings; CR=Composite Reliability;

AVE=Average variance extracted

The estimation results of path coefficient and P-values based on the output in Figure 2 concluded that CSQ had a direct and significant effect on CS (P- value<0.001; path coefficient 0.245). Furthermore, CR had a significant effect on EX (P-value <0.001; path coefficient 0.677).

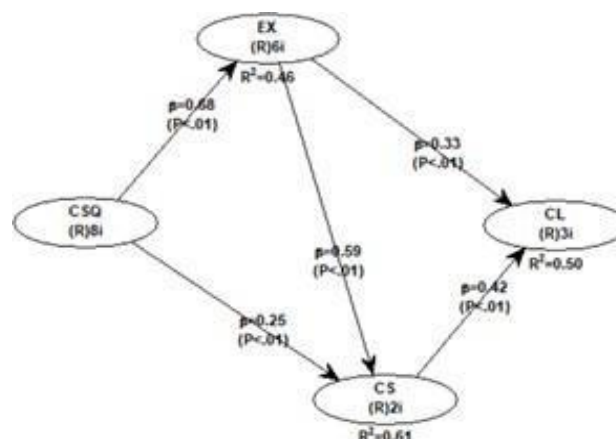


Figure 2. Path coefficient and P-values Construct Model CSL

The EX variable directly and significantly affected CL (P-value < 0.001; path coefficient 0.326). The EX variable directly and significantly affected CS (P-value < 0.001;

path coefficient 0.593). CS has a direct and significant effect on CL (P-value < 0.001; path coefficient 0.424).

Based on P-value and path coefficient, it was found that the effect of CS on CL was significant, resulting from testing on mediating effect can be continued. Path coefficient and p-values construct model csl show by figure 2 as follow:

Based on the value of indirect effect and total effect, it can be concluded that CSQ had an indirect and significant effect on CL mediated by EX (P-value

< 0.001; path coefficient 0.325). Furthermore, CSQ has an indirect and significant effect on CS mediated by EX (P-value < 0.001; path coefficient 0.402). EX has an indirect and significant effect on CL mediated by CS (P-value < 0.001; path coefficient 0.251). Referring to the indirect effect value, resulted:

- CSQ → CL; $VAF = 0.325 / (0.325 + 0.677) = 0.325 / 1.002 = 0.324 = 32.4\%$
- CSQ → CS; $VAF = 0.402 / (0.402 + 0.677) = 0.402 / 1.079 = 0.373 = 37.3\%$
- EX → CS; $VAF = 0.251 / (0.251 + 0.593) = 0.251 / 0.844 = 0.297 = 29.7\%$

All VAFs have values between 20% - 80%, so the amount of influence of all indirect effects was in the form of partial mediation. Based on the VAF value, it can be interpreted that customer experience and customer satisfaction were partial mediators, namely the elements of each EX and CS variable which categorized as indirect effects with a value of 20-80%. Other intervening variables can be applied for other models, which were not investigated in this research

Based on the output latent variable coefficients, the value of Adj. R-Squared was obtained for CL variable was 0.495, which means that the influence of CSQ, EX, and CS variables in explaining the variation of the criterion variable by 49.5%, but the remaining 50.5% was influenced by other variables outside this research model. The Adj. R-Squared value for the CS variable of about 0.608, indicating that the influence of the CSQ variable on CS is 60.8%, and the value of Adj. R-Squared for EX variable was 0.455, which means that the influence of the CSQ variable on EX was 45.5%.

4. RESULTS AND DISCUSSION

The CSL measurement model has shown the effect of CSQ on CSL mediated by EX and CS. It proved that customer experience affects satisfaction, service quality affects satisfaction; and satisfaction affects. However, in this CSL model, there was a partial effect on the mediating variable, which indicates that CL is influenced by other variables outside of the CSL model. Liu et al. identify customer experience variables affecting perceived value which in turn affects customer loyalty [22].

CSQ was a significant antecedent to CS but not significant to EX, while EX has significant effects on CS, indicating customer experience was a better predictor of satisfaction and loyalty. CSQ should be able to provide a customer experience that satisfies customers both applying applications and direct interaction, such as physical environment (atmosphere, multisensory, space, and function, as well as signs/symbols/artifacts) as well as human interaction (attitude, professional behavior, proactive service, and socialization).

The physical environment and human interaction are crucial elements that influence customer ratings in gaining experience to positively impact loyalty [22]. Courier service applications have to meet the experience in terms of the physical environment (in virtual terms) and human interaction (between customers and couriers). Therefore, courier service applications can provide value and increase satisfaction to increase customer loyalty.

5. CONCLUSIONS

Based on the construct of the CSL model, courier service quality can affect customer loyalty, mediated by customer experience and satisfaction. The partial relationship indicates the existence of other variables which affect customer satisfaction, such as perceived value. Meanwhile, the key elements of the customer experience must be the parameters of the courier service application affecting customer satisfaction and will ultimately impact customer loyalty.

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