

The Influence of Service Quality on Customer Loyalty at PLN Icon Plus Iconnet

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Abstract— This study examines the connection between PLN Icon Plus Iconnet's customer loyalty and service quality, highlighting the importance of service quality in building client loyalty. Data was gathered via a Google Form survey that was directed at 100 PLN Iconnet customers as part of a quantitative approach. The study finds a strong correlation between customer loyalty and service quality using Partial Least Squares Structural Equation Modeling (PLS-SEM). Supported by strong reliability and validity measurements in the models, the study emphasizes how crucial it is to provide high-quality service in order to establish and maintain loyalty. The results offer practical advice for businesses looking to increase client loyalty and retention through higher-quality services.

Keywords—*Service Quality, Customer Loyalty, Consumer Behavior, and Customer Satisfaction.*

I. INTRODUCTION

In 2000, PLN Icon Plus started its commercial activities by establishing a Network Operation Center (NOC) in Gandul, Cinere. As a subsidiary of PT PLN (Persero), PLN Icon Plus was initially formed to meet PT PLN (Persero's) internal needs for a reliable telecommunication network, in order to support smooth and safe electricity operations and distribution. The main focus at that time was to provide connectivity services for the electricity needs of PT PLN (Persero).

However, with the increasing industry need for telecommunication networks that have a high level of availability and reliability, PLN Icon Plus has begun to expand its business. They take advantage of the excess fiber optic network capacity owned by PT PLN (Persero) in Java and Bali to serve public telecommunication needs. In its business development, PLN Icon Plus has established partnerships with various companies and government and private institutions that require a wide, fast, and reliable telecommunication network. Thus, PLN Icon Plus not only focuses on PLN's internal needs, but also begins to serve external sectors that require solid network support to support their operations.

This transformation not only expands the scope of PLN Icon Plus' business, but also confirms the company's commitment to supporting PLN to achieve business targets outside the electricity sector. By continuing to prioritize innovation and network quality, PLN Icon Plus strives to become a key player in the ICT industry in Indonesia, serving the needs of customers from various sectors, and creating added value for all stakeholders. However, in 2021, PT Indonesia Comnets Plus changed the name of its retail internet service to ICONNET, which aligns its offerings with PT Indonesia Comnets Plus' broader strategic goals. With this name change, the focus is strengthened on high-quality connectivity and cutting-edge solutions for residential and business clients. ICONNET offers five core products to meet diverse connectivity needs: ICONect (customized connectivity solutions), ICONWeb (web hosting services), ICONBase (infrastructure as a service), ICONApps (customized applications), and ICONNET (internet services for household customers). These services collectively reflect ICONNET's commitment to providing comprehensive digital infrastructure solutions and high-speed internet across various market segments.

II. LITERATURE REVIEW

A. Customer Loyalty

The term "customer loyalty" describes a customer's commitment to a brand, merchant, or supplier as a result of especially positive features in subsequent transactions. This suggests that brand loyalty is a result of both customer satisfaction and complaints. Despite the potential for behavioral shifts brought on by the circumstance and marketing initiatives, loyalty is the unwavering resolve of a customer to consistently re-subscribe to or purchase a particular good or service. Customer loyalty is a positive outlook-based commitment made by a customer to a business, retailer, or supplier, as evidenced by frequent repeat business. (Sarker, 2017)(Uddin and Sarker, 2017)

B. Service Quality

One way to determine whether a good or service is in line with what is desired or not is to look at its quality. Quality processes and human resources will result in high-quality goods and services. One of the most important metrics for winning in a competitive market is quality. so that

a business might already experience client happiness after producing high-quality goods or services. (Maidah, 2019).

C. Customer Satisfaction

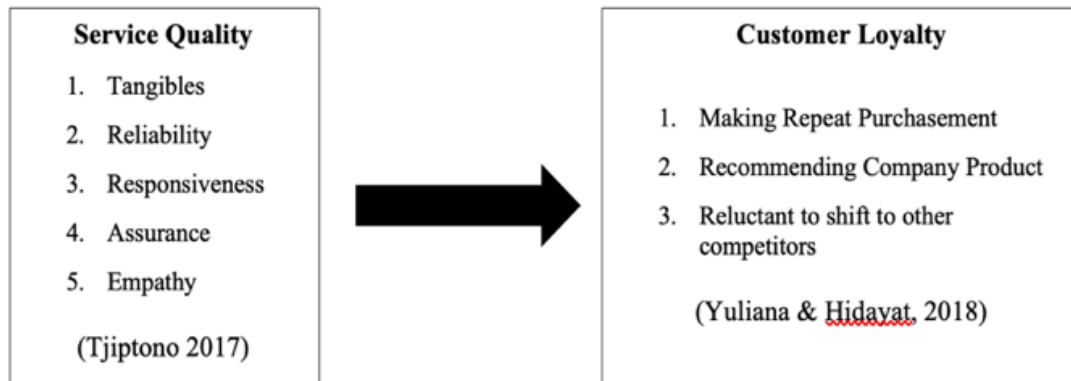
(Pasaribu, 2023) stated that customers who repurchase products will have an experience that is getting closer and closer to customer satisfaction. The business implements marketing-related strategies, like product innovation, to make each product satisfying and to generate a positive experience. Customer experience is the company's implementation in managing customer experience in products/services that aim to meet customer needs and create customer satisfaction, where customers feel they have a memorable experience so that customers will always remember the product/service when they need it (Simanjuntak, 2021)

D. Consumer Behavior

There are various methods to use an understanding of consumer behaviour. The first is to create a successful marketing plan, such as figuring out when to provide discounts to draw in customers. Second, decision-makers can use consumer behaviour to inform public policy decisions. For example, decision-makers can calculate the price of transit tickets for Eid by anticipating that consumers will use them extensively. Social marketing, or the sharing of ideas among customers, is the third application. It is possible to disseminate ideas more rapidly and efficiently by comprehending how customers feel about a product. (Sunyoto, 2022)

E. The Relationship of Service Quality to Customer Loyalty

(Hwang, 2016) argue that the experience of the customer achieved can affect the satisfaction felt by the customer. The quality of service has a significant influence on customer loyalty, as good service creates satisfaction, trust, and a strong emotional connection between customers and the company. Quality service includes responsiveness, reliability, empathy, assurance, and physical evidence that meets or even exceeds customer expectations. When customers feel valued and well served, they are more likely to have a memorable positive experience, which not only increases satisfaction but also strengthens their loyalty to the company. Customer loyalty is reflected in behaviors such as repeat purchases, recommendations to others, and tolerance for minor mistakes or higher prices than competitors. On the other hand, poor service quality can lower trust and trigger customer turnover to competitors.



A hypothesis is a tentative statement or assumption that is suggested to be evaluated by research or experiments in order to identify connections between the variables involved. There are two types of hypotheses: causal, which looks at how one variable affects another, and descriptive, which describes an observable phenomena. Hypotheses should be precise, quantifiable, and testable, and they are usually founded on preliminary theory or discoveries from a literature review. The findings will be utilised to decide whether the hypothesis is accepted or rejected after the study is over and the data is gathered, giving guidance for future theoretical development. So according to the description above, the hypothesis proposed in this study is:

H0: There is no significant influence between service quality on customer loyalty.

H1: There is a significant influence between service quality on customer loyalty.

III. METHODOLOGY

The structure of this study was evaluated using a five-point Likert Scale, where 1 represented "strongly disagree", 2 represented "disagree", 3 represented "Neutral", 4 represented "agree", and 5 represented "strongly agree."

A. Respondent and methods of data analysis

The respondent of this study were customer of PLN Iconnet that have been using the product and service for atleast 1 month. As for the sampling technique for this study used a purposive sampling, where samples are selected based on certain criteria that are relevant to the research objectives. According to Sugiyono, purposive sampling is a sample selection technique based on

certain considerations, namely sampling is carried out in accordance with special criteria or conditions that have been previously set by the researcher

According to (Widodo, 2017) the operational definition of a variable is a study that contains conceptual definitions and dimensions or indicators of the variable. In this study, the variables used are as follows. The operational definition of a variable, according to (Widodo, 2017), is a study that includes the variable's dimensions in this investigation.

- a. X, the independent variable An independent variable, also known as a free variable, is one that influences and results in changes in other variables, according to Eckdar (2017):217. Therefore, it is expected that the other variables will change if this variable changes. Service quality is the study's independent variable, often known as the free variable (X).
- b. Y, The variable that is reliant A dependent variable, often called a bound variable, is one that is impacted by or arises from the existence of an independent variable, according to Echdar (2017). This variable is referred to as a bound variable since it is affected by other variables, particularly the independent or free variable. The study's dependent or bound variable is customer loyalty (Y).

Primary data for this study was gathered directly from people or participants who were actively participating in empirical research. Questionnaires were circulated in order to collect pertinent data regarding the research issue. A questionnaire is a method of gathering data in which participants are given a set of questions or written statements (Rio Haribowo, 2022)

B. Method for statistical analysis

This study employed the PLS-SEM approach for analysis using SmartPLS software. The method known as structural equation modeling (SEM) describes whether or not there are correlations between the observed variables using a variety of model types (Suharto & Ligery, n.d.). The primary objective is to use a quantitative approach to test the researcher's theoretical hypotheses. Partial Least Squares (PLS) is one of the models used in structural equation modeling (SEM). Both the structural model, also known as the inner model, which illustrates the strength of the estimates between constructs, and the measurement model, also known as the outer model, which illustrates

how the indicator represents the latent variable to be measured, are sub-models of PLS analysis (Irwan & Adam, 2015). (Irwan, 2015).

IV. RESULTS

The validity and reliability of the measurement model must be examined right away in order to guarantee the science of hypothesis testing of the model. While validity include both discriminant and convergent validity, reliability is defined as the internal fit, which is measured by the composite reliability coefficient (CR). For any notion to have a relevant internal fit, the CR coefficient value of the latent variables must be greater than 0.50, as the lowest critical value. Furthermore, the measurement index's standardized factor loadings must all exceed the 0.60 critical value. The latent variables have meaningful convergent validity, as indicated by the requirement that each average variance extracted (AVE) be more than 0.50.

A. Outer Model

a. Convergent Validity

	CL	SQ
CL 1.1	0.764	
CL 1.2	0.819	
CL 2.2	0.694	
CL 3.1	0.653	
CL 3.2	0.791	
SQ 1.2		0.742
SQ 2.1		0.663
SQ 2.3		0.798
SQ 3.2		0.832
SQ 4.1		0.619
SQ 4.2		0.731

The outer loading value above the 0.5 threshold in the preceding table indicates that convergent validity has been effectively achieved. Hair et al. (2019) state that exploratory research can tolerate outer loadings between 0.4 and 0.7.even if the ideal value is higher than 0.7. However, outer

loading in the range of 0.5 to 0.6 is still seen to be adequate to meet convergent validity requirements. This demonstrates that the measurements had enough validity to capture the anticipated construct.

b. Discriminant Validity

	CL	SQ
CL 1.1	0.764	0.500
CL 1.2	0.819	0.596
CL 2.2	0.694	0.389
CL 3.1	0.653	0.281
CL 3.2	0.791	0.395
SQ 1.2	0.453	0.742
SQ 2.1	0.436	0.663
SQ 2.3	0.518	0.798
SQ 3.2	0.446	0.832
SQ 4.1	0.356	0.619
SQ 4.2	0.439	0.731

The cross-loading numbers in the preceding table demonstrate that this model is valid since it fulfills the predetermined standards for evaluating discriminant validity. When an indicator's correlation with its related construct is greater than its correlation with any other construct in the model, discriminant validity is attained. By demonstrating that each indication has a higher correlation with its assigned construct than with other constructs, this demonstrates the uniqueness and accuracy of the constructs being examined. An important component of evaluating the validity

of the model is this criterion, which confirms that the constructs are appropriately specified and represented by their respective indicators.

c. Composite Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CL	0.804	0.835	0.862	0.557
SQ	0.826	0.834	0.874	0.539

Composite reliability is seen to be a more accurate way to assess a construct's internal consistency. When a construct or variable's Composite Reliability and Cronbach's Alpha values are more than 0.7, it is considered trustworthy. All of the Cronbach's Alpha values in the table are higher than 0.7, suggesting that the variables are dependable.

B. Inner Model

a. Coefficient of Determination (R^2)

	R-square	R-square adjusted
CL	0.368	0.361

Given the available data above, the R Square value of 0.368 suggests that the independent variables (X) in the model account for 36.8% of the variability in the dependent variable (Y). The Adjusted R Square value of 0.361, which accounts for the sample size and number of predictors, slightly lowers the explanatory power to 36.1%. These findings indicate a moderate relationship between X and Y, indicating that additional factors not included in the model account for a significant portion (about 63.9%) of Y's variability, even though the predictors have a big simultaneous effect on Y. An R^2 value between 0.10 and 0.50 is appropriate in social science research, according to Peterson K. Ozili (2023) in his paper "The Acceptable R-Square in Empirical Modelling for Social Science Research," as long as some or most of the explanatory factors are statistically significant.

b. Effect Size (F^2)

	CL	SQ
CL		

SQ	0.582	
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The effect size of construct X on Y is regarded as strong since it exceeds the cutoff point for a large effect (0.35), with a F Square value of 0.582. This suggests that the model's predictors significantly and significantly contribute to the explanation of the variance in the dependent variable (Y). In the framework of this model, construct X is crucial in influencing Y, as evidenced by the high effect size, which points to a strong association.

C. Hypothesis Result

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
SQ -> CL	0.606	0.623	0.071	8.529	0.000

With a T-statistic of 4.529, higher above the essential threshold of 1.96 for a 95% confidence level, the Path Coefficient table shows that the independent variable has a considerable impact on the dependent variable. Additionally, the p-value of 0.000, which is far below the significance level of 0.05, confirms that this effect is statistically significant. The results show that the independent variable has a significant impact on the dependent variable's outcome, suggesting a robust and consistent link between the variables.

IV. CONCLUSION

Based on this research we can infer that Customer Loyalty (Y) is significantly and consistently impacted by Service Quality (X). Numerous important variables promote this dependability. First, the Adjusted R Square of 0.361 makes sure that the number of predictors does not exaggerate this result, showing a strong and moderate association. The R Square score of 0.368 indicates that service quality accounts for 36.8% of the variation in customer loyalty. Additionally, the F Square

value of 0.582 indicates a strong impact size, highlighting the important role that service quality plays in the variation in customer loyalty. Composite reliability and Cronbach's Alpha values, which both above the 0.7 cutoff and indicate the dependability of the constructs, validate internal consistency. The indicators are guaranteed to measure the constructs adequately since their outer loadings likewise satisfy the convergent validity standards. Each indicator has a stronger correlation with its own construct than with others, confirming the precision and uniqueness of the constructs and achieving discriminant validity. These findings collectively demonstrate that there is a statistically significant, dependable, and relevant relationship between customer loyalty and service quality, highlighting the strong correlation between increases in customer loyalty and service quality improvements.



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