

## Research Article

# The Ease of Use of Applications and Quality of Service Toward Consumer Loyalty in Cargo Express Service Companies, Bekasi, Indonesia

Andrian\*, Boge Triatmanto, and Pudjo Sugito

Post Graduate of Doctoral in Economics, University of Merdeka Malang, Malang, Indonesia

**ORCID**

Andrian: <https://orcid.org/0000-0003-2888-1519>

**Abstract.**

This study tries to assess the effect that may occur among the ease of use of applications on consumer loyalty, quality of service on consumer loyalty, ease of use of applications, and quality of service on consumer loyalty. This study aims to determine how important application usability and service quality are influencing consumer loyalty. This study, discusses the factors that can affect consumer loyalty and determines how much influence the ease of use of applications and service quality have on consumer loyalty. This research utilized purposive sampling. The data gathering approach utilized in this study is questionnaires with Google Forms media. The prerequisite test from the data obtained uses the data quality test and the classical assumption test. This study employed the following data analysis techniques: validity test, reliability test, normality test, multicollinearity test, heteroscedasticity test, multiple regression analysis, statistical t test (partial), F test (simultaneous), and coefficient of determination ( $R^2$ ). The final results show that the two independent variables (the ease of use of applications, quality service) were significantly affected by the dependent variable (consumer loyalty). According to the report, service quality and application simplicity of use account for 42.6% of client loyalty.

**Keywords:** the ease of use of applications, service quality, consumer loyalty

Corresponding Author: Andrian;  
email:  
[andrian@dsn.ubharajaya.ac.id](mailto:andrian@dsn.ubharajaya.ac.id)

**Published:** 15 October 2024

Publishing services provided by  
Knowledge E

© Andrian et al. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the 8<sup>th</sup> ICOS: Sustainable Economics Conference Committee.

## 1. Introduction

The level of development of the world economy is marked by globalization in all fields which is accompanied by high levels of population mobility, the movement of money and goods in the flow of trade. On the other hand, the government's workload is getting heavier because of the increasing demand for improving people's welfare. The vast number of people who transfer items to one another from afar makes this service critical. Currently, there are quite a lot of landline delivery service companies, from small-scale companies to large-scale foreign companies that have branch offices abroad. Convincing customers to use landline infrastructure and services is difficult; one approach is to



use customer loyalty behavior. The usage of customer loyalty is motivated by the long-term benefits of loyalty, with the goal that consumers would continue to use the delivery service on a regular basis. This is described by Dhingra [1], who asserts that the quality of cloud services is important to the success of any global company in today's climate. The goal of this study is to identify cloud service quality parameters and investigate their impact on customer satisfaction and loyalty. In India, a Likert scale-based survey tool was used to poll 419 cloud experts/users. The respondents were cloud experts/users who had used services from India's top five cloud providers. The study hypothesis was tested using a partial least squares structural equation model. The study found that agility, service assurance, reliability, scalability, security, service responsiveness, and usability all had a favorable and substantial influence on overall cloud service quality. This study reveals a partial mediation effect of customer satisfaction on service quality and customer loyalty. It is obvious that service quality has a positive and significant influence on client loyalty and satisfaction. This shows that consumer pleasure has a moderating effect in the relationship between service quality and customer loyalty. Finally, this study proposes that cloud service experts, consumers, and providers pay close attention to these considerations while shifting to cloud services. Clients are mostly repeat clients who want to use a company's services or products. Customers are attracted by mutually beneficial cooperation patterns that arise during the collaboration process between service providers and users. A client cannot exist unless there is mutually beneficial interaction. Without mutually beneficial collaboration, there is simply the process of acquiring ordinary things, which is not followed by other purchases of commodities at other times. Loyalty is a purchase behavior reaction that decision makers can show consistently by paying attention to one or more alternative brands among a variety of comparable brands, and it is influenced by psychological processes. According to Kotler and Armstrong [2] the definition of a service is any action or activity performed by one party for another that is fundamentally intangible and does not result in ownership. Nowadays, goods delivery services are services that have a big contribution to the business development of a company, especially those engaged in distributing goods across islands. With a professional goods delivery service company, the distribution or logistics of commodities to various sites will be simplified. The most essential factor is that the excursion firm maintains consistency in its management by providing the greatest possible service to its consumers. Maximum service in this scenario offers clients with courteous, inexpensive service, clearer explanations, simple procedures, and goods insurance if necessary. Service that aims to obtain customer

satisfaction is not an easy thing to do, problems are often found in managing a company's services and failure to satisfy customers. Problems or problems that are usually faced by both companies and customers regarding the level of service offered by a firm to its customers is characterized by a bureaucratic, confusing, and unclear service structure, and the company's human resources are still unaware of the importance of consumers to success. Company, lack of knowledge and abilities, poor attitudes and behavior by employees. Offering services to consumers must be based on consumer interests and company performance, therefore J&T Express must pay attention to everything that consumers consider important. One of the phenomena causing client unhappiness is myself.

Loyalty is a commitment that is retained by the consumer for a long period insight into buying or re-supporting a chosen product or service in the future, regardless of situational influences and marketing efforts possibly leading to customer switch [3]. So, loyalty is defined as a consumer's commitment to a brand, product, or service when they repeatedly acquire the thing for free. Where loyal customers can add big profits for the company. Therefore companies that want to create a loyal attitude towards product or brand owned by providing the best performance of the company. By improving the marketing strategy that is expected to become a recommendation for other consumers. Customer loyalty is also established as a result of the quality of service, positive brand image, and perceived ease of use of the product or service provider.

Customer loyalty can be realized if satisfaction is achieved customers and one way to achieve that satisfaction if the company can provide good service quality so that it instills a trust from customer. Customer loyalty is a firmly held commitment to repeatedly buy or use a chosen product or service in the future, despite situational pressures and marketing efforts that may trigger switching behavior [4].

Along with the times, namely the development of technology, companies in services have switched to electronic services. According to Rowley, electronic service is defined as a service provided by using information technology assistance [5]. Zeithaml interpret electronic services are service facilities or services in the form of a website that can be used to shop, purchase and deliver products that can run effectively and efficient [6].

In the face of competition followed by technological developments, the company is always trying to find and maintain market share through various media, one of which is electronic services. Electronic Services is one of the most popular applications that make use of Information and Communication Technology (ICT) in a variety of fields.

According to Rowley states that electronic services are described as acts, efforts, or performances that are delivered using information technology [6]. Zeithaml defines e-service quality refers to the ease and efficiency with which items and services may be purchased and delivered online [5,6].

Service quality is generally different from electronic service quality. Service quality is consumed and measured through direct transactions that are made by sellers and buyers, while the quality of electronic services is judged by the services supplied by the firm via its website.

According to Li and Suomi, the characteristics of e-service quality are examined from two angles: the firm perspective and the client perspective [7]. From a company's perspective, the dimensions of e-service that must be considered are ease of use (convenience for customers to use the website), website design (the website must be well designed and visually appealing), reliability (performance consistency and web reliability), system availability (correct technical functioning of the website), privacy (security and protection of customer information), and responsiveness (problem handling and effective return). From the consumer's perspective, the characteristics of e-service that must be handled are experience (impression of the company based on previous customers) and trust.

According to Zehir & Narçkara, with the growth of online retailing, e-retailers' service quality has been recognized as a critical factor in determining e-commerce firm success rates [8]. New purchasing patterns have resulted in an increase in study on consumer happiness, trust, acceptance, service quality, customer perceptions, and loyalty. The study looks at the aforementioned topic in the Turkish e-business context. We performed our research with 645 customers using the top ten online merchants in Turkey, with the purpose of determining the relationships between E-Service Quality, Perceived Value, Recovery Service Experiences, and Loyalty Intention. We sought to see how recovery services influenced customers' non-routine encounters with the sites, as well as how e-service quality affected routine interactions. According to the findings of our study, there is a significant relationship between E-service Quality and Loyalty Intentions, with Perceived Value acting as a mediator.

Another study about this according to Prybutok [9] although both anecdotal and scholarly sources indicate that interpersonal recommendation is an important approach for marketing mobile applications (apps), little research has been undertaken on the subject. To address this gap, we developed a research approach based on the Customer

Value, Satisfaction, and Loyalty Framework (VSL). While previous VSL studies treated customer value as a black box and examined its effects as a whole, this study divides it into four categories: utilitarian benefits (app utility and quality), hedonic benefits (app aesthetics and enjoyment), monetary sacrifices, and non-monetary sacrifices. This study applies VSL to the mobile app setting and discovers factors influencing app recommendations. The research of 347 app users found that the urge to recommend is a significant predictor of app referral behavior. Satisfaction with programs, users' willingness to use them again, and the hedonic benefits they offer are all direct indicators of intent to recommend. Furthermore, non-monetary sacrifices and utilitarian benefits have an indirect effect on referral intent through satisfaction and app retention. Contrary to expectations, it found no substantial effects of monetary sacrifices in the redesigned VSL. It also provides a thorough discussion of the findings, as well as the study's theoretical and practical implications.

Based on the previous studies above, it can conclude that the research gap from this study compares to the others is about the research methods applied, where in this study, the research technique utilized the SPSS program, whereas in several previous studies the PLS-SEM application was used.

In this modern era, the development of technology and the internet has increased significantly so that it is inevitable that almost all citizens in Indonesia use a lot of technology and the internet. Residents believe that with the development of this technology it is very helpful and fulfill their own needs and become more practical.

Along with the advancement of technology and the internet in Indonesia, the service industry is expanding, with an increasing number of service companies developing applications that are concerned with making it easier for consumers to use applications rather than having to visit a store or branch.

In Indonesia, as technology and the internet have advanced, most people take advantage of these developments to create opportunities to build a business and create their own companies that create innovative technologies by creating online applications. One of them is the J&T Express service company, which designs technological innovations for online package sending and receiving applications in the application, namely J&T Express. The J&T Express application has just been released in 2020 which is used for sending, receiving and checking packages online without having to come to the office. J&T Express also works with one of the banks, namely Bank Mandiri to facilitate the payment.

The J&T Express service company adds various features to the application: Mass orders in large quantities and only one click, bulk print shipping receipt labels to save shipping time, your order can easily track delivery orders, complete delivery report feature.

However, with this very attractive offer, there are some consumers who complain that some consumers experience things that are not good with the J&T Express application. The existence of these complaints is indirectly related to the company's image which will cause the image of the J&T Express company to decline. The number of consumers who complain is conveyed through comments on one of the J&T EXPRESS social media where the complaints of consumers will be read and seen by many social media users.

With so many complaints submitted by consumers to users of the J&T Express application, it will affect consumer loyalty. Where consumers will no longer be loyal to the J&T Express application and will move to other service companies. This is very unfortunate if the company experiences loss of consumer loyalty.

Geographically, North Bekasi District is located at 107.0037 east longitude and 6.2063 south latitude, with a height of 11 m above sea level. North Bekasi District, especially in terms of communication and transportation. The Central Statistics Agency reported that the population of North Bekasi in 2019 reached 402,430 people (BPS Kota Bekasi, 2019). Based on these data, the North Bekasi area is divided into 6 regions, namely Harapan Jaya, Central Kaliabang, Perwira, Harapan Baru, Teluk Pucung and Marga Mulya.

The population of North Bekasi, Harapan Jaya Region, based on gender, the population of the Harapan Jaya region who are male has a larger number, namely 49,159 people. While the female sex is 48,952 people. Residents of North Bekasi, Central Kaliabang Region, based on gender, residents of the Central Kaliabang region who are male have a larger number, namely 58,669 people. While the female sex is 55,399 people.

Population of North Bekasi Officer Area based on gender, residents of the Officer area who are male have a larger number, namely 23,268 people. While the female sex is 22,067 people. Population of North Bekasi Harapan Baru Region based on gender, residents of Harapan Baru area who are male have a larger number, namely 24,557 people. While the female sex is 26,084 people.

The population of North Bekasi in Teluk Pucung area based on gender, the population of Teluk Pucung area who are male has a larger number of 35,555 people. While the female sex is 33,476 people.

Based on gender, the population of North Bekasi in the Marga Mulya Region, residents of the Marga Mulya area who are male have a larger number, namely 12,860 people. While the female sex is 12,384 people.

The ease of using the application is very useful for consumers, because it makes it easier for consumers to do work online, such as businesses in the field of online shops, by simply going through the internet without having to go to the store and spend a lot of time. Consumers who feel pleased with the use of an application are more likely to develop a feeling of devotion to the J&T Express service company, because they experience happiness and advantages from the service company's application.

Service quality is defined as the efforts made to meet client requirements in line with specifications. It is conceivable to conclude that service quality is defined as the difference between actuality and customer expectations for the services provided. If the perceived service matches the anticipated service, the service's quality will be regarded as positive or excellent. If the observed service exceeds expectations, service quality is considered ideal, with outstanding service quality defined by reliability in providing a service to consumers and promptness in communicating or receiving consumer complaints. As a consequence, clients develop an indirect sense of loyalty to the product or service.

Consumer loyalty is a type of loyalty that can be shown when customers know that a particular product or service is superior to products or services offered by competitors, for example in an application where it is easy to use and easy to collect information so that it becomes the basis for selection. a product or service and a feeling of wanting to use a particular service arises, even though there are competing products as an alternative.

## 2. Methods

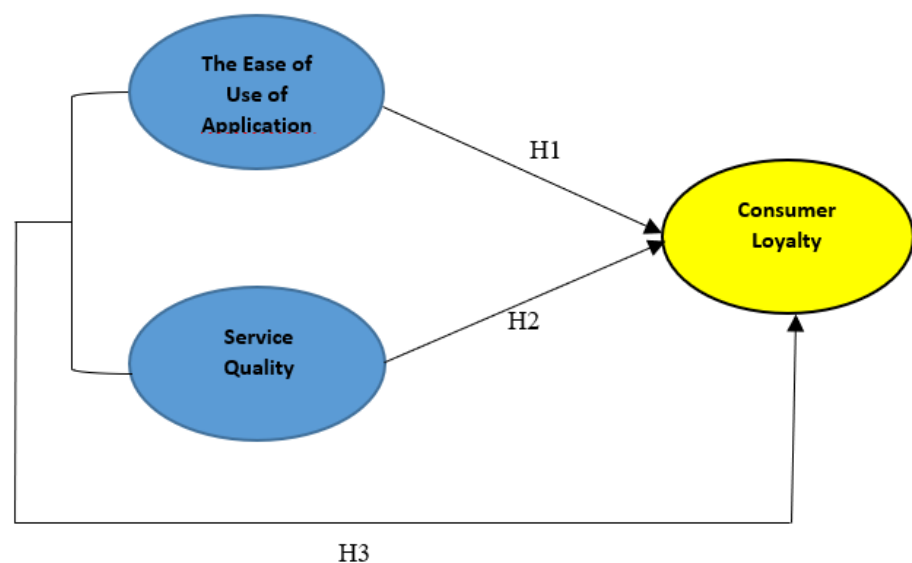
This research was conducted on March 16, 2021 until completion. This research was conducted at J&T North Bekasi Region, Taman Kebalen Branch. Creswell [10] states that a population is a collection of people who have the same characteristics. In this study, the population includes all customers who utilize the J&T Application in North Bekasi,

then sampling in this research was carried out using a non-probability sampling method. According to Dornyei & Taguchi his sampling technique was deemed appropriate for this research due to several practical criteria such as availability and accessibility [11]. The non-probability sampling method means that respondents who meet certain criteria have an equal chance of being chosen as an example [12]. Purposive sampling was the non-probability sampling approach that was chosen. In this purposive sampling strategy, samples are collected depending on predetermined criteria established by the researcher. The respondent criteria determined by researchers in this study are:

1. Consumers who utilize the J&T Application.
2. Consumers located in North Bekasi, West Java.

Because the population size remains unknown, the Lemeshow method was employed to determine the number of samples collected in this investigation. The acquired data is then analyzed using SPSS using many tests, including validity, reliability, data normality, multicollinearity, heteroscedasticity, multiple linear regression analysis, hypothesis testing, and coefficient of determination (R<sup>2</sup>) tests, to draw conclusions.

In this study, it discusses the factors that can affect consumer loyalty and determines how much influence consumer loyalty is impacted by application usability and service quality (see Fig. 1):



**Figure 1:** The conceptual framework. Source : Prepared by the authors (2023).

This type of research is quantitative research, which is a systematic scientific examination of components, events, and their relationships. The purpose of quantitative



research is to develop and apply mathematical models, hypotheses, and/or forecasts for an event. The material in this study is quantifiable in nature.

This investigation employed both direct and secondary resources. Data acquired immediately from observations, conversations, and surveys is referred to as primary data. This research relies on original data collected through observations, interviews, and surveys. This study makes use of both source and secondary material. The author used secondary data from study papers, reference materials, and paperwork from data gathering at J&T in the North Bekasi region.

To guarantee the validity of the data used in this research, the writers used reliability and validity checks. Data is collected with a questionnaire and analyzed with SPSS software.

### 3. Results

#### 3.1. Validity test

The purpose of this validity test was to see if the questionnaire was valid (see Table 1).

TABLE 1: Validity test.

Correlation	R count	R table	Conclusion
The Ease of Use of Application	0.626	0.1966	Valid
Service Quality	0.701	0.1966	Valid
Customer Loyalty	0.655	0.1966	Valid

Source : Prepared by the authors (2023)

#### 3.2. Reliability test

A reliability test is one that is used to discover how dependable a measuring device is. The basis for reliability is as follows:

- (1) If the Cronbach Alpha value is  $> 0.70$ , the data to be evaluated is considered reliable.
- (2) If the Cronbach Alpha value is  $< 0.70$ , the data to be evaluated is considered unreliable.

The dependability test findings are displayed in the dependability Statistics report. Cronbach's Alpha was 0.802 between the three factors. According to the criteria, this

TABLE 2: Reliability statistics.

Cronbach's Alpha	N of Items
0.802	3

Source : Prepared by the authors (2023)

number is higher than 0.60, indicating that the findings of the distributed surveys have a high degree of reliability (see Table 2).

### 3.3. Normality test

The normality test is helpful for determining whether the dependent and independent variables in a regression model have a regular distribution or not.

TABLE 3: Kolmogorov-smirnov normality test.

N		100
Normal Parameters <sup>a,b</sup>	Means	0.000000
	Std. Deviation	2.02926838
Most Extreme Differences	Absolute	0.057
	Positive	0.041
	Negative	-0.057
Test Statistic		0.057
Asymp. Sig. (2-tailed)		0.200cd

Source : Prepared by the authors (2023)

If the Kolmogorov-Smirnov test has a significance value greater than 0.05, the variable is normally distributed; otherwise, it is not. The results of Table 3 reveal that the Asymp. Sig. (2-tailed) of 0.200 is more than 0.05, suggesting that the data is normally distributed.

### 3.4. Multicollinierity test

The multicollinearity test may be performed to see if the regression model identified a relationship between independent variables.

Table 4 indicates that no independent variables have a tolerance value < 0.10 or a variance inflation factor (VIF) > 10. Based on the obtained Tolerance and VIF values, it is feasible to conclude that there is no multicollinearity among independent components in the regression model.

TABLE 4: Multicollinierity test.

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
The Ease of Use of Application	0.645	1.551
Service quality	0.645	1.551

Source : Prepared by the authors (2023)

### 3.5. Heteroscedasticity test

The heteroscedasticity test compares the residuals of one data set to those of another in a regression model.

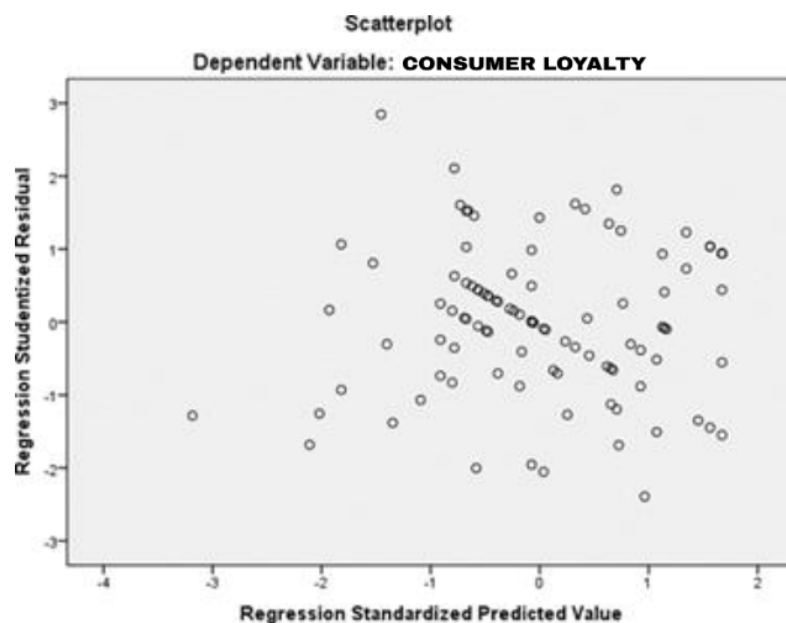


Figure 2: Heteroscedasticity test. Source : Prepared by the authors (2023)

Figure 2 shows that there is no obvious structure and that the points on the Y axis are distributed above and below the number 0. This demonstrates that heteroscedasticity did not appear in the research data.

### 3.6. Multiple linear regression analysis

Multiple linear regression analysis evaluates the impact of service quality and pricing on customer contentment.

TABLE 5: Multiple linear regression analysis.

Model	Unstandardized Coefficient	
	B	Std. Error
1 (Constant)	7.493	1.482
The Ease of Use of Application	0.196	0.079
Service Quality	0.358	0.069

Source : Prepared by the authors (2023)

Table 5 shows the numerous linear regression solution used in this study:

$$Y = 7.493 + 0.196 X_1 + 0.358 X_2 + e$$

The above multiple regression equation is described as follows:

The above multiple regression equation has a constant of 7.493. If the independent variables are considered to be constant, the magnitude of the constant implies that the dependent variable, Y, rises by 7.493.

The variable coefficient  $X_1 = 0.196$  indicates that every unit rise in  $X_1$  causes a 0.196 increase in Y.

The variable  $X_2$  has a coefficient of 0.358, which indicates that every unit rise in  $X_2$  causes a 0.358 increase in Y.

### 3.7. Partial t test

The t statistical test assesses how much an independent variable impacts the dependent variable. The t test was used in this research to compare the significance of t with an  $\alpha = 0.05$ , and customer happiness is as follows:

TABLE 6: Partial t test.

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	.sig
	B	Std. Error			
1 (Constant)	7.493	1.482		5.057	0.000
The Ease of Use of Application	0.196	0.079	0.233	2.461	0.016
Service Quality	0.358	0.069	0.495	5.219	0.000

Source : Prepared by the authors (2023)

Table 6 of the SPSS calculation findings can be summarized as follows for each variable:

### 3.7.1. Ease of use of Applications ( $X_1$ ) has a direct positive effect on Consumer Satisfaction (Y)

The partial test results for the variable Ease of Use of Application (t count = 2.461, significance value = 0.016 < 0.05) indicate that H0 is rejected and H1 is accepted. This supports H1 claim that the ease of use application directly impacts customer loyalty.

### 3.7.2. Service Quality ( $X_2$ ) has a direct positive effect on Consumer Loyalty (Y)

H0 is rejected and H2 is accepted based on partial test results for the service quality measure (t count = 5.219, p-value < 0.05). This demonstrates that H2, which says that there is a substantial favorable direct impact between service excellence and customer loyalty, is partially correct.

## 3.8. Simultaneous F test

The F test evaluates how independent criteria, such as application ease of use (X1) and service quality (X2), influence customer loyalty (Y).

TABLE 7: Simultaneous F test.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	316.885	2	158.442	37.699	
Residual	407.675	97	4.203		
Total	724.560	99			

Source : Prepared by the authors (2023)

Table 7 shows a count F value of 37.699 with a 0.000 significance level, and a F table of 3.09. The count F value exceeds the tabular F value, and the significance level is < 0.05. Thus, H1 is approved, indicating that there is a substantial impact on Consumer Loyalty (Y) from both Ease of Use of the Application (X1) and Quality of Service (X2).

## 3.9. The determination coefficient ( $R^2$ ) test

The coefficient of determination ( $R^2$ ) indicates how accurately the model describes the dependent variables.

TABLE 8: Coefficient of determination ( $R^2$ ) test.

Model R	R Square	Adjusted Square	R Std. Error of the Estimate
1	0.661a	0.437	0.426

Source : Prepared by the authors (2023).

Table 8 displays the results of SPSS computations, indicating an Adjusted R Square of 0.426. This study found that 42.6% of consumer loyalty may be attributed to service quality and application ease of use, while the remaining 57.4% is impacted by other factors such as customer happiness, product quality, pricing perception, and promotions.

## 4. Discussion

The Ease of Use of Applications and Quality of Service have a direct and significant influence on Consumer Loyalty, because Ease of Use of Applications is one of the company's efforts to persuade customers to use mobile and applicative services that can help the company or service provider deliver goods quickly. The Ease of Use of Applications and Quality of Service have a direct and significant influence on Consumer Loyalty, because Ease of Use of Applications is one of the company's efforts to persuade customers to use mobile and applicative services that can help the company or service provider deliver goods quickly. According to Zehir & Narcıkara [12], with the growth of online retailing, e-retailers' service quality has been recognized as a critical factor in determining e-commerce firm success rates. New purchasing patterns have resulted in an increase in study on consumer happiness, trust, acceptance, service quality, customer perceptions, and loyalty. The study looks at the aforementioned topic in the Turkish e-business context. We performed our research with 645 customers using the top ten online merchants in Turkey, with the purpose of determining the relationships between E-Service Quality, Perceived Value, Recovery Service Experiences, and Loyalty Intention. We sought to see how recovery services affected users' nonroutine contacts with the sites, as well as how e-service quality influenced routine interactions. According to the findings of our study, there is a significant relationship between E-service Quality and Loyalty Intentions, with Perceived Value acting as a mediator.

Another study about this according to Prybutok [9] although both anecdotal and scholarly sources indicate that interpersonal recommendation is an important approach for marketing mobile applications (apps), little research has been undertaken on the

subject. To address this gap, we developed a research approach based on the Customer Value, Satisfaction, and Loyalty Framework (VSL). While previous VSL studies treated customer value as a black box and examined its effects as a whole, this study divides it into four categories: utilitarian benefits (app utility and quality), hedonic benefits (app aesthetics and enjoyment), monetary sacrifices, and non-monetary sacrifices. This study applies VSL to the mobile app context and identifies characteristics that impact app recommendations. The data study of 347 application users revealed that desire to suggest is a strong predictor of app recommendation behavior. Satisfaction with applications, users' desire to use them again, and the hedonic advantages they provide are all direct predictors of intention to suggest. Furthermore, non-monetary sacrifices and utilitarian advantages have an indirect impact on recommendation intent via satisfaction and app retention. Contrary to the assumptions, it found no significant impacts of monetary sacrifices in the revised VSL. It also includes a full explanation of these findings, as well as the study's theoretical and practical consequences.

## 5. Conclusion

The purpose of this study is to determine if the convenience of use of apps and the quality of service have a substantial impact on consumer loyalty for J&T Express service firms in the North Bekasi area. According to the t test findings and discussion analysis from this study, the application's simplicity of use ( $X_1$ ) has a substantial influence on user loyalty ( $Y$ ). This suggests that the better the J&T Express application and the advantages seen by its consumers, the higher the score, the higher the user happiness, and the greater the consumer loyalty to the J&T Express organization. The J&T Express application has benefits for its users because the existence of this application will speed up and make it easier to do work such as an online store without having to put data in place, simply by using the application so it saves more time. Furthermore, based on the t test findings, the measure Service Quality ( $X_2$ ) has a substantial impact on Consumer Loyalty ( $Y$ ). These findings explain why customers presently rate service quality as satisfactory. The service quality is divided into 5 dimensions. First, the tangible dimension, so far the facilities provided to consumers have been adequate with comfortable service areas, adequate facilities, clean and tidy service rooms. The reliability dimension is where the services provided to consumers are in accordance with their needs and interests without any differences between them. Responsiveness dimension, J&T Express provides fast service and always prioritizes

consumer interests, is competent in responding to consumer requests efficiently. The empathy dimension is where every consumer gets the same treatment without any differences in service. The magnitude of the input provided to service excellence demonstrates that consumers believe they have fulfilled standards. However, based on the F test findings, Ease of Use of Applications ( $X_1$ ) and Quality of Service ( $X_2$ ) have a substantial impact on Consumer Loyalty ( $Y$ ). Based on the observations and analysis of the coefficient of determination, it is clear that the coefficient of determination (Adjusted R Square) is 0.426. This suggests that service quality and application ease of use account for 42.6% of consumer loyalty, whereas the remaining 57.4% is impacted by variables not investigated in this study, such as customer satisfaction, product quality, pricing perception, and promotions. The limitations of the study are as follows : the study's object is only focused on one company, so it does not represent the actual research object, and also during the data collection process, the information provided by respondents via questionnaires did not always reflect their actual opinions. This occurred because each respondent's thoughts, assumptions, and understandings differed, as did other factors such as the honesty factor in filling out the respondents' opinions in the questionnaire. Based on the study that has been carried out, the following suggestions may be made: Future researchers should undertake continuous study in order to evaluate and analyze any changes in respondent behavior over time, and it is hoped that there will be new variables that impact many aspects of this research.

## References

- [1] Dhingra RA, S. Factors influencing cloud service quality and their relationship with customer satisfaction and loyalty. *Heliyon*. 2023;9(4).
- [2] Kotler P, Kotler G. *Principles of marketing* | Pearson. Pearson; 2018.
- [3] Kotler. *Manajemen Pemasaran di Indonesia: Analisis, Perencanaan, Implementasi dan Pengendalian*. Jakarta: Penerbit Salemba Empat; 2011.
- [4] Oliver RL. *Satisfaction: A behavioral perspective on the consumer*. Routledge; 2014. <https://doi.org/10.4324/9781315700892>.
- [5] Rowley J. An analysis of the E- Service literature, toward a research agenda. *Internet Res*. 2006;16(3):339–359.
- [6] Valarie A, Zeithaml AP. AM. Service quality delivery through web sites: A critical review of extant knowledge. *J Acad Mark Sci*. 2002;30(4):362–375.



- [7] Li H, Suomi R. A proposed scale for measuring eservice quality. *International Journal of U- and Eservice. Science and Technology*. 2009;2:1–10.
- [8] Cemal Z, Elif N. E-service quality and E-recovery service quality: Effects on value perceptions and loyalty intentions. *Procedia Soc Behav Sci*. 2016 Aug;2016(229):427–443.
- [9] Prybutok CX. A customer value, satisfaction, and loyalty perspective of mobile application recommendations. *Decis Support Syst*. 2015 Nov;2015(79):171–183.
- [10] Creswell JW. *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. 4th Editio. Boston, USA: Pearson Education Limited; 2012.
- [11] Zoltan D, Tatsuya T. *Questionnaire is second language research*. Second Edi. New York, USA; 2010. 60 p.
- [12] Malhotra NK. *Marketing research: An applied orientation*. Fourth Edi. New Jersey, USA: Prentice Hall; 2004.