

ANALYSIS OF PROMOTION AND SERVICE QUALITY ON CUSTOMER SATISFACTION AT PT. TOKOPEDIA INDONESIA BRANCH JAKARTA

Arif Hernawan^a, Nunuh^b, Richard Paulus^c, Ricardo Daniel^d

^aFaculty of Management and Business, Institut Transportasi dan Logistik Trisakti

Trisakti, Jakarta, Indonesia

Corresponding author: richardpaulus80@gmail.com

Abstract: This study aims to determine and analyse the effect of promotion and service quality on customer satisfaction of Tokopedia Indonesia Jakarta Branch, by utilising an Internet of Things (IoT) based system. Promotion is measured through analysing customer responses to promotional campaigns run by PT Tokopedia. Meanwhile, service quality is evaluated by monitoring IoT parameters which include delivery time, product availability, and system responsiveness. using testing the hypothesis that there is a relationship between the level of satisfaction experienced by customers and the level of quality and marketing enjoyed by Internet of Things (IoT) services. The type of research used uses a quantitative approach. The method used in this research is quantitative descriptive method, information collection methods utilizing surveys, and examination methods utilizing different direct relapse (SPSS). The comes about appeared that there was a solid impact between IoT-based benefit quality and advancement on client fulfillment.

Keywords: *promotion, service quality, customer satisfaction, internet of things (IoT), tokopedia*

1. Introduction

In this digital and interconnected era, marketing and customer service strategies have undergone significant changes, especially in the e-commerce sector, such as Tokopedia. One of the major players in this industry, Tokopedia continues to innovate to respond to increasingly dynamic market changes. Customer satisfaction, as a key indicator of company success, is a major concern in an effort to achieve sustainable growth.

Internet of Things (IoT) is an thought or situation in which objects have the capacity to exchange information over a organize without requiring human-to-human or human-to-computer association (Mudjanarko et al., 2017). IoT can be interpreted as a concept that aims to expand the benefits of internet connectivity that remains connected continuously (Kasus Gojek di Medan et al., 2021). Internet of Things (IoT) is an advanced technology that allows connected devices (such as cameras, gadgets, ATM machines, etc.) to communicate with each other and collect data in real-time. The data is sent to the cloud for processing and analysis, enabling instantaneous responses to events. IoT plays a role in the e-commerce industry, such as Tokopedia.

Tokopedia is one of the largest e-commerce companies in Indonesia, having achieved significant growth since its official launch. Employing a commercial center and online shopping center trade demonstrate, Tokopedia gives openings for communities, little shops, and brands to open and oversee online stores. Tokopedia must completely get it how their advancements and benefit quality affect client discernment and fulfillment. By utilising IoT technology, companies can provide more effective and innovative solutions in meeting customer expectations.

This research analyses how promotion and service quality play a role in shaping customer satisfaction at PT Tokopedia Jakarta Branch. The method used is an Internet of

Things (IoT) based system. By using IoT, this research enables real-time monitoring of promotional activities and service quality. This provides immediate information that can be used to quickly evaluate and respond to customer needs, provide deep insights needed to improve marketing and service strategies, companies can optimise operational processes, including efficiency in implementing promotions and improving service quality and can increase customer satisfaction.

By involving IoT technology, this research is not only to identify factors that influence customer satisfaction, but also to evaluate the extent to which the implementation of advanced Internet of Things technology can have a positive impact on the operational efficiency of Tokopedia's Jakarta branch. This approach is expected to provide a comprehensive picture of the relationship between promotion, service quality, and customer satisfaction in the evolving context of e-commerce.

Based on this background, an in-depth analysis of the influence of promotion and service quality on customer satisfaction using an Internet of Things (IoT)-based approach is needed. It is expected that the results of this analysis can provide a comprehensive view and enable Tokopedia to take appropriate actions to improve service quality and design more effective promotions that will contribute to customer satisfaction or loyalty.

2. Literature review

2.1 Definition of Service

According to Kurnia Sari 2018 service quality is defined as a dynamic condition related to service products, people, processes, and the environment. These conditions have the capacity to meet or even exceed consumer expectations. service quality is measured by the extent to which the company can meet or exceed customer expectations. Services that meet or exceed expectations can create customer satisfaction.

According to Gunawan & Raymond, 2020, service quality is characterized as consumers' assessment of the degree to which the level of benefit gotten is in line with their desires. On the off chance that the benefit gotten matches or surpasses desires, at that point the benefit quality is considered great and fulfilling. The fulfillment accomplished has the potential to empower customers to create rehash buys and potentially make them steadfast clients within the future.

In the mean time, concurring to Aulia & Imam Wahjono 2023, benefit quality underscores all the characteristics and characteristics of a great or benefit that influence its capacity to fulfill expressed or inferred needs. This benefit quality is key in assembly buyer desires.

Based on the definitions and views of experts, it can be concluded that service quality refers to the extent to which a service meets customer expectations. In general, good service quality has a positive relationship with customer satisfaction. When companies can provide services that meet or exceed customer expectations, this can create a positive experience, build a positive brand image, and can increase customer satisfaction. High customer satisfaction can have a positive impact on customer loyalty, and customer recommendations to others.

2.2 Definition Promotion

According to Iqbal, 2021, promotion is any form of communication used to inform, persuade, and remind target markets about products produced by organizations, individuals, or households. Promotion is an attempt to announce or offer a product or service to attract potential customers to purchase or consume it, thereby increasing

sales.

According to Ningtias 2018, promotion is defined as a form of non-personal, paid communication, carried out through various means by businesses, non-profit organizations and individuals. Promotion is intended to provide a one-way flow of information or persuasion, intended to encourage individuals or organizations to take actions that create an exchange in a marketing context. Promotion includes all forms of one-way communication to inform, persuade, and remind people about products produced by organizations, individuals, and households to create commerce in marketing activities.

Promotion can be explained as a marketing activity that aims to disseminate information, influence or persuade, and remind the target market about the company and its products. This is done in the hope that the market is willing to accept, buy, and remain loyal to the products offered by related companies (Darmawan, n.d.)

From the opinions of the experts above, it can be concluded that promotion is an effort made by companies to influence consumers directly or indirectly, with the aim of increasing sales turnover through the creation of exchanges in the marketing of goods. In the context of customer satisfaction, effective promotions can help create a positive perception of the brand, increase customer understanding, and build better relationships.

2.3 Definition of Costumer Satisfaction

According to Ningtias 2018, promotion is defined as a form of non-personal, paid communication, carried out through various means by businesses, non-profit organizations and individuals. Promotion is intended to provide a one-way flow of information or persuasion, intended to encourage individuals or organizations to take actions that create an exchange in a marketing context. Promotion includes all forms of one-way communication to inform, persuade, and remind people about products produced by organizations, individuals, and households to create commerce in marketing activities.

Fandy Tjiptono (2017: 180) defines service quality or service quality as an indicator of how effective the level of service provided is in achieving customer expectations. Arianto (2018: 83) also emphasises that Service Quality focuses on meeting needs and requirements, as well as timeliness in meeting customer expectations. The principle of Service Quality applies to all types of services provided by the company when the client is in the company.

Based on this opinion, it can be concluded that service quality is a comparison of services related to products, services, people, processes provided by producers to meet consumer expectations. Service quality is an action taken by the company in the form of intangible things but can be felt by consumers.

3. Research method

2.4 Methods

Quantitative research According to Sugiyono (2018: 13), quantitative data is a research method based on empirical research data (specific data) in numerical form that will be measured by statistical data. computational testing tool, related to the problem under study to reach a conclusion. The scale used in this study is a Likert scale starting with (1) strongly disagree (2) disagree (3) least agree (4) agree (5) strongly agree.

This research uses quantitative research methods, which is an approach to obtaining knowledge or solving problems systematically by collecting data in the form of a collection of numbers. (Nasehudin and Gozali, 2012). To collect data, this research uses the technique of distributing questionnaires or questionnaires and trials, with the aim of evaluating the level of validity and reliability of the questionnaire. The main focus in this quantitative research is to identify relationships between variables and test hypotheses that have been formulated previously by researchers. The respondents involved in this study were customers who used Tokopedia.

2.5 Population

According to Handayani (2020), a population is the totality of each element that needs to be studied with similar characteristics, which can be an individual of a group, an event or something that needs to be studied.

The object of study can be people, animals, plants, symptoms, values, events, attitudes, life, etc.

The population of this study included Tokopedia users who used the Tokopedia service in Jakarta.

2.6 Sample

According to Siyoto & Sodik (2015), a sample is a portion of the population's numbers and characteristics, or a small portion of the members of the population taken according to certain procedures so that they can be representative of the population.

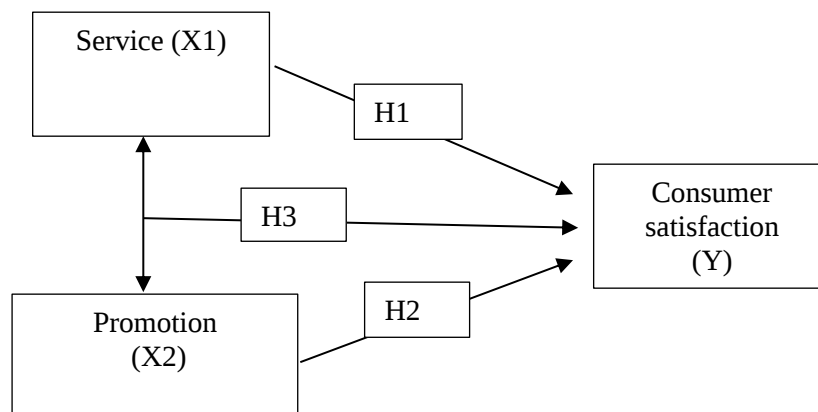
The researchers used a sample collection technique based on calculations using the Lameshow formula.

Therefore, the result obtained is that the minimum sample size required in this study is 96 respondents, which the researchers will round up to 100 respondents.

The reason researchers use Lemeshow's (1997) formula is because the target population is so large and its numbers vary.

2.7 Conceptual Framework and Hypothesis

This study describes the relationship between the independent variables, namely Service (X1), and Promotion (X2), with the dependent variable, namely Consumer satisfaction (Y). The framework is as follows:



Based on the research framework previously described, the authors can make hypotheses that are quantitative in nature to provide temporary answers or estimates of problem-solving as follows:

H1: Tokopedia's customer satisfaction is impacted by the quality of its services.

H2: Promotions have an impact on Tokopedia customers' contentment.

H3: Tokopedia's customer satisfaction is impacted by both advertising and service quality.

4. Results and discussion

4.1 Research results

This study aims to analyze the service and promotion on consumer satisfaction in System IoT by Tokopedia. The sample in this study were some Tokopedia customers in Jakarta, totaling 100 respondents. This research was conducted in October 2023. In this section, the results of descriptive analysis of respondent characteristics, descriptive analysis of research variables, instrument testing results, classical assumption test, multiple linear regression analysis, and hypothesis testing will be presented:

a. Instrument Testing Results

In this section the researcher will show the results of the validity test of the Service (X1), Promotion (X2), and Consumer Satisfaction (Y) variables tested using SPSS version 25, which can be seen in the following table:

Variable	Statemet	r Count	r Table	Information
Quality service (X1)	X1.01	0.76	0.197	VALID
	X1.2	0.783		VALID
	X1.3	0.705		VALID
	X1.4	0.775		VALID
	X1.5	0.766		VALID
	X1.6	0.717		VALID
	X1.7	0.824		VALID
	X1.8	0.798		VALID
	X1.9	0.746		VALID
	X1.10	0.703		VALID
	X1.11	0.781		VALID
	X1.12	0.64		VALID
	X1.13	0.798		VALID

Variable	Statemet	r Count	r Table	Information
Promotion (X2)	X2.1	0.736	0.197	VALID
	X2.2	0.71		VALID
	X2.3	0.752		VALID
	X2.4	0.742		VALID
	X2.5	0.754		VALID
Customer Satisfaction (Y)	Y.1	0.596	0.197	VALID
	Y.2	0.784		VALID
	Y.3	0.78		VALID
	Y.4	0.718		VALID

Table 1 Validity Test Results

The results of observations on the r-Table obtained a value of the sample (N) = 100 of 0.197. Referring to the results of the validity test, it was found that all instruments starting from the Service (X1), Promotion (X2), and Consumer Satisfaction (Y) variables all produced a value (r-Count) > than (t-Table) so it can be concluded that all instruments in this study can be said to be valid.

Next, the researcher will show the results of the reliability test of the Service (X1), Promotion (X2), and Consumer Satisfaction (Y) variables tested using SPSS version 25, which can be seen in the following table:

NO	Variable	Cronbach's Alpha	Information
1	Quality Service (X1)	0.950	Realibel
2	Promotion (X2)	0.893	Realibel
3	Customer Satisfaction (Y)	0.864	Realibel

Table 2 Reliability Test Results

From the results of the reliability test, it was found that all values from the results of the Service variable 0.950 (X1), Promotion 0.893 (X2), and Consumer Satisfaction 0.864 (Y) resulted in a Cronbach's alpha value > 0.60. So it can be concluded that all instruments in this study are reliable.

In this section the researcher will show the results of the normality, heteroscedasticity and multicollinearity tests of each variable tested using SPSS version 25.0 which are presented in the form of tables and figures as below.

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		100
Normal Parameters ^{a,b}	Mean	31.99
	Std. Deviation	4.505
Most Extreme Differences	Absolute	0.184
	Positive	0.150
	Negative	-0.184
Test Statistic		0.164
Asymp. Sig.		0.000 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Table 3 Normality Test Results

If the result is more than 0.05, it is considered normally distributed. The findings of this normality test are based on a single sample Kolmogorov Smirnov test with a significant value of 0.05. The findings of this study's normality test indicate wherein the data were distributed normally

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.782 ^a	0.611	0.603	1.989
a. Predictors: (Constant), Service Quality, Promotion				
b. Dependent Variable: Customer Satisfaction				

Table 4. Coefficient of Determination Test (R2)

In this section the researcher will show the results of multiple linear regression analysis analyzed using the help of SPSS software version 25.0 which is poured into tabular form

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.
-------	-----------------------------	---------------------------	---	------

		B	Std. Error	Beta		
1	(Constant)	-2.604	1.576		-1.652	0.102
	Quality Service	0.239	0.161	0.561	3.930	0.000
	Promotion	0.255	0.153	0.238	1.666	0.099
a. Dependent Variable: Customer Satisfaction						

Table 5 Multiple Linear Regression Analysis

Based on the table above, it can be concluded that each independent variable is as follows. From this description it can be concluded wherein the Service Quality variable (X1) has a significant effect on the Customer Satisfaction variable (Y) because the significant value is $0.000 < 0.05$ and the calculated t value is $3.930 > t$ table 1.660. Apart from that, the Promotion variable (X2) has a significant effect on the Customer Satisfaction variable (Y) because the significant value of the Promotion variable (X2) is $0.010 < 0.05$ the calculating t value is $1.666 > t$ table 1.660.

In this section the researcher will show the results of the T Test (Partial), F Test (Simultaneous) and the Coefficient of Determination (R²) which are analyzed using the help of SPSS software version 25.0 which is poured into tabular form as below:

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	560.834	2	280.417	83.193	.000 ^b
	Residuals	326.956	97	3.371		
	Total	887.790	99			
a. Dependent Variable: Consumer Interest						
b. Predictors: (Constant), Goods Safety, Service						

Table 7 F Test Results (Simultaneous)

Based on the table over, it is known wherein the significance value is $0.000 < 0 > f$ table value (2;97) = 3.09 on the impact of Service Quality (X1) and Promotion (X2) on Customer Satisfaction (Y). This implies that Ho3 is rejected and Ha3 is acknowledged. The consistent conclusion is in this way that situations where of Service Quality (X1) and Promotion (X2) on Customer Satisfaction (Y).

b. Discussion

• The Impact of Service on Customer Satisfaction within the Utilize of Tokopedia

Based on the comes about of the ponder, According to inquire about comes about, there's a positive and critical impact between benefit and buyer fulfillment when utilizing Tokopedia. Where the esteem of tally $t > t$ table t or $3,930 > 1,985$

- **The Impact of Promotion on Consumer Satisfaction in Utilizing the Tokopedia**

Based on the results of the study, Concurring to investigate comes about, there's a positive and noteworthy impact between article security and customer fulfillment when utilizing Tokopedia. Where esteem t-count $> t$ -table or $1.666 > 1.985$ and cruel esteem is 0.000.

- **The Influence of Service and Promotion on Consumer Satisfaction in Utilizing the Tokopedia**

Based on the results of the study, Concurring to investigate comes about, there's a positive and noteworthy affect between administrations and advancements on shopper fulfillment when utilizing Tokopedia. In which the esteem F-count $> F$ -table or $76,208 > 3,090$ and the noteworthy esteem is 0.000

5. Conclusion

Following the analysis of the data as well as its synthesis, we are able to come to the following conclusions:

1. First, a t-test analysis of the impact of service quality on customer loyalty reveals a positive and statistically significant relationship between the two; the higher the quality of service provided by the company, the more loyal its customers will be.
2. Similarly to the impact of service quality, the promo has a positive and significant influence on customer contentment, as shown by the t test analysis of the promo variable on customer satisfaction, which reveals a t-count of 2.624 with a significant value of $0.010 < 0.05$.
3. The simultaneous influence of Service Quality and Promotion on Customer Satisfaction is positive and statistically significant, as shown by the F-count of 76,
4. [208 with a significant value of 0.000.

6. Implications

Based on the results of the study, theoretical and practical implications can be stated in this study:

a) Theoretical Implications

Theoretically, this study proves that the services and promotions provided by Tokopedia using the IoT System to consumers will affect consumer interest in continuing to use the services offered from Tokopedia. In addition, by ensuring the security or safety of goods from consumers, both from the sender and the recipient, consumer confidence to continue using the services offered by Tokopedia will increase and will even affect consumer interest in trying other services offered by Tokopedia to consumers.

b) Practical Implications

Practically, this research provides input for Tokopedia to continue to provide the best service to consumers by being responsive in responding to consumer complaints and also the most important thing is to pay attention to the safety of consumer goods when delivered to the destination address. In addition, the accuracy of Tokopedia is also important so that the goods to be sent are checked for packaging and do not let the delivery address of the goods not match.

7. Research limitations

A study has certain limitations to limit the discussion in a study. The limitations of this research are as follows:

- a. This study only discusses the effect of service and promotion on customer satisfaction, and does not discuss other variables in this study.
- b. Respondents in this study are only Tokopedia consumers who are service users.
- c. The number of respondents in this study was limited to 100 respondents determined through the Lemeshow formula.
- d. This research is also limited by time and cost so that data collection is carried out by distributing questionnaires online in the form of google forms to speed up data.

Reference

- Aulia, S., & Imam Wahjono, S. (2023). *PENERAPAN IOT PADA BISNIS E-COMMERCE TOKOPEDIA*. <https://www.researchgate.net/publication/370497894>
- Darmawan, C. D. P. (n.d.). *INTERNET OF THINGS (IOT) FOR INVENTORY AND CONTAINER POSITION*.
- Gunawan, H., & Raymond, D. (2020). NESIA JAYA INDONESIA. *Jurnal Syntax Transformation*, 1(6).
- Interfungsional dan Kualitas Pelayanan Pusat Kontrol Operasi di Bandara Gusti Ngurah Rai, K. I., Reynold, B., Sodikin, A., Marina, S., Rafi, S., Pahala, Y., Pratiwi Perwitasari, E., Institut Transportasi dan Logistik Trisakti, abcdef, IPN No, J., & Besar Selatan, C. (2023). in I Gusti Ngurah Rai Airport Bali. *Jurnal Manajemen Transportasi & Logistik (JMTRANSLOG)*, 10(02). <https://journal.itltrisakti.ac.id/index.php/jmtranslog>
- IQBAL, M. (2021). Efektifitas Digital Marketing Terhadap Kualitas Layanan pada Usaha di Masa Pandemi Covid 19 (Studi Kasus di Aceh). *JEMSI (Jurnal Ekonomi, Manajemen, Dan Akuntansi)*, 7(2), 83–93. <https://doi.org/10.35870/jemsi.v7i2.609>
- Kasus Gojek di Medan, S., Sarkum, S., & Rasyid Syamsuri, A. (2021). The Role of Online Transportation in Pandemic Era: Case Study Gojek in Medan. *Jurnal Manajemen Transportasi & Logistik (JMTRANSLOG)*, 08(03). <https://journal.itltrisakti.ac.id/index.php/jmtranslog>
- Kurnia Sari, S., Andarini, S., & Timur, J. (n.d.). *Reslaj: Religion Education Social Laa Roiba Journal Pengaruh Kualitas Pelayanan Tokopedia terhadap Kepuasan Konsumen pada Pengguna Tokopedia di Surabaya*. <https://doi.org/10.47476/reslaj.v4i5.1154>
- Ningtias, R. P. (n.d.). *MENDORONG INDUSTRI TOKOPEDIA DENGAN MEMANFAATKAN TEKNOLOGI IOT*. <https://www.researchgate.net/publication/370836377>
- Setiawati, R., Eve, J., Syavira, A., Ricardianto, P., Nofrisel, & Endri, E. (2022). The Role of Information Technology in Business Agility: Systematic Literature Review. *Quality - Access to Success*, 23(189), 144–149. <https://doi.org/10.47750/QAS/23.189.16>