The Influence of Internet Service Provider (ISP) Service Quality in Indonesia on Consumer Loyalty Through Internet User Profiles

Sri Zuliarni1*, Gita Rizkia Arfina2*

* Politeknik Negeri Batam
Program Studi Administrasi Bisnis Terapan
Jl. Ahmad Yani, Batam Centre, Batam 29461, Indonesia
E-mail: sri.zuliarni@polibatam.ac.id
E-mail: gita.4121601051@students.polibatam.ac.id

Abstract

This study examines the influence of Internet Service Provider (ISP) service quality in Indonesia on consumer loyalty, examined using internet user profiles. The study's population consisted of internet users and consumers of Telkomsel, Indosat, and XL who had engaged with the services of a provider for at least one year. The participants consisted of 300 persons located in Batam City, Indonesia. The sampling approach utilized was a combination of purposive and quota sampling. This study aimed to examine the dimensions of ISP service quality and consumer loyalty across various user categories (Light, Medium, and Heavy Users). The analytical approach employed was Structural Equation Modeling (SEM), utilizing SmartPLS, AMOS, SPSS, and JASP. This study's findings indicate that the quality of ISP services favorably affects consumer loyalty in Indonesia, with certain cases exhibiting a significant impact. The majority of internet users are moderate users.

Keywords: Attitudinal Loyalty, Behavioral Loyalty, Internet Service Provider, ISP Service Quality, Internet User Profile

1. Introduction

In the current development of globalization, communication and information technology are increasingly experiencing rapid progress, one of which is the internet. The internet has become a necessity for both the public and business owners for long-distance communication, accessing information, marketing products, and other activities. Consequently, many companies, known as Internet Service Providers (ISPs), provide telecommunications services to meet these needs. An Internet Service Provider (ISP) is an enterprise that offers many internet connectivity options and additional services. Internet Service Providers maintain networks that enable users to connect to the global internet, covering both domestic and international distances. Consequently, to connect to the internet, users are required to utilize an Internet Service Provider (Maxmanroe.com, 2019).

The significant increase in consumer desires and the fulfillment of these needs is a crucial foundation for companies to build upon. By achieving optimal profitability, companies can survive and experience high growth in today's increasingly competitive business environment. However, business success today is determined not only by the products or services sold, but also by customer satisfaction and loyalty, which are the focus of this research. Consumers are a key factor in meeting their needs and desires. Furthermore, companies can provide added value to consumers, allowing them to study consumer behavior effectively and professionally (Simamora, 2004).

Thus, ISP user segmentation is crucial for evaluating their perceptions of the facets of ISP service quality. Segmentation can optimize the allocation of service provider resources (Taichon et al., 2015). The classifications of internet user segmentation include heavy users, moderate users, and light users (Quach et al., 2016).

This study will examine the impact of ISP service quality aspects on customer loyalty, informed by internet user profiles, utilizing the NCIS Quality Model established by Thaichon et al. (2015). This research was also adapted from research by Thaichon et al. (2015), Quach et al. (2016), and Lestari and Rachmawati (2019), which measured Internet Service Provider (ISP) service quality based on user loyalty across various internet usage patterns. The four dimensions of ISP service quality, using the Network,

Customer, Information, and Security (NCIS) Quality Model as outlined by Thaichon et al. (2014), are as follows:

1. Network Quality, a key factor driving overall service. ISPs must ensure network quality is maintained, as poor performance affects customer trust and perceptions. Customers assess this based on signal strength, errors, speeds, and response times.

2. Customer Service and Technical Support are the people who talk to customers and help them with their questions and problems. A good reputation with customers gives you an edge over your competitors.

3. The quality of information has to do with how accurate, thorough, and well-formatted the information is that is sent. A good business website clearly explains what an ISP offers. Accurate information and relationships let people think more positively.

4. Security and Privacy, conveying security and protection during transactions and service use. Companies must ensure customers that only authorized personnel can access confidential personal data. Clear policies foster positive perceptions of service quality.

As per Maxmanroe.com (2019), an Internet Service Provider (ISP) is an entity that offers internet connectivity and additional online services. ISPs have both domestic and international networks, allowing users to connect to the global internet. These networks use transmission media such as modems, cable leases, broadband, radio, or VSAT. Therefore, customers must use ISP services to access the internet, and the ISP must provide a terminal for network access.

Quach et al. (2016) in Lestari and Rachmawati (2019) divided internet users into three groups: light, medium, and heavy users. Drawing from previous research, the researchers updated these categories based on daily usage: light users (3 hours or less), medium users (more than 3 hours up to 7 hours), and heavy users (7 hours or more).

Thaicon et al. (2015) assert that client loyalty exerts a substantial influence on marketing literature. Consumer loyalty can be measured through two dimensions: Attitudinal Loyalty and Behavioral Loyalty.Numerous studies clarify loyalty predominantly from a behavioral perspective (Jaiswal & Niraj, 2011) and utilize it as a moderator; however, others argue that an attitudinal viewpoint more precisely encapsulates client loyalty (Flint et al., 2011).

This study has significant practical implications, since it creates a framework for understanding and improving consumer loyalty in the ISP sector, thereby offering actionable insights for industry professionals and researchers.This study seeks to evaluate the influence of ISP service quality in Indonesia on consumer loyalty, the effect of ISP internet user demographics in Indonesia on consumer loyalty, the correlation between ISP service quality in Indonesia and internet user demographics, and the impact of ISP service quality in Indonesia on consumer loyalty as mediated by internet user demographics.

Based on the theoretical and empirical foundations outlined previously, this study formulates the following hypotheses:

H1a: Network Quality positively and significantly affects Attitudinal Loyalty of ISP customers in Indonesia.

H1b: Network Quality positively and significantly affects the Behavioral Loyalty of ISP customers in Indonesia.

H2a: Customer Service and Technical Support positively and significantly affect on Attitudinal Loyalty of ISP customers in Indonesia.

H2b: Customer Service and Technical Support positively and significantly affect the Behavioral Loyalty of ISP customers in Indonesia.

H3a: Information Quality positively and significantly affect on Attitudinal Loyalty of ISP customers in Indonesia.

H3b: Information Quality positively and significantly affects the Behavioral Loyalty of ISP customers in Indonesia.

H4a: Security and Privacy positively and significantly affect on Attitudinal Loyalty of ISP customers in Indonesia.

H4b: Security and Privacy positively and significantly affect on the behavioral loyalty of ISP customers in Indonesia.

H5: Attitudinal Loyalty is a mediator in the relationship between the dimensions of ISP service quality and behavioral loyalty.

H5a: Attitudinal Loyalty mediates the effect of Network Quality on Behavioral Loyalty among ISP customers in Indonesia.

H5b: Attitudinal Loyalty mediates Customer Service and Technical Support on behavioral loyalty.

H5c: Attitudinal Loyalty mediates Information Quality on behavioral loyalty.

H5d: Attitudinal Loyalty mediates Security and Privacy on behavioral loyalty.

H6: Attitudinal Loyalty positively and significantly affects on behavioral loyalty.

H7: ISP service quality dimensions differently

influence attitudinal loyalty among the three segments of light, medium, and heavy users.

H8: ISP service quality dimensions differently influence behavioral loyalty across the three segments: light, medium, and heavy users.

The conceptual framework (Figure.1) shows the relationship that exists between consumer loyalty which is the dependent variable and the factors that affects it which are independent variables identified as ISP service quality and internet user profile.
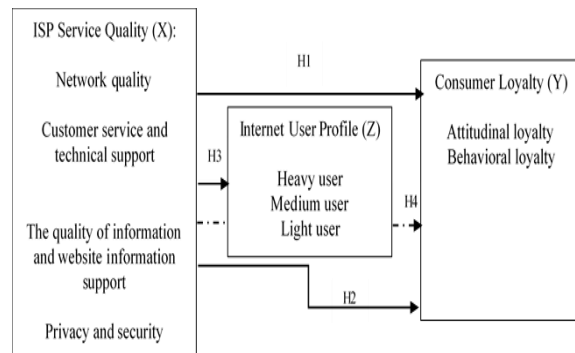

Figure 1: Research Framework

2. Research Methodology

This study utilized a quantitative methodology to assess the impact of service quality from the three leading Internet Service Providers in Indonesia on consumer loyalty in Batam City, using internet user profiles as a moderating variable. This study looks at things like the quality of the network, customer service, information, privacy security, attitudinal loyalty, behavioral loyalty, and the profiles of internet users (light, average, and hooked users). The data was collected using only one questionnaire. The people that took part were 300 ISP customers who had been using the provider's services for at least a year. Structural Equation Modeling (SEM) was the method used to analyze the data. This study utilized primary data, specifically obtained through the dissemination of questionnaires and the selection of respondents who fulfilled the established criteria. Secondary data comprised firm profiles, empirical journals, books, and websites.

Validity and Reliability Testing

In this test, the researcher used a data sample from the initial experiment (N = 15 and 18 statement items) and analyzed it through Pearson correlation in SPSS Statistics 26 software. With a significance level of 5%, the determined r value was 0.514.

Outer Model Testing

SEM testing has two primary assessments: the initial one is reliability testing (outer model).

The test findings demonstrate that both Cronbach's alpha and composite reliability values above 0.7, so confirming the dependability of the research instrument employed in this work. It is suitable for hypothesis testing as it satisfies the criteria for reliability testing.

TABEL I

RELIUABILITY TESTING OUTPUT

	Cronbach's Alpha	Composite Reliability
Attitudinal Loyalty	0.825	0.896
Behavioural Loyalty	1.000	1.000
Customer Service	0.832	0.899
Information Quality	0.858	0.914
Network Quality	0.738	0.851
Security and Privacy	0.876	0.924

Inner Model Testing

The test findings reveal that the R-squared value for the Attitudinal Loyalty variable is 0.531, indicating that the independent variable explains 53.10% of the variance in the dependent variable, while the remaining variance is ascribed to external factors not encompassed in this study's model. The R2 result for the Behavioral Loyalty variable is 0.405, signifying that the independent variable explains 40.5% of the variation in the dependent variable. In this investigation, the residual variation will be attributed to factors excluded from this model.

TABEL II

R-SQUARE OUTPUT

	R-Square
Attitudinal Loyalty	0,531
Behavioural Loyalty	0,405

1. Hypotheses Testing

The findings of data processing yielded the following outcomes on the hypothesis of direct influence.

TABEL III

PATH COEFFICIENTS

	P values	Description
AL->BL	0.000	Positive and insignificance influence
CSTS->AL	0.052	Positive and insignificance influence
CSTS->BL	0.102	Positive and insignificance influence
IQ->AL	0.000	Positive and significance influence
IQ->BL	0.132	Positive and insignificance influence
NQ->AL	0.313	Positive and insignificance influence
NQ->BL	0.330	Positive and insignificance influence
SP->AL	0.001	Positive and significance influence
SP->BL	0.752	Positive and insignificance influence

2. Indirect Effect

The criteria for indirect effect analysis are:

a. If the P-value is less than 0.05, the effect is significant and indirect. This means the mediator

variable affects the relationship between the exogenous variable and the endogenous variable.

b. If the P-value is greater than 0.05, the effect is considered insignificant, and the relationship is direct. This means the mediator variable does not affect the relationship between the exogenous variable and the endogenous variable.

TABEL IV

INDIRECT EFFECT OUTPUT

	P values	Description
STS ->BL	0.066	There is no mediation
IQ->BL	0.000	There is no mediation
NQ->BL	0.317	There is mediation
SP->BL	0.006	There is mediation

3. Multi-Group Correlation Analysis (Attitudinal Loyalty)

This analysis seeks to investigate categorical moderator factors or those that differ among groups of internet users. The analysis reveals that the dimensions of ISP service quality substantially affect attitudinal loyalty among three classifications: light users, medium users, and heavy users. The P-values for all three groups were <0.001, signifying that the three internet user profiles influence the effect of ISP service quality on consumer attitudinal loyalty in Indonesia.

4. Multi-Group Correlation Analysis (Behavioural Loyalty)

The test results indicate that the internet user profile completely moderates ISP service quality regarding behavioral loyalty among consumers in Indonesia. For light users, the P-value obtained was 0.014, suggesting that the ISP service quality component exerted no significant influence on behavioral loyalty. Nonetheless, the quality of ISP services markedly affected behavioral loyalty among medium and heavy users, with P-values below 0.001.

5. The Influence of ISP Service Quality Dimensions on Consumer Loyalty

The analysis of this study reveals that several dimensions of ISP service quality have a direct, positive, and significant effect on consumer loyalty. The characteristics demonstrating the most advantageous yet minimal influence are network quality and customer service. Furthermore, behavioral loyalty is the primary characteristic of loyalty and is minimally influenced by ISP service quality. The results predominantly validate the research conducted by Taichon et al. (2015), which indicated that attributes of ISP service quality have a positive and substantial influence on attitudinal loyalty. However, this is not applicable to behavioral loyalty.

6. The Mediating Effect of Attitudinal Loyalty on the Relationship Between Service Quality and Behavioral Loyalty.

The analysis of this study reveals that behavioral loyalty does not act as a mediator in the relationship between components of ISP service quality, such as network quality and customer service, and attitudinal loyalty. Behavioral loyalty mediates the components of ISP service quality, encompassing information quality and privacy security. Research by Lestari and Rachmawati (2019) indicates that all components of ISP service quality influence or are mediated by behavioral loyalty through consumer attitudinal loyalty. Improvements in information quality and privacy security are anticipated to cultivate heightened consumer loyalty towards ISP services.

7. The Influence of ISP Service Quality Dimensions on Consumer Loyalty Based on Light, Medium, and Heavy User Groups.

This study's findings demonstrate that characteristics of ISP service quality affect consumer loyalty to ISPs in Indonesia, categorized by internet user groups. All factors of ISP service quality substantially affect consumer attitudinal loyalty. The findings demonstrate that all three internet user characteristics influence ISP service quality regarding attitudinal loyalty. Nevertheless, the findings suggest that infrequent users do not substantially affect behavioral fidelity. The data indicated that medium users were the largest group of internet users, with an average daily usage rate of 45.9%. Consequently, amounts of internet usage might affect consumer perceptions of ISP service quality, as perceptions may vary across different characteristics of service quality.

3. Conclusions

The researchers have drawn numerous significant findings about ISP consumers in Indonesia based on the data processing results. Initially, they discovered that Network Quality exerts a positive, though minor, influence on both Attitudinal and Behavioral Loyalty among these customers. Likewise, Customer Service and Technical Support exhibit a favorable yet negligible effect on Attitudinal and Behavioral Loyalty.

The investigation indicated that Information Quality considerably affects Attitudinal Loyalty, while its

impact on Behavioral Loyalty is favorable but not statistically significant. Furthermore, Security and Privacy were demonstrated to have a substantial influence on Attitudinal Loyalty, although their effect on Behavioral Loyalty is favorable yet not statistically significant.

The researchers investigated the mediating effects among different parameters. They found that Attitudinal Loyalty does not mediate the relationship between Network Quality and Customer Service and Technical Support with Behavioral Loyalty. They identified a mediating influence of Attitudinal Loyalty on Behavioral Loyalty about Information Quality. Likewise, a mediating influence from Attitudinal Loyalty is observed in other domains as well.

The results made it very evident that Attitudinal Loyalty greatly improves Behavioral Loyalty. The study also looked at how factors that affect the quality of ISP services affect different types of users, such as light, medium, and heavy users. The findings showed that these traits have a big effect on Attitudinal Loyalty in all groups, but the effect was strongest in the medium user group. Also, the user groups showed different effects of these elements on Behavioral Loyalty.

Implications

Based on the findings of this research, the researcher intends to provide several recommendations to benefit various stakeholders. Firstly, it is suggested that ISP companies, such as Telkomsel, Indosat, and XL Axiata, utilize these findings as a catalyst for enhancing the quality of their internet services. Additionally, ISPS need to focus on fostering loyalty among both light and heavy users, while also working to retain medium users; this strategy aims to further strengthen consumer loyalty in the long run. Finally, the researcher proposes that future studies explore other ISP companies on similar topics, delve deeper into the specific components of the variables examined, and conduct research on a larger scale. This could involve gathering a more extensive set of respondents and considering variations based on different cities and regions.

References

Achmad Nur Effendhi, J. I. "BULETIN APJII EDISI 33" - Mengawali Integritas Era Digital 2019. Jakarta: APJII (Asosiasi Penyelenggara Jasa Internet Indonesia), 2019.

APJII. "Hasil Survei Penetrasi dan Perilaku Pengguna Internet Indonesia", Jakarta: APJII, 2018.

Bilson, S. "Panduan Riset Perilaku Konsumen". Jakarta: PT. Gramedia Pustaka Utama, 2004.

Fatihudin, D. 2015. "Metode Penelitian: Untuk Ilmu Ekonomi, Manajemen dan Akuntansi". Sidoarjo: Zifatama Publisher, 2015.

Flint, D.J., Blocker, C.P. and Boutin Jr., P.J. "Customer Value Anticipation, Customer Satisfaction and Loyalty: An Empirical Examination. Industrial Marketing Management", 40, 219-230, 2013. http://dx.doi.org/10.1016/j.indmarman.2010.06.03

Hidayat, W. "Pengguna Internet Indonesia Nomor Enam Dunia". Retrieved from KOMINFO: https://kominfo.go.id. 2014, November 24.

Jaiswal, A.K. & Niraj, Rakesh. "Examining mediating role of attitudinal loyalty and nonlinear effects in satisfaction-behavioral intentions relationship", Journal of Services Marketing 25(3):165-175, 2011. DOI: http://dx.doi.org/10.1108/08876041111129155

Lestari, W. G., & Rachmawati, I. "Pengaruh Kualitas Layanan Internet Service Provider (ISP) Terhadap Loyalitas Pelanggan Indihome Fiber di Indonesia Berdasarkan Pola Penggunaan Internet yang Berbeda". e-Proceeding of Management Universitas Telkom, Pp. 388, 2019.

Maxmanroe (n.d). "Pengertian ISP, Fungsi, Jenis Layanan, dan Contoh Perusahaan ISP". Retrieved from https://www.maxmanroe.com/vid/teknologi/internet/pengertian-isp.html

Simamora, Bilson. "Memenangkan Pasar Dengan Pemasaran Efektif dan Profitabel". Jakarta: PT Gramedia Pustaka Utama, 2001.

Thaichon, P., Quach, T. N., & Jebarajakirthy, C. "Internet Service Providers Service Quality and Its Effect on Customer Loyalty of Different Usage Patterns". Elsevier - Journal of Retailing and Consumer Services, 2019.

Quach, T. N., Jebarajakirthy, C., & Thaichon, P., "The Effects of Service Quality on Internet Service Provider Customer's Behaviour – A Mixes Methods Study". Emerald Insight - Asia Pacific Journal of Marketing and Logistic, 2016.