JURNAL DOKTOR MANAJEMEN
P-ISSN: 2622-5352 E-ISSN:2622-9285
JDM sinta 3
https://publikasi.mercubuana.ac.id/index.php/jdm

# Analysis of Competition Maps, Service Quality, and Customer Movement Behavior of Internet Service Providers in the Special Region of Jakarta

**Hanif Yusuf[1*]; Eko Ruddy Cahyadi[2]; Alim Setiawan Slamet[3]**

[1] hanifyusuf@apps.ipb.ac.id, *IPB University, Jl. Raya Darmaga Kampus IPB, Babakan, Kec. Dramaga, Kabupaten Bogor, Jawa Barat, Indonesia*
[2] ekocahyadi@apps.ipb.ac.id, *IPB University, Jl. Raya Darmaga Kampus IPB, Babakan, Kec. Dramaga, Kabupaten Bogor, Jawa Barat, Indonesia*
[3] alimss@ipb.ac.id, *IPB University, Jl. Raya Darmaga Kampus IPB, Babakan, Kec. Dramaga, Kabupaten Bogor, Jawa Barat, Indonesia*

***Article Information*:**

**Keywords:**
Brand Positioning;
Brand Switching;
Isp;
Markov Chain;
Model Kano;

**Article History:**
Received : December 16, 2025
Revised : January 27, 2026
Accepted : April 09, 2026

**Article Doi:**
10.22441/jdm.v9i1.37313

**Abstract**

This study aims to analyze the competitive map, service quality, and customer transfer behavior in four main internet service providers in the Special Region of Jakarta, namely IndiHome, Biznet, First Media, and MyRepublic. Internet services, which have become an essential need of urban communities, present fierce competition between providers, especially in terms of speed, stability, price, and user experience. This study uses the Multidimensional Scaling (MDS) method to map the brand position based on customer perception of service attributes, including features, network reliability, area coverage, speed, and price. In addition, the Kano model is used to assess the level of customer satisfaction with each service attribute, while the Markov Chain method is applied to predict the chances of customer switching between service providers. The results show that Biznet occupies the most differentiated position with advantages in terms of speed and network stability, while IndiHome, First Media, and MyRepublic are in close positions which reflects the perception of service similarity in the minds of customers. These findings confirm that competitive advantage in the internet service provider industry is not only determined by price, but also by technical quality, reliability, and customer experience. Theoretically, this study strengthens the understanding that customer switching behavior is closely linked to perceived service quality and competitive positioning in service-based industries.This research is expected to be a reference for internet service providers and regulators in formulating strategies to improve service quality, customer retention, and encourage the creation of healthy market competition in the Indonesian telecommunications sector.

## 1. INTRODUCTION

Internet services have now become an essential infrastructure that supports various sectors of life, such as the economy, education, health, and entertainment (Chen, 2024; Haleem et al., 2022; Wahab et al., 2020; Yu & Meng, 2022). Data from Statista (2024) It shows that 67.1% of the world's population is actively using the internet by 2024, reflecting the global digital transformation. Indonesia, as one of the fastest-growing countries in the world, has more

than 212 million internet users in 2023, making it the country with the fourth-largest number of internet users in the world after China, India, and the United States. APJII Survey (2024) shows internet penetration in Indonesia which will reach 79.50% by 2024, with 221 million of Indonesia's total 278 million population already connected to the internet. This strengthens Indonesia's position as the largest internet service market, driven by increasing demand and accelerating digitalization in various sectors.

However, despite the increasing number of internet users, the quality of service provided by internet service providers (ISPs) is still often an issue. Customer complaints related to unpredictable internet speeds, unresponsive customer service, and frequent network interruptions are the main challenges that drive the phenomenon of brand switching. On the other hand, competition between ISPs is getting fiercer, and customers are not only judging services based on price and speed, but also on their overall experience of using the service. This fairly significant brand switching phenomenon is an indicator of customer dissatisfaction with the quality of existing ISP services. With the growth in the number of customers and the increasing expectations for service quality, ISPs must optimize marketing strategies and improve service quality to meet customer needs and expectations.

The Region of Jakarta the highest internet penetration rates in Indonesia (above 80%) and a population exceeding 10 million, making it the largest and most competitive urban internet market for major internet service providers (BPS, 2023; APJII, 2023). In the Jakarta Special Area, competition between ISPs is getting tougher, with large providers such as IndiHome, Biznet, First Media, and MyRepublic competing fiercely in terms of speed, price, and service quality. Some previous studies have focused on analyzing ISP service quality, but most have only highlighted specific aspects, such as speed or price, without considering other factors that affect overall customer satisfaction. For example, research conducted by Vania, (2021) maps ISPs in the Jakarta Special Region based on service attributes, but does not include a more in-depth mapping of brand positioning, especially in terms of customer perceptions of the advantages and disadvantages of competing ISPs. In addition, although the Kano model has been widely applied to analyze customer satisfaction in various cities such as Bandung (Sidik et al., 2021), research on the attributes of service quality that are influential in Jakarta is still limited.

This study aims to address the following research gaps:

1. The lack of comprehensive ISP competitive mapping in Jakarta, particularly in capturing brand positioning based on multiple service attributes using multidimensional scaling (MDS) ((Borg et al., 2013; Mogaji, 2021)
2. Limited studies identifying key service quality attributes influencing customer satisfaction in Jakarta, especially using the Kano model (Phasa & Astuti, 2021; Sidik et al., 2021)
3. Insufficient analysis of customer switching behavior among ISPs in Jakarta, particularly using the Markov chain approach (Ching et al., 2013; Vania, 2021)
4. The absence of an integrated analytical approach that simultaneously examines competitive positioning, service quality, and brand switching dynamics, resulting in a fragmented understanding of ISP market competition in Jakarta.

The objectives of this study are to: (1) Analyze the brand positioning mapping of ISPs in the Special Region of Jakarta using the MDS method based on customer perception of important service attributes, such as speed, price, area coverage, and network reliability; (2) Evaluate the service quality of ISPs using the Kano model to identify service attributes that have a significant effect on customer satisfaction; and (3) Analyzing the dynamics of brand switching among ISP customers in the Special Region of Jakarta using the Markov chain method. This research is expected to make a significant contribution in understanding the dynamics of ISP market competition, as well as providing strategic recommendations for ISPs and regulators in designing policies that encourage healthy competition and improve the quality of internet services in Jakarta.

## 2. LITERATURE REVIEW

### *Internet Service Provider* (ISP)

*Internet service provider* is an entity that provides access services to the global internet network. Etymologically, the internet refers to a global communication network that allows access to various information online, while *service providers* refer to service providers (Bumbungan, 2025). ISPs act as a bridge that connects users to cyberspace, facilitating various digital activities such as communication, *e-commerce*, and entertainment (Rauf dkk., 2025). In Indonesia, the implementation of ISPs is regulated by the Regulation of the Minister of Communication and Information Technology Number 13 of 2019 concerning the Implementation of Telecommunication Services (Deacon, 2022). Based on the technology used, ISPs can be categorized *into dial-up*, *broadband*, *wireless*, satellite, and *fiber-optic*. Meanwhile, based on the scope of service, ISPs can be differentiated into local, regional, national, and international ISPs.

As a key player in the telecommunications industry, ISPs offer a variety of service packages with varying speeds and capacities to meet the diverse needs of users. Sibarani *et al.* (2023) emphasizing the great potential of ISPs in driving the growth of Indonesia's digital economy. However, this is highly dependent on the quality of network infrastructure and government policy support. In addition to providing basic connectivity services, modern ISPs also offer additional

solutions such as *domain hosting*storage *Cloud*, and cybersecurity. The position of ISPs as a link between users and the global internet demands a high commitment in maintaining network security from various cyber threats. Research by Liu (2019) highlighting the importance of network technology innovations, such as 5G, in improving ISP service quality and providing a more optimal user experience.

### *Brand Positioning*

*Fire* or brands have an important role in distinguishing a product from its competitors since the beginning of human civilization. Function *fire* as a marker of quality and differentiator of products has been known since the Indus Valley civilization to develop in modern times (Moore & Reid, 2008). As a signal of quality and differentiation, *brand positioning* aims to create a strong brand image and value in the minds of consumers (Kotler & Armstrong, 2018). *Brand positioning* is a strategy that companies use to put their brand in the minds of consumers by designing unique and meaningful offerings and imagery (Keller et al., 2015).

### Quality of Service

The concept of service quality (*service quality*) refers to the extent to which the characteristics and capabilities of a product or service are able to meet or even exceed customer expectations. According to Mutmainnah (2017), service quality is the overall characteristics that can meet customer needs. Gulla *et al.* (2015) emphasizing that quality is a decisive factor for companies to retain customers and create added value. Opele *et al.* (2020) He further explained that quality services are the result of the service provider's efforts in meeting the needs and desires of consumers in a timely manner. Service quality is a dynamic condition that is capable of exceeding customer expectations. The high quality of service not only increases customer satisfaction but also encourages loyalty and repurchase (Ulkhaq & Br.Barus, 2017). However, measuring the quality of service is quite complex because of its *intangible*, heterogeneous, and simultaneous (Bordoloi et al., 2018). Prananda *et al.* (2019) adding that in addition to the quality of service, other factors such as price, product quality, and personal factors also affect customer satisfaction.

### *Brand Switching*

*Brand switching* It is a phenomenon of consumer movement from one brand to another that is influenced by various factors such as service quality, price, and technological innovation. When consumers are dissatisfied with the brand used, they tend to look for better alternatives. *Brand switching* It can happen for a variety of reasons, including a search for variety, new product offerings, or dissatisfaction with an existing product. Medari *et al.* (2017) join *brand switching* with customer loyalty. Level *brand switching* A high indicates low customer loyalty to a brand. According to Agustina and Kembang (2019), some of the main reasons consumers do *brand switching* is product quality that does not meet expectations, uncompetitive prices, difficulty obtaining products, or the desire to try new products.

## 3. METHOD

This study uses primary data collected through a Likert-scale questionnaire distributed online via Google Form. The research was conducted through several sequential stages, starting from instrument development, data collection, data testing, and data analysis. The questionnaire consists of three main parts: brand positioning, service quality, and brand switching. In the brand positioning section, respondents were asked to assess the similarities or dissimilarities between ISPs based on service attributes, including features, internet speed, area coverage, network reliability, and price. The service quality section measures customer satisfaction with the functional and dysfunctional service attributes of each ISP, while the brand switching section captures respondents' reasons for remaining loyal or switching internet service providers.

The population of this study comprises residents of the Special Region of Jakarta who subscribe to IndiHome, Biznet, First Media, or MyRepublic. After determining the population, a volunteer sampling technique was applied, resulting in a sample of 400 respondents aged 19-49 years, representing the productive age group and considered capable of objectively evaluating the ISP services used.

Following data collection, the research proceeded to the data testing stage. Descriptive analysis was first employed to describe the characteristics and responses of the respondents without generalization. The Likert scale ranged from 1 (strongly disagree) to 5 (strongly agree), and scale range calculations were used to categorize respondents' answers. Instrument validity was tested using the corrected item–total correlation method, with items considered valid at a 5% significance level, while reliability was assessed using Cronbach's Alpha, with values above 0.70 indicating acceptable reliability.

In the final stage, data analysis was conducted using three analytical methods aligned with the research objectives. Multidimensional Scaling (MDS) was used to map customer perceptions of similarities among ISPs based on service attributes, generating a perceptual map of competitive positioning, with the STRESS value employed to assess

the goodness of fit. The Kano model was applied to analyze ISP service quality by classifying service attributes into Attractive, One-Dimensional, Must-be, Indifferent, and Reverse categories, and calculating customer satisfaction and dissatisfaction coefficients. Furthermore, brand switching behavior was analyzed using the Markov Chain method by constructing a transition matrix to estimate the probability of customer movement between ISPs and predict future switching patterns. This final stage provides insights into the factors influencing brand switching decisions and supports ISPs in developing more effective customer retention strategies.

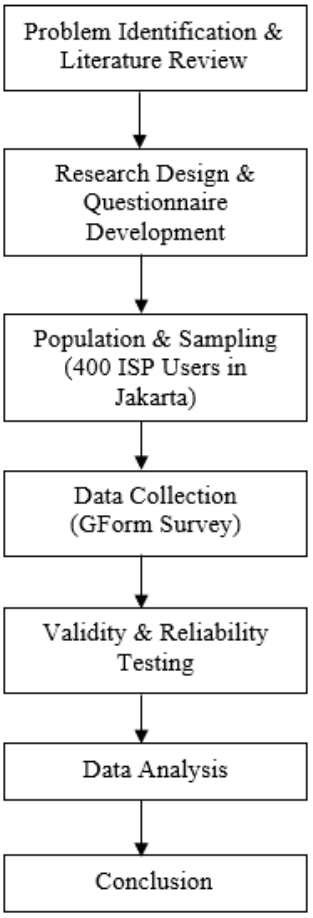


**Figure 1.** Research Framework

## 4. RESULTS AND DISCUSSION

### Result

Service attribute assessment measurements were conducted to provide an initial overview of customer perceptions of each ISP's performance, including aspects of service, features, speed, coverage area, network reliability, price fairness, and external factors. The average results of these attribute assessments are presented in Table 1.

Table 1. Average attribute assessment score

| Attribution | IndiHome | First Media | Biznet | MyRepublic |
|---|---|---|---|---|
| Service | 3,453 | 3,438 | 3,765 | 3,437 |
| Feature | 3,152 | 3,254 | 3,303 | 2,957 |
| Speed | 3,267 | 3,557 | 3,634 | 3,550 |
| Jangkauan Area | 3,168 | 3,202 | 3,230 | 3,123 |
| Network Reliability | 3,043 | 3,350 | 3,500 | 3,127 |
| Price Fairness | 3,029 | 3,202 | 3,653 | 2,940 |
| External | 3,108 | 3,360 | 3,424 | 3,273 |

Based on the categories in table 1 the results in table 12 explain that customers tend to give a positive assessment (agree) to IndiHome's performance in terms (attributes) of services (score 3,453). First Media and MyRepublic showed similar performance, with each customer likely to agree that the ISP they use is positive in terms of service (scores of 3,438 and 3,437) and speed (scores of 3,557 and 3,55). Furthermore, customers tend to agree that Biznet is rated positive in almost all attributes except features (score 3.303) and area coverage (score 3.23) which

are relatively neutral. However, overall the performance of the four ISPs tends to be rated not negatively by customers because they obtain an average score for all attributes that are classified as neutral and agreeable. Further evaluation was carried out by comparing the performance of the four ISPs presented in the radar diagram in Figure 2.

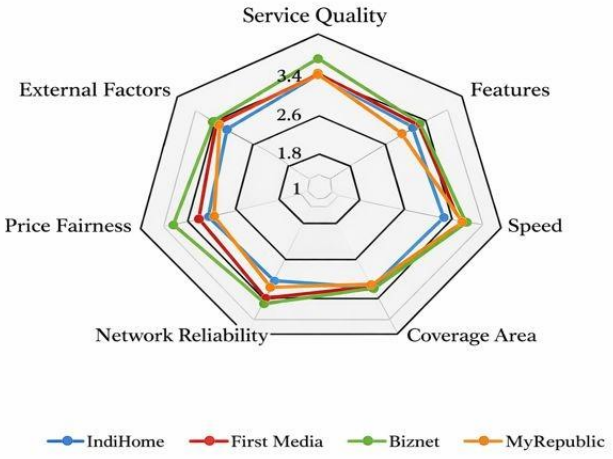


**Figure 2.** ISP attribute rating score scatter chart

Based on Figure 2, it can be seen that Biznet has the highest score in all attributes, even higher than the positive scores of IndiHome (service), as well as First Media and MyRepublic (service and speed). Service and price fairness are attributes that emphasize Biznet's superiority because of the significant score difference with the other three ISPs. First Media is considered quite superior because it has an attribute assessment score that is not much different from Biznet, especially in several attributes that received positive assessments, such as speed, network reliability, and external factors. In addition to having a positive rating in the speed attribute, MyRepublic also has an external factor attribute assessment score that is not much different from Biznet and First Media. However, in some other attributes, especially price fairness and features, MyRepublic's rating score is the lowest. Results are the main part of the scientific article, which contains: final results without data analysis processes, hypothesis testing results. Results can be presented with tables or graphs, to clarify the results verbally.

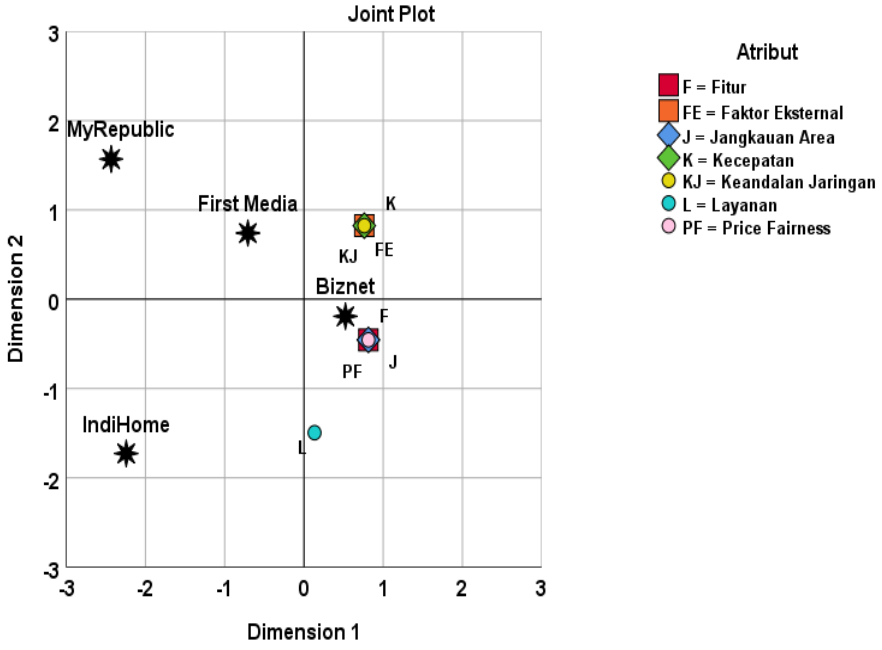


**Figure 3.** Perception map *positioning* ISP

Based on the position of the attributes in Figure 3, the economic feasibility attribute group is in the middle of the other two attribute groups with relatively equal distances. This indicates that the relationships formed from this group of attributes are integrated in shaping customer perceptions. This means that ISPs will meet performance and credibility

criteria, if the economic feasibility criteria are also met. On the other hand, ISPs will meet the criteria for quality customer service, if the economic feasibility criteria are also met. In other words, the economic feasibility criteria in this case are a measure of customer validation to classify ISPs to be classified as performance and credibility criteria or quality customer service. Thus, these results provide an explanation of the competitive position of ISPs as follows.

The quality of the perception map produced by MDS can be measured from the data output in the form of several goodness-of-fit measures listed in Table 13 below.

Table 1 Goodness of Fit of the Perceptual Map

| Indicator | Value | Interpretasi | Explanation |
|---|---|---|---|
| Kruskal's Stress | 0,000 | Perfect | There is no error between the original distance between objects and the distance on the map |
| Variance Accounted For (RSQ) | 1,000 | Perfect | All variants of the original data can be described on the map |
| Dispersion Accounted For | 1,000 | Perfect | The map perfectly represents the distribution of data |
| Recovered Preference Orders | 0,976 | Excellent (close to 1) | The respondents' perception ratings are fully depicted on the map |
| Spearman's Rho | 0,992 | Excellent (close to 1) | The mapping results are highly representative of the original data sequence |
| Kendall's Tau | 0,987 | Excellent (close to 1) | Most data pairs remain consistent in order |

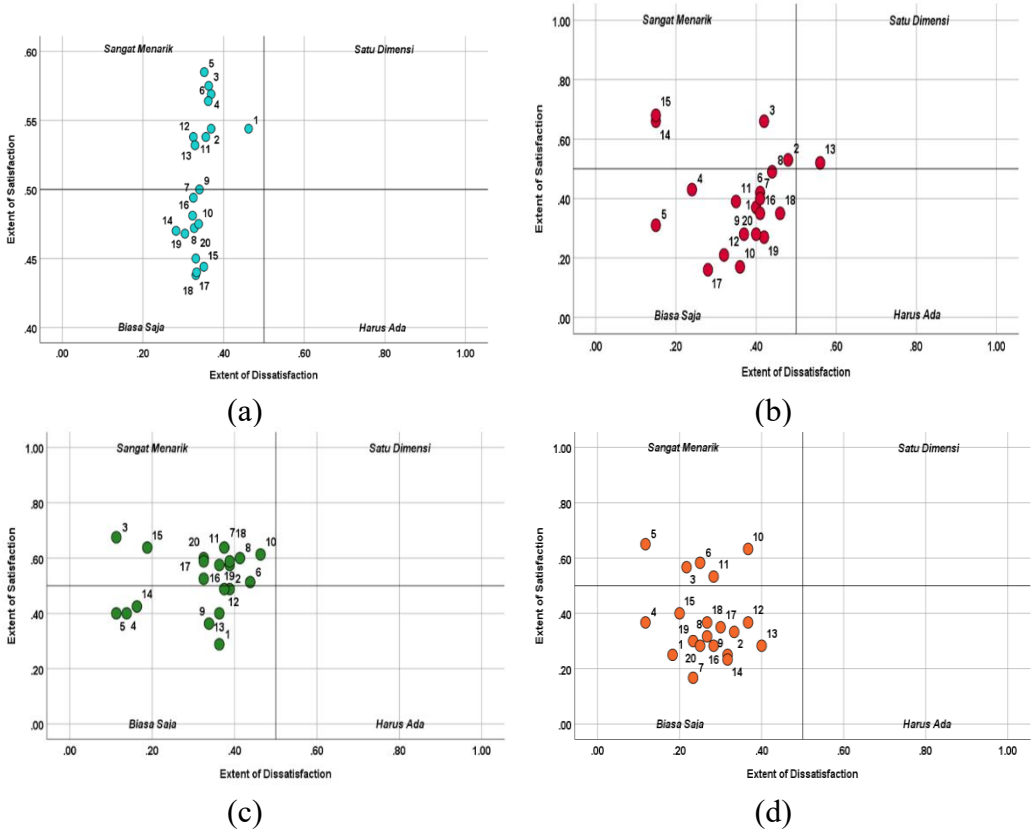


**Figure 4.** Kano analysis scatter chart related to ISP service quality (a) IndiHome, (b) First Media, (c) Biznet, (d) MyRepublic

The classification results show that most of the attributes of IndiHome's services are in the *attractive* category. Customers pay great attention to ease of access, customer service responsiveness, and installation speed. Technical

attributes, such as high internet speed, connection stability, and availability of network *backups* are also considered excitement *factors* that significantly increase satisfaction when present. In addition, large and flexible data quotas, *mobile* applications for account management, and *TV streaming services* also fall into this category. On the other hand, attributes that are classified *as indifferent* include additional features such as extra speed during peak hours, coverage throughout the home, and discount-based loyalty programs. External factors such as ISP reputation, regulatory compliance, or IoT device support are also not seen as the main differentiator. This shows that IndiHome's customers are more focused on the direct experience and convenience of the service than the external aspects.

Table 2 Number of ISP subscribers during the study

| ISP | 2024 | | | | 2025 |
|---|---|---|---|---|---|
| | January | April | July | October | January – July |
| IndiHome | 157 | 160 | 154 | 148 | 160 |
| First Media | 97 | 97 | 115 | 97 | 100 |
| Biznet | 64 | 64 | 66 | 76 | 80 |
| MyRepublic | 70 | 67 | 53 | 67 | 60 |
| Other | 12 | 12 | 12 | 12 | 0 |

The customer migration model between ISPs was developed taking into account the migration probability of all service providers. This probability is derived from the historical data presented in Table 4 which shows the presence of customers using other ISPs during the observation period. The value of the current transition probability is calculated based on the aggregation of displacement data from the previous four periods. The results of the aggregation are summarized in Table 5.

Table 5. Aggregate of customer transitions between ISPs in the observation period

| Previous period | Current period | | | | | |
|---|---|---|---|---|---|---|
| | IndiHome | First Media | Biznet | MyRepublic | Other | Total |
| IndiHome | 590 | 8 | 16 | 5 | 0 | 619 |
| First Media | 11 | 376 | 7 | 12 | 0 | 406 |
| Biznet | 9 | 0 | 261 | 0 | 0 | 270 |
| MyRepublic | 11 | 14 | 2 | 230 | 0 | 257 |
| Other | 1 | 11 | 0 | 0 | 36 | 48 |
| Total | 622 | 409 | 286 | 247 | 36 | 1600 |

Each row in the transition matrix represents the ISP provider that the customer used in the previous period, while each column represents the ISP that was used in the current period. The values in each matrix cell indicate the aggregate number (frequency) of customer moves to ISPs in a given column, with the previous condition being the customers of the ISP on the corresponding row. For example, a value of 590 in cells (IndiHome, IndiHome) indicates that there were 590 instances when customers who previously subscribed to IndiHome maintained their services (did not move) during the observation period. In other words, the aggregate retention of IndiHome customers from January 2024 to July 2025 is 590 incidents. Based on this aggregate transfer data, the probability of a conditional transition between ISPs can be calculated. The resulting transition probability matrix is presented in Table 6.

Table 6. Cross-ISP customer transition probability matrix

| Previous period | Current period | | | | |
|---|---|---|---|---|---|
| | IndiHome | First Media | Biznet | MyRepublic | Other |
| IndiHome | 0.953 | 0.013 | 0.026 | 0.008 | 0.000 |
| First Media | 0.027 | 0.926 | 0.017 | 0.030 | 0.000 |
| Biznet | 0.033 | 0.000 | 0.967 | 0.000 | 0.000 |
| MyRepublic | 0.043 | 0.054 | 0.008 | 0.895 | 0.000 |
| Other | 0.021 | 0.229 | 0.000 | 0.000 | 0.750 |

Based on the analysis of the transition matrix, it was revealed that the four major ISPs (IndiHome, First Media, Biznet, and MyRepublic) exhibited complex competition dynamics characterized by significant variations in customer retention and acquisition rates. The performance of each ISP and its implications for marketing strategies and customer loyalty will be discussed in depth by considering various theoretical and empirical perspectives from the current literature.

Table 7. Quarterly Forecast of the Market Share of Major ISPs in the Special Region of Jakarta

| Period | Year | IndiHome | First Media | Biznet | MyRepublic |
|---|---|---|---|---|---|
| January - July | 2025 | 40.0 | 25.0 | 20.0 | 15.0 |
| October | 2025 | 40.1 | 24.5 | 20.9 | 14.5 |
| January | 2026 | 40.2 | 24.0 | 21.8 | 14.0 |
| April | 2026 | 40.3 | 23.5 | 22.6 | 13.6 |
| July | 2026 | 40.4 | 23.0 | 23.4 | 13.2 |
| October | 2026 | 40.5 | 22.6 | 24.2 | 12.8 |
| January | 2027 | 40.5 | 22.1 | 24.9 | 12.4 |
| April | 2027 | 40.6 | 21.7 | 25.6 | 12.1 |
| July | 2027 | 40.7 | 21.3 | 26.3 | 11.8 |
| October | 2027 | 40.7 | 20.9 | 26.9 | 11.5 |

The market share forecast of the major ISPs in the Special Region of Jakarta shows a consistent trend over the three-year projection period. IndiHome and Biznet are projected to experience an increase in market share despite different growth patterns. IndiHome grew moderately from 40.0% to 40.6% (up 0.6%), while Biznet experienced a more significant increase from 20.0% to 26.9% (up 6.9%). In contrast, First Media saw a decline from 25.0% to 20.9% (down 4.1%), while MyRepublic recorded the sharpest decline from 15.0% to 11.6% (down 3.4%). This pattern indicates that market dominance tends to be focused on two main players, namely IndiHome as an existing player with a large customer base and Biznet which is able to attract new customers through service differentiation.

**Discussion**

Discussion is the most important part of the entire content of a scientific article. The purpose of this discussion is: to answer research problems, interpret findings, integrate findings from research into existing knowledge pools and formulate new theories or modify existing theories.

Analysis *brand switching* with Markov *Chain* emphasizing that the balance between customer retention and acquisition is a key determinant of the sustainability of market share. IndiHome and Biznet showed relatively stable dominance as they were able to manage both aspects simultaneously, while First Media and MyRepublic faced pressure due to strategies that still relied on pricing and short-term acquisitions. This pattern is in line with the findings Negro *et al.* (2021) which suggests that a high probability of retention correlates with long-term market share stability, while strengthening the view Mesh *et al.* (2009) that price wars only produce pseudo-unsustainable growth. In the perspective of management, this phenomenon is in line with the concept of *customer lifetime value* (CLV) which emphasizes that long-term profitability is more determined by the ability to retain high-value customers than relying solely on new customer acquisition (Gupta dan Lehmann, 2006).

For IndiHome, the relevant strategy is to maintain the effectiveness of retention by strengthening innovation *bundling* and value-added services. This approach is in accordance with the theory *network effect* which emphasizes that the larger the customer base, the higher the perceived value of the service, so that it is created *switching barriers* natural that strengthens loyalty (Pang dan Etzion, 2012). Meanwhile, Biznet with the highest retention rate needs to optimize its technical advantages as a strategic resource according to the perspective *resource-based view* (RBV). Network reliability and quality are unique assets that are valuable, rare, and difficult to replicate, so they can be the basis for continuous competitive advantage. It is also in line with the framework *service–profit chain* Yee *et al.* (2009) which emphasizes that internal quality will increase customer satisfaction and ultimately drive profitability.

First Media faces a dilemma because despite having quite strong retention, its market share is showing a downward trend. Research Squirting (2025) highlighted that price and promotion factors are still dominant in influencing customer satisfaction in Greater Jakarta so that the urgency of First Media is to balance technical performance with a value-based pricing strategy (*value-based pricing*). Flexible packages and segmented promotions are considered effective for expanding the customer base without sacrificing the perception of quality. On the other hand, despite being technically superior in speed and latency, MyRepublic faces serious challenges in retention. Aggressive price penetration strategies are indeed effective in attracting new customers, as shown by Gerpott *et al.* (2001), but not enough to build long-term loyalty. Therefore, MyRepublic needs to strengthen its retention strategy through the development of value-added features, improving the quality of customer service, and optimizing the digital user community such as *Gamer* or *streamer* to build an emotional bond with customers.

Furthermore, the results of this study enriched the management literature by integrating Kano and MDS analysis. Most ISP service attributes are categorized as *attractive* or *indifferent* which indicates that the customer views the basic technical attributes as *must-have* which is no longer a differentiator, while competitive differentiation is more determined by additional service innovations. These findings support the theory of the evolution of service attributes (Tan & Pawitra, 2001) which explains the shift in consumer expectations for service standards as market maturity increases. Therefore, the product development strategy should be directed at optimization *delighters* to create differentiation and avoid price-based competition.

This approach strengthens Porter's positioning theory in Islamic *et al.* (2020) which emphasizes that differentiation of products or services if designed to be unique, high-value, and difficult to replicate will result in a continuous competitive advantage through customer loyalty and the company's ability to set premium prices. Empirical research supports this argument, e.g. studies by Saqib (2021) who found that differentiation strategies contribute significantly to a company's performance because it creates value that is difficult for competitors to replace.

The above is also emphasized in the literature review *positioning* across industries that show that *positioning* It is not just a marketing activity, but the core of the overall business strategy. On the other hand, the Blue Ocean Strategy introduced by Kim dan Mauborgne (2005) Offering a different paradigm through the concept *value innovation,* That is an effort to create new value that is able to open up an undeniable market space so that companies not only compete in the existing market but create new competition arenas. Kim and Mauborgne's study was supported by research Cho and Jung (2013) which proves that the strategy *blue ocean* tend to have a greater positive impact on business performance in the early stages of the industrial lifecycle, while Porter's competitive strategy is more relevant and effective when the industry has entered the maturity stage. Thus, it can be understood that Porter's differentiation serves to maintain the company's position in an established market, while value innovations such as *blue ocean* become a strategic instrument to create new growth opportunities.

This research theoretically contributes to the development of marketing management and strategy in the technology-based service industry. The integration of the Multidimensional Scaling (MDS) approach, the Kano Model, and the Markov Chain adds a competitive analysis perspective by linking consumer perceptions, service quality, and brand switching behavior in a single framework. These results strengthen brand positioning theory by showing that consumer perceptions of ISPs are shaped by a combination of economic value, service experience, and provider credibility. The results of this study extend the application of the Resource-Based View (RBV) to the fixed-broadband industry by showing that network quality and service reliability are strategic resources that are valuable, rare, and difficult to imitate.

The practical implications that can be drawn from the results of this study are the need for ISPs in the Special Region of Jakarta to integrate three main dimensions in their business strategy. First, continued investment in the technical quality of the network as the foundation of RBV to create a competitive advantage that is difficult to replicate. Second, the development of service differentiation through *innovative bundling*, value-added features, and measurable loyalty programs to improve CLV. Third, strengthening ethical *switching* barriers, such as flexible contracts with added value or easy service migration mechanisms in an effort to reduce the tendency to lose customers. By adopting this framework, each ISP can adjust its strategy according to its position, including IndiHome as a generalist with a large network effect, Biznet as a provider with solid technical advantages, First Media as a player in price differentiation and promotion, and MyRepublic as a technical *challenger* with the potential of digital community segments.

Overall, this study confirms that the sustainability of the *fixed-broadband* industry in Jakarta is not determined by price wars alone but by the company's ability to build loyalty through service quality, product innovation, and value-based customer relationship management. By linking empirical findings with modern management theories such as *service–profit chain*, CLV, and RBV, this research makes a practical and academic contribution to the formulation of ISP strategies that are more adaptive, competitive, and sustainable in the midst of the competitive dynamics of the digital market.

This study has limitations that could provide opportunities for further research. The limited focus of the study on major ISPs in the Special Region of Jakarta causes the results to reflect the characteristics of urban markets with high levels of competition and technology penetration, so generalization to other regions requires caution. The use of perception survey data over a single time period does not fully capture the dynamics of long-term customer preferences. However, the application of the Markov Chain approach provides a strong picture of customer switching patterns and market share projections.

## 5. CONCLUSION

This research succeeded in achieving the goals that have been formulated with a comprehensive analysis of brand positioning, service quality, and brand switching in the ISP industry in the Special Region of Jakarta. Brand positioning mapping using the MDS approach shows that Jakarta customers divide their perception of ISPs into three criteria: economic feasibility, network performance and credibility, and customer service. Biznet excels in all service attributes, while First Media is the closest competitor. MyRepublic and IndiHome have positive performance but are not enough to compete with Biznet. A service quality assessment using the Kano Model shows that the majority of ISP service attributes fall into the category of attractive and indifferent, which indicates that customer satisfaction is more influenced by innovation and value-added services than by basic technical attributes such as speed and connectivity. The results of the brand switching analysis using Markov Chain revealed that Biznet and IndiHome have high customer retention rates, while First Media and MyRepublic face major challenges in retaining customers. Projections show that IndiHome and Biznet have the potential to increase market share, while First Media and MyRepublic are expected to

decline.

Based on these findings, there are several suggestions for stakeholders. Service providers like Biznet need to maintain technical superiority and network reliability while being more aggressive in marketing to expand their customer base. IndiHome should focus on improving network quality and service reliability to ensure continued customer retention. First Media needs to evaluate its pricing strategy and service packages to increase perceived value and strengthen customer retention, while MyRepublic needs to improve its loyalty program and customer service quality to improve retention. For regulators, this research can be an input to encourage healthy competition and ensure the quality of services that meet basic standards. Further research can explore external variables such as the adoption of new technologies or government policies, as well as use qualitative approaches or longitudinal research to explore customer motivation in brand switching and monitor market changes over time.

This study has limitations that could provide opportunities for further research. The limited focus on major ISPs in the Special Region of Jakarta results in the results reflecting the characteristics of an urban market with high levels of competition and technology penetration. Therefore, further research is recommended with different subjects to deepen our understanding of the motivations and psychological factors influencing brand switching behavior.

## 6. REFERENCE


Agustina, F. I., & Kembang, L. P. (2019). *Pengaruh tempat dan promosi terhadap perpindahan merek pada Mataram Mall di Mataram*. *9*(2), 158–163.

APJII (Asosiasi Penyelenggara Jasa Internet Indonesia). (2024). *Laporan Survei Internet APJII 2023--2024*.

Asosiasi Penyelenggara Jasa Internet Indonesia. (2023). Survei penetrasi dan perilaku pengguna internet Indonesia tahun 2023. APJII. https://apjii.or.id

Badan Pusat Statistik. (2023). Provinsi DKI Jakarta dalam angka 2023. Badan Pusat Statistik. https://jakarta.bps.go.id

Bordoloi, S., Fitzsimmons, J. A., & Fitzsimmons, M. J. (2018). *Service Management : Operations, Strategy, Information Technology* (9th ed). McGraw-Hill Education.

Borg, I., Groenen, P. J. F., & Mair, P. (2013). *Applied Multidimensional Scaling*. Springer.

BPS (Badan Pusat Statistik). (2024). *Statistik Telekomunikasi Indonesia 2023* (Vol 12). ©Badan Pusat Statistik.

Bumbungan, S. (2025). Peran Dan Perkembangan Jaringan Internet Dalam Mendukung Transformasi Digital Global. Bulletin of Network Engineer and Informatics, 3(1), 11-15.

Chen, X. (2024). Impact of the internet on entertainment media industries: The double effects of Metcalfe and McLuhan. *Information Services and Use*, *44*(2), 93–105. https://doi.org/10.3233/ISU-230188

Ching, W.-K., Huang, X., Ng, M. K., & Siu, T.-K. (2013). *Markov Chains: Models, Algorithms adn Applications* (2nd ed). Springer.

Cho, S. Y., & Jung, J. Y. (2013). Blue ocean strategy vs. competitive strategy: the effect of business strategic choices on firm performance, according to the industry life cycle. *International Research Journal of Business and Economics*, *1*(1), 36–45.

Deacon, D. T. (2022). Institutional Considerations for the Regulation of Internet Service Providers. Berkeley Tech. LJ, 37, 309.

Gerpott, T. J., Rams, W., & Schindler, A. (2001). Customer retention, loyalty, and satisfaction in the German mobile cellular telecommunications market. *Telecommunications Policy*, *25*(4), 249–269. https://doi.org/10.1016/S0308-5961(00)00097-5

Gulla, R., Oroh, S. G., & Roring, F. (2015). Analisis harga, promosi, dan kualitas pelayanan terhadap kepuasan konsumen pada hotel Manado Grace Inn. *Jurnal EMBA*, *3*(1), 1313–1322. https://doi.org/https://doi.org/10.35794/emba.3.1.2015.8297

Gupta, S., & Lehmann, D. R. (2006). Customer lifetime value and firm valuation. *Journal of Relationship Marketing*, *5*(2–3), 87–110. https://doi.org/10.1300/J366v05n02_06

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, *3*(February), 275–285. https://doi.org/10.1016/j.susoc.2022.05.004

Islami, X., Mustafa, N., & Topuzovska Latkovikj, M. (2020). Linking Porter's generic strategies to firm performance. *Future Business Journal*, *6*(1), 3. https://doi.org/10.1186/s43093-020-0009-1

Keller, K. L., Prameswaran, A. M. ., & Jacob, I. (2015). *Building, Measuring, and Managing Brand Equity* (4th ed, Vol. 5, Issue 6). Pearson India Education Services.

Kim, W. C., & Mauborgne, R. (2005). Value innovation: a leap into the blue ocean. *Journal of Business Strategy*, *26*(4), 22–28. https://doi.org/10.1108/02756660510608521

Kotler, P., & Armstrong, G. (2018). *Principles of Marketing* (17th ed.). Pearson Education.

Liu, X. (2019). Evolution of Fiber-Optic transmission and networking toward the 5G era. *IScience*, *22*, 489–506. https://doi.org/10.1016/j.isci.2019.11.026

Maille, P., Naldi, M., & Tuffin, B. (2009). Price war with migrating customers. *2009 IEEE International Symposium on Modeling, Analysis & Simulation of Computer and Telecommunication Systems*, 1–8. https://doi.org/10.1109/MASCOT.2009.5362674

Medari, H. S., Sri, W. S., & Widajanti, E. (2017). Pengaruh harga, loyalitas merek, kepercayaan dan promosi terhadap keputusan perpindahan merek pada konsumen kartu seluler telkomsel. *Jurnal Ekonomi Dan Kewirausahaan*, *17*, 175–185.

Mogaji, E. (2021). *Brand Management: An Introduction through Storytelling*. palgrave macmillan. https://doi.org/https://link.springer.com/book/10.1007/978-3-030-66119-9

Moore, K., & Reid, S. (2008). The birth of brand: 4000 years of branding. *Business History*, *50*(4), 419–432. https://doi.org/10.1080/00076790802106299

Mutmainnah. (2017). Pengaruh kualitas pelayanan dan citra perusahaan terhadap kepuasan nasabah. *Jurnal Manajemen Dan Pemasaran Jasa*, *10*(2), 201–216. https://doi.org/http://dx.doi.org/10.25105/jmpj.v10i1.2344 ISSN

Neger, M., Hossain, A., Bhuiyan, Z. H., & Chowdhury, H. K. (2021). Markov analysis for assessing consumers' brand switching behavior: evidence from telecommunication sector in Bangladesh. *International Journal of Education and Social Science*, *8*(3), 2415–1246.

Opele, A. M., Afolabi, O. J., & Adetayo, H. O. (2020). Service quality and preference for Mobile Telecommunic- ations Service Providers among students of Tertiary Institutions in Lagos State. *NIJOTECH*, *39*(2), 484–492. https://doi.org/10.4314/njt.v39i2.18

Pang, M. S., & Etzion, H. (2012). Analyzing pricing strategies for online services with network effects. *Information Systems Research*, *23*(4), 1364–1377. https://doi.org/10.1287/isre.1110.0414

Phasa, A. S., & Astuti, Y. P. (2021). Analisis perilaku brand switching dengan metode Rantai Markov. *MATHunesa*, *9*(1), 212–219. https://doi.org/10.26740/mathunesa.v9n1.p212-219

Prananda, Y., Lucitasari, D. R., & Abdul Khannan, M. S. (2019). Penerapan metode Service Quality (Servqual) untuk peningkatan kualitas pelayanan pelanggan. *Opsi*, *12*(1), 1–11. https://doi.org/10.31315/opsi.v12i1.2827

Prawir, A. H. (2025). Analysis of factors affecting internet customer satisfaction service provider in Jabodetabek. *Journal of Information Systems Engineering and Management*, *10*(30s), 938–946. https://doi.org/10.52783/jisem.v10i30s.4943

Rauf, A., Annah, A., & Djamro, R. A. (2025, March). Tanggung Jawab Hukum Penyedia Layanan Internet Terhadap Konten Ilegal Di Dunia Maya. In SISITI: Seminar Ilmiah Sistem Informasi dan Teknologi Informasi (Vol. 14, No. 1, pp. 48-56).

Saqib, N. (2021). Positioning – a literature review. *PSU Research Review*, *5*(2), 141–169. https://doi.org/10.1108/PRR-06-2019-0016

Sibarani, D. R., Hutagaol, M. P., Ahmad, F. S., Asmara, A., & Alexandi, M. F. (2023). Dampak akses-infrastruktur, penggunaan, dan keahlian teknologi informasi dan komunikasi terhadap pertumbuhan ekonomi. *CARE*, *8*(2), 32–42.

Sidik, J., Muhardi, M., & Adwiyah, R. (2021). Analisis kualitas pelayanan jasa jaringan internet dengan menggunakan Metode Kano untuk meningkatkan kepuasan pelanggan pada PT Eka Mas Republik. *Prosiding Manajemen*, *7*(September), 249–253.

Tan, K. C., & Pawitra, T. A. (2001). Integrating SERVQUAL and Kano's model into QFD for service excellence development. *Managing Service Quality: An International Journal*, *11*(6), 418–430. https://doi.org/10.1108/EUM0000000006520

Ulkhaq, M. M., & Br.Barus, M. P. (2017). Analisis kepuasan pelanggan dengan menggunakan SERVQUAL: studi kasus layanan IndiHome PT. Telekomunikasi Indonesia, Tbk, Regional 1 Sumatera. *Jurnal Sistem Dan Manajemen Industri*, *1*(2), 61–67. https://doi.org/10.30656/jsmi.v1i2.365

Vania, F. L. (2021). *Penerapan Metode Rantai Markov dan Analytical Hierarchy Process dalam Analisis Brand Switching Internet Service Provider*. Universitas Negeri Jakarta.

Wahab, N. A., Nayan, S., & Kang Cheah, Y. (2020). Internet user and economic selected Southeast Asia Nations: a Panel Data Analysis. *JEEIR*, *8*(3), 17–25. https://doi.org/https://doi.org/10.24191/jeeir.v8i3.8952

Yee, R. W. Y., Yeung, A. C. L., Cheng, T. C. E., & Lai, K.-H. (2009). The service-profit chain: A review and extension. *Total Quality Management & Business Excellence*, *20*(6), 617–632. https://doi.org/10.1080/14783360902924259

Yu, J., & Meng, S. (2022). Impacts of the internet on health inequality and healthcare Access: a Cross-Country study. *Frontiers in Public Health*, *10*(June), 1–12. https://doi.org/10.3389/fpubh.2022.935608