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Sentiment Analysis to Starlink Services in Indonesia

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ABSTRACT:*This research aims to analyze the sentiment of the Indonesian public towards the newly introduced Starlink satellite internet services in Indonesia. Data was collected from the social media platform X using keywords related to Starlink and analyzed with the Naive Bayes algorithm to classify sentiments as positive, negative, or neutral. The analysis results show that neutral sentiment is more dominant compared to positive and negative sentiments. The main factors influencing public sentiment are the relatively high service price, the speed and accessibility of the internet offered, and Elon Musk's involvement in investments in Indonesia. Although the service has great potential to improve internet access in remote areas, challenges related to cost and public acceptance remain a concern. This research is expected to provide guidance for internet service providers in designing strategies that better align with the needs of the Indonesian market.*

Keywords:*Analysis Naive Bayes, Public Perception Indonesia, Remote Area Internet, Starlink Sentiment Indonesia, Web Scraping*

The advancement of communication and information technology (ICT) has revolutionized the way humans interact and access information [1]. This is marked by the emergence of the internet, which facilitates rapid and efficient information exchange worldwide. According toNugraha& Nuraeni (2021), the internet has created a "networked society" where individuals are connected through a global communication network. One significant breakthrough in ICT is the development of satellite internet. This technology offers solutions for providing internet access in remote areas previously unreachable by traditional infrastructure such as optical cables or cellular towers. As noted by [3], this has the potential to bridge the digital divide and enhance access to information and communication services for communities worldwide.

The internet access gap remains a critical issue in various parts of the world, particularly in remote areas with limited traditional internet infrastructure. This results in restricted access to information, education, and other public services. To address this challenge, innovations are needed to reach areas that have been difficult to access with conventional technology. One solution presented is satellite technology operated by Starlink. Starlink aims to provide high-speed, low-latency internet access globally by utilizing a constellation of thousands of satellites in low Earth orbit (LEO). This technology enables Starlink to reach areas underserved by terrestrial internet infrastructure, such as optical cables and cellular towers. With this technology, it is hoped that various barriers hindering internet service provision in hard-to-reach areas can be overcome, allowing more people to connect to the digital world without geographical limitations.

Starlink has the potential to be a revolutionary solution for the internet access gap, particularly in rural and remote areas that previously lacked adequate internet access [4],. Starlink can provide much higher internet speeds compared to traditional satellite internet, with lower latency and broader coverage. The advantages of Starlink are also emphasized by [5], who states that Starlink offers innovative and flexible solutions to address the internet access gap, with the potential to have a significant impact on social and economic development in remote areas. Although many see the great potential of this technology, it is undeniable that public acceptance is a decisive factor for its successful implementation. Therefore, it is crucial to evaluate how the public responds to and perceives the services offered by Starlink.

Table 1. Starlink Subscription Prices in Indonesia

Service Package	Hardware Cost		Monthly Subscription	
Standard Package	Rp	4.680.000	Rp	750.000
Priority Package 40 GB	Rp	7.800.000	Rp	1.100.000
Mobile Package	Rp	4.680.000	Rp	990.000
Mobile Priority 50 GB	Rp	43.721.590	Rp	4.345.000

Source: Databox (Starlink, May 2024)

The pricing discrepancies highlighted in Table 1 reflect the subscription costs for Starlink internet services. According to information from the Starlink website, this satellite internet service utilizes a constellation of thousands of satellites that orbit closer to Earth, at an altitude of 550 kilometers, compared to traditional satellites that orbit at approximately 36,000 kilometers. This allows Starlink to offer lower latency and supports faster data transmission processes. However, to enjoy

these services, consumers must purchase specific hardware from Starlink and pay a monthly subscription fee. The standard package has a hardware cost of Rp 4,680,000 and a subscription fee of Rp 750,000 per month, while priority packages with higher quotas can reach subscription costs of up to Rp 12,320,000 per month.

This research highlights findings regarding sentiment analysis of Starlink services in Indonesia, revealing concerns about data security based on incident data from Ministry of Communication and Information of the Republic of Indonesia in 2024. Additionally, the disparity between Starlink's service prices and the average internet expenditure of the Indonesian population, which predominantly ranges from Rp 50,000 to Rp 100,000 per month, poses a barrier to widespread adoption, particularly among low-income communities. In the context of Indonesia's ongoing digital transformation, the main challenge lies in addressing the imbalance between technological advantages and service accessibility and costs, while also strengthening data protection and cybersecurity to build public trust in new services like Starlink. This study uses platform X as a data collection medium to gauge public sentiment toward Starlink services.

Public sentiment regarding Starlink is classified into several groups through Naive Bayes-based machine learning analysis. This classification allows for a better understanding of the variations in attitudes and perspectives within the community regarding the service. By employing three machine learning analysis methods, variations in public sentiment can be identified more accurately, aiding in understanding how society responds to new technologies like Starlink. Sentiment analysis is categorized as positive, negative, or neutral based on word patterns and context. This categorization is crucial for identifying dominant perceptions, emerging issues, and potential solutions. The study also investigates deeper insights into public opinion dynamics regarding Starlink services, which could inform policies and strategies to enhance Indonesia's digital transformation and improve business strategies in various environments.

LITERATURE REVIEW

Research on sentiment analysis utilizing the Naive Bayes method has revealed significant insights across various domains, emphasizing its effectiveness in understanding consumer sentiment. For instance, Pratama et al. (2017) showcased the method's strength in analyzing comments related to the Tokopedia application, achieving impressive metrics: an accuracy of 97.13%, precision of 95.49%, and an AUC of 0.980. Their findings highlighted a troubling trend of predominantly negative comments, particularly surrounding product conditions and brand reputation. This underscores the importance of addressing customer dissatisfaction to improve business outcomes and enhance consumer trust [7].

Building upon these insights, subsequent studies have sought to enhance sentiment analysis accuracy through various optimizations. Particle Swarm Optimization (PSO) to their analysis of skincare product reviews, resulting in a notable accuracy boost from 77.96% to 79.85% [8]. Similarly, PSO to optimize their Naive Bayes classifier in the context of Formula E-Jakarta, achieving a remarkable increase in accuracy from 81.27% to 89.16% (Jatmiko et al. 2022). These studies illustrate the potential of integrating advanced optimization techniques, enhancing the performance of sentiment classification and demonstrating the evolving nature of sentiment analysis methodologies.

Moreover, research extending to diverse sectors reinforces the applicability of the Naive Bayes method in sentiment analysis across various contexts. examined the film "Agak Laen", achieving notable results with an accuracy of 78%, emphasizing the need for future enhancements in data cleaning and emotion analysis [10]. This highlights the importance of refining methodologies to capture the nuances of sentiment more effectively. Concurrently, Sentiment within the mining industry in Konawe Utara, identifying a stark 84% negative sentiment on Twitter and confirming the effectiveness of the Naive Bayes algorithm with an accuracy of 85%. Such findings affirm that sentiment analysis can serve as a valuable tool for gauging public opinion in various fields [11].

Collectively, these studies not only validate the versatility of the Naive Bayes method in sentiment analysis but also highlight ongoing opportunities for refinement and adaptation to address specific industry challenges. The diverse applications and improvements showcased in this body of research underline the method's significance in extracting meaningful insights from textual data.

MATERIALS AND METHODS

1. Research Objectives

The primary objectives of this research are to assess public perception and sentiment towards Starlink satellite internet service in Indonesia, and to identify the key factors influencing these sentiments. By utilizing a quantitative descriptive approach, the study aims to measure the overall sentiment of Indonesian users based on discussions on platform X, categorizing the sentiments into positive, negative, and neutral. Additionally, the research will quantitatively describe the characteristics of these sentiments, focusing on aspects such as service reliability, pricing, data security, and customer support. Ultimately, the findings will provide actionable insights for stakeholders, enabling them to enhance service delivery and address public concerns effectively, thereby fostering a better understanding of how Starlink offerings are received in the Indonesian market.

2. Web Scraping Method

Web scraping was employed as an additional method to address the limitations of API in data collection. Initially, relevant sources such as news articles, blogs, and forums discussing the Starlink satellite internet service in Indonesia were identified using keywords like "Starlink," "Indonesia," and "Starlink launch." Subsequently, web scraping tools like Beautiful Soup and Scrapy were utilized to automate the data extraction process, enabling the researchers to navigate the HTML structure of web pages and gather relevant user comments and sentiment expressions. The collected data was then cleaned to remove irrelevant content and duplicates, ensuring that only high-quality information remained. Finally, the scraped data was integrated with data obtained through the API, resulting in a comprehensive dataset that included around 5,000 relevant tweets and comments, providing an accurate representation of public sentiment towards the launch of the Starlink service in Indonesia.

3. Research Procedure

The research was conducted through a systematic series of stages to ensure the accuracy and relevance of the data collected in alignment with the study's objectives. The procedure began with data collection via web scraping, targeting tweets that contained keywords such as "Starlink," "Indonesia," "internet service," and "Starlink launch." To explore the factors influencing public sentiment towards Starlink, the first step involved identifying key topics and frequently mentioned keywords in discussions related to the service. Following this, data processing was performed, including the cleaning of collected tweets, labeling them based on sentiment, and preparing them for analysis.

Subsequently, sentiment analysis was conducted using the Naive Bayes algorithm to classify the sentiments of the collected tweets. The data was further filtered to eliminate irrelevant tweets, spam, and duplicates, ensuring that only relevant samples were selected for analysis. Finally, the results were interpreted to reveal the distribution of sentiment, allowing for the presentation of key findings that provide insights into public perceptions regarding the launch of Starlink in Indonesia.

RESULTS AND DISCUSION

Results

1. Description of the Research Object

Starlink is a satellite-based internet service project developed by SpaceX, the aerospace technology company owned by Elon Musk. The primary goal of Starlink is to provide high-speed, low-latency internet access worldwide, particularly in remote or rural areas that are difficult to reach with traditional wired internet infrastructure. The service operates using a constellation of thousands of small satellites orbiting the Earth at low altitudes (LEO, Low Earth Orbit). These satellites form a network that can transmit internet signals directly to receiving antennas on the ground, known as Starlink terminals. Thanks to this satellite technology, Starlink addresses the geographical limitations often faced by wired internet services. In Indonesia, Starlink promises a solution to the accessibility issues of internet service in many hard-to-reach areas. However, it faces several challenges, such as higher costs compared to local internet providers and regulatory hurdles. Starlink is also viewed as part of Elon Musk's strategic investments in Indonesia, which could impact various sectors, including the digital economy and connectivity in remote regions. The service has garnered public attention for its speed and coverage but has also sparked debate regarding its pricing and implications for the internet service market in Indonesia.

2. Data Collection

Data collection was conducted using the tweet-harvest library in Python to obtain tweets related to "Starlink." The initial step involved installing the library and utilizing relevant keywords sourced from Twitter. Subsequently, tweets were gathered by searching for these keywords, such as "Starlink," and the results were saved in a CSV file for further analysis. The collected data was then analyzed using the transformers library to determine the sentiment of each tweet. This approach enabled the research to identify and understand the sentiments of the Indonesian public towards the Starlink service, providing valuable insights for decision-making and business strategies.

Table 2.Data Attributes

Column	Description
conversation_id_str	A unique ID for each conversation that helps group tweets that are part of the same discussion.
created_at	The date and time the tweet was posted, usually in UTC format.
favorite_count	The number of users who liked (favorited) the tweet.
full_text	The complete text of the tweet, including any hashtags, mentions, and URLs that may be present.
id_str	A unique ID for the tweet, represented as a string.

image_url	The URL of any image attached to the tweet, typically linking to an image hosted on a server.
in_reply_to_screen_name	If the tweet is a reply, this column lists the screen name of the user being replied to.
lang	The language of the tweet, usually indicated by a two-letter code (e.g., "en" for English, "id" for Indonesian).
location	The geographic location associated with the tweet, if available.
quote_count	The number of users who quoted the tweet.
reply_count	The number of replies to the tweet.
retweet_count	The number of retweets the tweet received from other users.
tweet_url	The URL of the tweet on the social media platform.
user_id_str	A unique ID for the user who posted the tweet, represented as a string.
username	The screen name (username) of the user who posted the tweet.

Source: Data processed by the researcher, 2024.

3. Text Preprocessing

Text Preprocessing is the initial step in text analysis aimed at cleaning, organizing, and preparing raw text before further analysis is conducted.

4.3.1 Case Folding

Case folding is an essential yet basic step in text preprocessing for sentiment analysis. This step ensures data consistency, reduces model complexity, and enhances the accuracy of the analysis results. With case folding, we can manage text data more efficiently and effectively.

4.3.2 Text Cleaning

Text cleaning is a crucial step in data preprocessing for sentiment analysis. This process aims to remove irrelevant elements and ensure the data is more consistent and cleaner, allowing machine learning models to operate more effectively and accurately. With the right cleaning methods, we can improve the quality of the data and the results of sentiment analysis.

4.3.3 Stop words

Stop words are common words like "and", "that," "in" and "with" that frequently appear in text but do not significantly contribute to the understanding of meaning or sentiment analysis. Removing stop words from the text is an important step in data preprocessing because it can reduce noise, enhance data consistency, and focus attention on more relevant words for analysis. By eliminating stop words, we can reduce feature dimensions, increase computational efficiency, and improve the accuracy of sentiment analysis models, resulting in more precise and meaningful sentiment interpretations.

4.3.4 Tokenization

Tokenization is a crucial process that breaks text into smaller units called tokens, such as words or phrases, allowing for a more structured and in-depth analysis of the meaning and sentiment of the text. By using the word tokenize function from the NLTK (Natural Language Toolkit) library, text can be transformed into a list of tokens, facilitating subsequent preprocessing steps, such as stop word removal and stemming. For example, using the code word tokenize (This is an example text for tokenization in sentiment analysis) produces tokens like ['This', 'is', 'an', 'example', 'text', 'for', 'tokenization', 'in', 'sentiment', 'analysis', '.'], which can then be analyzed to determine the sentiment of the text. Tokenization enhances the accuracy and effectiveness of sentiment analysis models by enabling the model to understand and analyze text at the word or phrase level.

4.3.5 Text Normalization

Text normalization is an important step in data preprocessing for sentiment analysis that addresses variations in writing and improves data consistency. By utilizing the Sastrawi library, text normalization can be effectively performed, encompassing processes such as stemming and handling non-standard words. This process contributes to the enhancement of the accuracy and effectiveness of sentiment analysis models by ensuring that the analyzed data is in a more consistent and standardized form.

Table 3.Text Preprocessing

Before Text Preprocessing	After Text Preprocessing
Time magazine reports that antennas for the Starlink satellite service have begun being smuggled into Iran in hopes of providing a backup connection to the Internet in the event of a separation of powers there over the Internet. https://t.co/RL2fdUgfLi	Time magazine reports that Starlink satellite service antennas are being smuggled in Iran, please have a spare internet connection and separate internet power

Source: Data processed by the researcher, 2024.

4. Data Labeling

Data labeling in sentiment analysis involves classifying text based on the underlying sentiment, such as positive, negative, or neutral. In this process, the model "ayameRushia/bert-base-indonesian-1.5G-sentiment-analysis-smsa" is utilized through a pipeline that automates the procedure. It begins with tokenizing the text using the model-specific tokenizer, followed by sentiment classification performed by the BERT model trained for the Indonesian language. The outcome is automatically labeled sentiment text, enabling further analysis or additional model training with high efficiency.

Table 4.Data Labeling

Full Text	Sentiment
Starlink satellites in the southwest direction of the Jakarta sky in November at morning are lined up like trains, an example of their appearance	Neutral
Starlink technology is different, stupid, compare wifi packages, homeowner area, use commercial, use mesh wifi, want to maintain strength, use a modem, short support	Positive
Has there been any success in resolving the Starlink HD PVR matrix to a standstill?	Negative

Source: Data processed by the researcher (2024)

5. Naive Bayes Classification

Naive Bayes is a probabilistic classification method commonly used in sentiment analysis due to its simplicity and effectiveness. This method calculates the probability that a given text belongs to a specific sentiment category, such as positive, negative, or neutral, based on the distribution of words within the text, assuming that the words are independent of one another. Once trained using a labelled dataset, this model can determine the sentiment of new texts by calculating the probability of word occurrences in each category, selecting the category with the highest probability as the sentiment label. Although the independence assumption is considered "naive," this method is remarkably fast and efficient for analysing large volumes of text data.

Table 5.Data Classification

Metric	Negative	Neutral	Positive	Macro Average	Weighted Average
Precision	0.71	0.59	0.40	0.57	0.57
Recall	0.21	0.99	0.04	0.41	0.60
F1 Score	0.32	0.74	0.06	0.38	0.49
Support	57	139	57	253	253
Accuracy				0.60	253

Source: Data processed by the researcher, 2024.

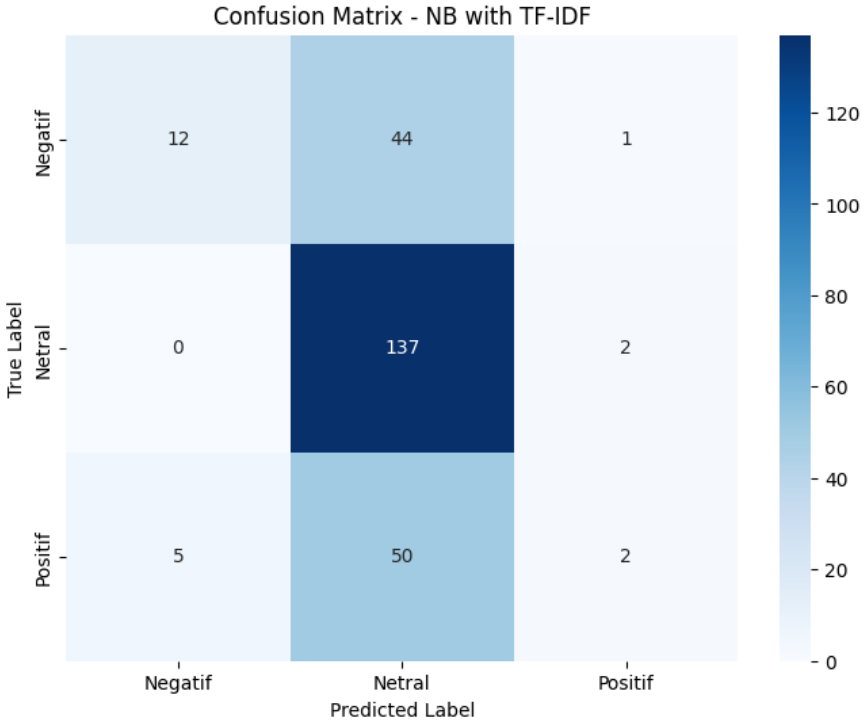

Figure1.Confusion Matrix

The evaluation results from the classification using the Naive Bayes algorithm show an accuracy of 60%, with the best performance observed in the neutral sentiment category (F1 score of 0.74) compared to negative and positive sentiments. The model has an F1 score of 0.32 for negative sentiment and only 0.06 for positive sentiment, indicating very weak detection of positive sentiment. Precision for both negative and positive sentiments is also relatively low, with recall for positive sentiment at just 0.04, showing that the model frequently fails to recognize positive sentiment. Overall, while the model demonstrates good performance in detecting neutral sentiment, improvements are needed for accurately identifying negative and positive sentiments.

The confusion matrix, as shown in the above figure, indicates that the Naive Bayes model with TF-IDF performs well in detecting neutral sentiment, correctly classifying 137 out of 139 neutral-labelled data points. However, the model exhibits weaknesses in detecting negative and positive sentiments. Of the 57 negative-labelled data points, only 12 were correctly classified, while 44 were incorrectly classified as neutral. A similar pattern is observed for the positive-labelled data, where only 2 out of 57 were correctly classified, while 50 were mistakenly categorized as neutral. This indicates a bias in the model towards neutral sentiment.

6. Word Cloud Visualization

Figure2.Word Cloud Visualization (from left: neutral, positive, negative)
Source: Data processed by the researcher, 2024.

Word cloud results for neutral sentiment show that "Starlink" and "Indonesia" dominate compared to other keywords. This word cloud visualizes the frequency of words that appear in the text data related to public sentiment toward Starlink's services in Indonesia. Words displayed in larger sizes, such as Starlink, Indonesia, satellite, service, internet, Tesla, and Twitter, represent the terms that appear most frequently.

In the following text, the word cloud results for positive sentiment also reveal that "Starlink" and "Indonesia" are highly dominant over other keywords. This word cloud presents a visualization of the most frequently appearing words in data with positive sentiment toward Starlink's services in Indonesia. Larger words like Starlink, Indonesia, investment, product, price, internet, and Tesla reflect topics commonly associated with positive sentiment.

In the final text, the word cloud results for negative sentiment indicate that "Starlink" and "Indonesia" still dominate compared to other keywords. This word cloud visualizes the most frequently appearing words in data with negative sentiment toward Starlink's services in Indonesia. Larger words, such as Indonesia, Starlink, price, Twitter, and people, reflect topics often associated with negative sentiment.

7. Word Association

Table 5. Data Classification

Keywords	Related	Mark
	Neutral	
Satellite	starlink	0.771
	Service	0.251
	Access	0.112
Service	Internet	0.660
	company	0.126
Internet	Satellite	0.495
	Network	0.135
	Internet	0.807
	Positive	
Starlink	product	0.059
	indonesia	0.178
	service	0.102
Internet	Satellite	0.279
	company	0.116
Satellite	internet	0.333
	orbit	0.139
	low	0.111
	Negative	
Price	expensive	0.222
	rich	0.111
	product	0.083
Internet	starlink	0.618
	data	0.088
Buy	million	0.087
	Indonesia	0.261
	cancelled	0.087

Source: Data processed by the researcher, 2024.

In the neutral word association data, it is evident that the public closely associates Starlink with "satelit" (score 0.771) as a service providing internet access, though its connection with words like "layanan" and "akses" is somewhat lower. The word "layanan" is also frequently linked with "internet" (0.660), reinforcing that Starlink is recognized as an internet provider, while "internet" itself shows a strong association with "satelit" (0.495) and "jaringan" (0.135). This suggests a public awareness of satellite technology's role in providing internet access, reflecting a good understanding of Starlink's core characteristic as a satellite-based internet service provider.

The positive association data shows that Starlink has a low correlation with words like "produk" (0.059) and "layanan" (0.102) but has a stronger association with "Indonesia" (0.178), indicating that discussions around Starlink in Indonesia are often tied to a regional context. Meanwhile, "internet" is frequently associated with "satelit" (0.279) and "perusahaan" (0.116), showing that the public understands the link between satellite technology and internet provision. The term "satelit" itself has a strong association with "internet" (0.333), as well as with "orbit" (0.139) and "rendah" (0.111), indicating public awareness of Starlink's use of low-orbit satellites to provide internet access. Overall, these associations suggest that neutral discussions around Starlink focus on its satellite technology, operations, and connection to the Indonesian market.

In the negative word association data, the term "harga" is often linked with "mahal" (0.222), indicating a general perception that Starlink service is costly. The word "harga" is also associated with "kaya" (0.111), implying that the service may be

seen as more affordable for high-income individuals, and shows a slight association with "produk" (0.083). Meanwhile, "internet" is strongly associated with Starlink (0.618), underscoring the public's recognition of Starlink as an internet provider, with a lower connection to "data" (0.088). The word "beli" is associated with "juta" (0.087), possibly referring to costs involved, as well as with "Indonesia" (0.261) and "batal" (0.087), suggesting that purchasing decisions may be influenced by price or other factors, including decisions to cancel. This data emphasizes that price plays a significant role in shaping public sentiment toward Starlink.

DISCUSION

1. Public Perception and Sentiment of Starlink

The public perception and sentiment analysis of Starlink satellite internet service in Indonesia shows a predominantly neutral stance, with most of the Indonesian audience in an observational phase regarding the service. This neutrality suggests that the public is still assessing the actual impact and reliability of Starlink within a local context. Words such as "Starlink," "satelit", and "Tesla" commonly appear in neutral comments, indicating a focus on the technical aspects and Starlinkassociation with Tesla and Elon Musk. This aligns with [12] theory of digital transformation, which emphasizes that technology-driven changes in society often require a period of evaluation before substantial shifts in perception occur.

While some positive sentiment reflects optimism about Starlink potential to extend internet access to remote areas, negative sentiments highlight concerns over affordability and the service's suitability for local needs. Keywords like "harga" and "orang" in negative comments suggest that the cost of Starlink service might be prohibitive for certain segments of society. Meanwhile, positive keywords such as "Indonesia," "investasi", and "Twitter" show a favourable outlook on Starlinkpotential to promote economic and digital inclusivity in underserved regions. These sentiments indicate a blend of hope and scepticism in public opinion, highlighting Starlink's potential impact on digital transformation in Indonesia and the barriers it must address to gain broader acceptance.

2. Key Factors Influencing Public Sentiment on Starlink

The public sentiment towards Starlinksatellite internet service in Indonesia is shaped by several key factors, including the technology used, foreign investment, service pricing, and internet performance. First, the satellite-based technology Starlink employs is seen as a significant innovation, particularly in reaching remote areas where traditional cable infrastructure is lacking. This aspect appeals to those interested in bridging the digital divide across Indonesia. Many view Starlink as a potential solution to long-standing connectivity issues, enabling digital inclusivity in underserved regions. This positive perception aligns with [13] observation that satellite technology can support underserved areas by providing infrastructure that enables economic growth through digital channels.

The investment from Elon Musk via Starlink adds a layer of credibility, with the public associating Musk's involvement with technological advancement and innovation. His global reputation as a technology pioneer bolsters public trust in Starlink, with some Indonesians viewing Starlink as part of a broader global digital transformation that will positively impact Indonesia. According to Luhut Binsar Panjaitan, Indonesia's Coordinating Minister for Maritime and Investment Affairs, Starlink's presence could promote equal access to internet services, potentially accelerating digitalization in critical areas like health and education [6]. This optimism is based on the idea that foreign investment in high-tech infrastructure could support Indonesia's journey toward a digitally inclusive economy.

However, high service costs present a challenge, dampening enthusiasm for Starlink among price-sensitive consumers. [13] highlights that Starlinkpremium pricing is a hurdle, especially in a competitive telecommunications market. With monthly costs around IDR 750,000, Starlinkpricing is far above the average internet spending of Indonesian households, which typically ranges between IDR 50,000 to IDR 100,000. This discrepancy suggests a mismatch between Starlink's costs and the financial capabilities of users in rural and remote areas, where incomes are generally lower. [14] noted that pricing strategy plays a critical role in consumer acceptance, and for Starlink, high subscription fees may hinder broader adoption unless mitigated through subsidies or financing options.

The performance of Starlink internet, particularly in terms of speed and accessibility, remains a compelling factor that attracts users who prioritize quality and reliability. [13] describes Starlink low Earth orbit satellite network as promising faster internet speeds even in remote locations, which could revolutionize connectivity in hard-to-reach areas. [15]reinforce that service quality strongly influences consumer interest, with high performance potentially justifying Starlink's costs for those who need reliable connections. In this context, Starlink's quality service might appeal to users who value stable internet over price, though this is only a segment of the broader market.

Given the high costs, Starlink adoption will likely depend on collaborations with the Indonesian government, focusing on sectors like education and healthcare to bridge the affordability gap in rural areas. Solutions like subsidized service packages or village fund support could make Starlink more accessible without burdening individuals with prohibitive costs. Elon Musk involvement also generates curiosity about modernizing digital infrastructure, yet for lasting trust, Starlink must address data security concerns to protect user information from potential misuse. Addressing these challenges will allow Starlink to capitalize on its advantages and potentially expand its market presence across Indonesia.

CONCLUSIONS

The sentiment of the Indonesian public towards Starlink is predominantly neutral, with many comments focusing on its technical aspects and its connection to Tesla. There is a segment of the population that expresses positive sentiments, driven by optimism regarding Starlink potential to enhance internet access in remote areas, as well as the positive impact of Elon Musk's investment. However, negative sentiments also emerge, particularly concerning the high service costs and concerns about whether Starlink can meet local needs.

The satellite technology employed by Starlink offers internet access in hard-to-reach areas where cable infrastructure is lacking, making it an innovative solution to address the digital divide in Indonesia. Furthermore, Elon Musk's investment through Starlink boosts public confidence in the potential for economic growth and improved quality of life, particularly in marginalized regions. Nevertheless, the relatively high service prices pose a significant barrier to acceptance among many users in Indonesia. Despite these concerns, the appeal of Starlink stable internet speeds and accessibility across various locations remains strong, although worries regarding affordability continue to be a key issue.

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