



Service Quality Breakdowns in Indonesia's Telecom Industry: Insights from Customer Reviews

Ares Albirru Amsal¹, Rayna Kartika²

¹ Alliance Manchester Business School University of Manchester, Manchester, United Kingdom

² Faculty of Economics and Business, Universitas Andalas, Padang, Indonesia

aresalbirru.amsal@postgrad.manchester.ac.uk

Abstract. This study addresses and categorizes service quality failures within one of Indonesia's leading internet service providers. Drawing upon a service quality framework tailored to the telecommunications industry, the research scrutinizes 4886 one and two-star reviews from popular Indonesian mobile application reviews. Employing content analysis techniques, this study meticulously analyzes the textual data to identify and classify various service quality deficiencies. Findings reveal critical issues related to reliability, assurance, responsiveness, network performance, empathy, convenience, and tangibles. By delving into the specific issues raised by customers in their reviews, this research sheds light on critical service failures, ultimately contributing to a deeper understanding of service quality challenges in the telecom sector. The findings have practical implications for enhancing service quality and customer satisfaction within the industry, emphasizing the significance of addressing these shortcomings to maintain competitiveness in the digital era.

Keyword: Customer Satisfaction, Service Quality Failure, Telecommunication.

1 Introduction

In today's rapidly evolving landscape, the telecommunications industry has emerged as a pivotal driver of economic development. Large corporations and small to medium enterprises rely heavily on its services, as the modern business toolkit necessitates internet connectivity. This industry's significance has been further underscored by the rise of the digital economy, where reducing geographical barriers and time constraints has revolutionized business operations. Additionally, the penetration of telecommunications services has become a key parameter for evaluating economic growth and urban development. Regions with high levels of telecommunications usage, particularly in suburban areas, exhibit greater potential for improved living standards compared to those with limited internet connectivity.

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In Indonesia, over 60 percent of the population has access to internet services [1], a figure influenced by the fact that

90.54 percent of households own mobile phones. The telecom industry has played a substantial role in contributing to Indonesia's Gross Domestic Product (GDP), accounting for 4.41 percent of it—a notable increase from 3.78 percent in 2017. This growth accelerated in 2019-2020, possibly influenced by the COVID-19 pandemic. As work-from-home regulations emerged, customers increasingly relied on Internet services in their professional lives. In 2021, the telecom sector demonstrated the second-highest growth among various industries, surpassed only by the services industry. Such a pivotal role is further reflected in the fact that 90 percent of household budgets are allocated to meet telecommunication needs.

In an era of technological advancements, businesses and consumers have embraced digital technologies, including mobile applications. These applications are essential for companies to enhance customer engagement, deliver expansive promotional content, and facilitate convenient transactions and data collection. Notable features of telecom apps include push notifications, simplified transactions, and data tracking capabilities. Customers, on the other hand, leverage these apps to access discounts and monitor their remaining internet data. These applications are readily available on platforms such as Google Play for Android users and the App Store for iOS users. Through app downloads, customers provide their email accounts, basic information, and data tracking preferences. However, using mobile apps also allows customers to express their service-related experiences, often manifesting in online reviews—a common practice in online application stores.

Online reviews within the telecom industry differ significantly from those about other products. Unlike reviews for most consumer goods, which serve as pivotal references during the decision-making [2, 3], telecom app reviews typically do not determine download intentions. Customers download these apps based on their decisions to use telecom services, subsequently employing them to manage their service usage. Consequently, telecom app reviews primarily focus on expressing user experiences, both positive and negative.

While previous studies have explored various aspects of the telecom industry through online review analysis, service failures based on negative online reviews have yet to be extensively categorized. This study contributes to the telecom industry's understanding of the sources of service failures and enriches the literature on negative online reviews within this context.

Service quality is paramount as it directly influences customer satisfaction and subsequent repurchase likelihood [4]. The measurement of service quality has traditionally been dominated by the SERVQUAL model introduced by Parasuraman, Zeithaml, and Berry [5]. This model assesses the gap between customer expectations and actual service performance, providing valuable insights into consumer experiences.

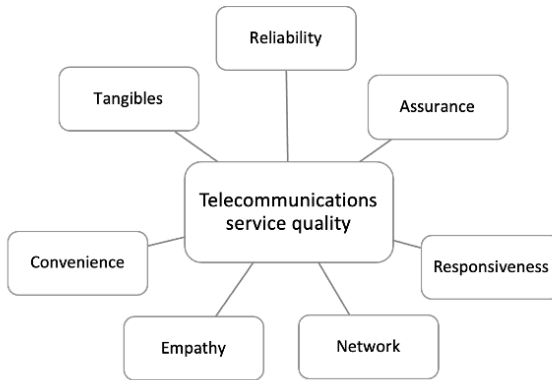


Fig. 1. Telecommunication service quality dimensions (Abd-Elrahman et al., 2020).

While studies focusing on assessing service quality in the telecommunications industry have started to emerge, there remains a need for comprehensive exploration. Much research suggests that telecommunications service quality positively impacts customer satisfaction and loyalty [6]. Critically reviewed studies in this domain have highlighted the multidimensional nature of telecommunications service quality, with dimensions ranging from two [7] to nine [8]. These dimensions encompass various aspects reviewed in the telecom industry. While conventional measurements targeted human-to-human interactions between service providers and customers, today's business landscape has evolved to accommodate interactions facilitated by technology. Mobile telecom apps introduce new service quality dimensions, including navigability, visual design, ease of use, innovation, and other technology-driven characteristics.

Despite the evolving nature of telecommunications, SERVQUAL dimensions continue to contribute significantly to service quality assessments in this context [8]. Nevertheless, the interpretation of SERVQUAL dimensions within the telecom industry differs from that of traditional service businesses. While there has yet to be a consensus on the number of service quality dimensions, a critical review conducted by Abd-Elrahman *et al.* frequently identified nine dimensions. Three dimensions—responsiveness, assurance, and empathy—subsume the roles of customer service and mobile device dimensions, leading to their exclusion. This research employs seven dimensions of telecommunication service quality (Fig. 1) to evaluate service failures based on negative online reviews. This study seeks to address the gap in the literature by categorizing service failures within the telecom industry using negative online reviews. By doing so, it aims to provide telecom top management with a better understanding of the sources of service failures and their potential impact. Additionally, this research contributes to the growing knowledge surrounding negative online reviews within the telecom sector.

2 Methods

The data for this study were collected from the most popular app store reviews on Google Play for Android devices. Google Play is a platform for Android users to download apps and provide feedback to app publishers. Given the study's primary focus on service failures, the collected online reviews specifically targeted one and two-star ratings from October 2019 to October 2021, which represent the lowest and second-lowest ratings available, respectively. The rating scale ranges from one to five stars, with five stars indicating high satisfaction and one star reflecting dissatisfaction. A summary of the key statistical information derived from the collected online reviews is presented in Table 1. This study focused on one specific telecom company service provider and sought to examine instances of service failure through user reviews of their mobile app. Low star ratings on the website primarily identified these service failures. While there is no universally agreed-upon definition for negative reviews, service failure typically occurs when the perceived experience falls short of user expectations. The rating scale employed ranges from one to five stars, with the study deliberately avoiding the use of three-star ratings, as they represent a midpoint indicating that customers are partially satisfied with some aspects of the service while dissatisfied with others. The reviews were collected using Python, explicitly focusing on Indonesian locations. The researchers meticulously reviewed the negative reviews and extracted relevant data into a Microsoft Excel worksheet for subsequent analysis.

Table 1. Summary of collected online reviews.

Item	Numbers	Percentage
Number of reviews	4886	100%
One-star reviews	3837	78.5%
Two-star reviews	1049	21.5%
Reviews with service provider replies	4550	93.1%
Reviews with thumbs up from other reviewers	839	17.2%

This study employed the content analysis method developed by Kolbe and Burnett [9]. All extracted reviews were independently reviewed by two judges who examined identical copies of the content. Both judges agreed to utilize the service quality measuring model developed by Abd-Elrahman *et al.*, which includes reliability, assurance, responsiveness, network quality, empathy, convenience, and tangible aspects. The judges were well-versed in the meaning of each service quality dimension and employed a consistent categorization system. They engaged in discussions and reached a consensus on the categorization of reviews.

Data codification was conducted manually, previously the use of popular software like NVivo. This choice was made due to the software's limitations in capturing contextual nuances, especially in cases where reviews contain abstract language that cannot be categorized solely based on exact word matches. However, Voyant tools were employed to gain a general understanding of common keywords within the reviews. Each review may encompass multiple service quality dimensions, and as such, the data was categorized into the most relevant dimensions. Reviews with the highest number of responses (thumbs up) from other users, indicating agreement with the content and shared experiences of service failure, were prioritized for analysis.

3 Results and Discussion

3.1 Reliability-associated failure

Reliability pertains to the consistency of a product's performance, its ability to deliver on its promises [10] consistently, and the extent to which customers can depend on it to meet their expectations. In the context of the telecom industry, reliability is manifested through the stability of performance across various usage scenarios and locations. In the case of this particular company, reliability failures are evident in the inconsistent performance of internet speed and the instability of the mobile app itself.

"..Stop adding useless features like the music mixtape, focus on the functionality and stability of the app please, it's not that reliable at its current state, and it'll be better if it goes back to not having those useless features..." Reviewer ID 6968, 579 thumbs up.

"The app is utterly unreliable. Logging in just to find an error message saying 'something went wrong' is unacceptable in a system where the only way to access and control your data plan is through the app. Added to the fact that outages are not a rare occurrence. And not brief either, sometimes lasting hours or even a full day." Reviewer ID 7616, 477 thumbs up.

The reviewers unequivocally highlight the app's unreliability and instability, urging the development team to shift their focus away from superfluous features like the music mixtape and prioritize the app's functionality and stability. They assert that the app's current state leaves much to be desired in terms of reliability. Moreover, they express frustration over encountering frequent login errors, emphasizing the app's failure to perform a fundamental function. This frustration stems from the realization that they lack control over their spending due to these app errors. These sentiments are articulated as follows:

Reviewer ID 6968, with 579 thumbs-up reactions, emphasizes the need for the app to forego unnecessary features and prioritize functionality and stability. In contrast, Reviewer ID 7616, with 477 thumbs-up reactions, decries the app's unreliability, citing instances where login attempts result in frustrating error messages. This unreliability is

exacerbated by occasional outages extending for hours or an entire day. The substantial number of thumbs-up reactions from other users underscores the widespread prevalence and seriousness of these reliability-related service failures within the app's user community.

3.2 Assurance-associated failure

Assurance within the context of service provision entails the capacity of employees or individuals representing the service provider to establish a sense of mutual trust and confidence with customers. This hinges on several essential competencies, including a deep understanding of the product, the practice of courtesy, the demonstration of credibility, and proficiency in ensuring security [11]. In the realm of the telecom industry, assurance is closely intertwined with the level of product knowledge possessed by employees when addressing customers' inquiries and issues. Assurance, in the context of telecom services, encompasses providing customers with not just a dependable network but also assurance that their problems will be acknowledged, communicated transparently, and resolved promptly. Customers need assurance that their service provider values their experience and is committed to delivering a seamless service.

"Review updated. Internet speed is not the fastest in my area but I accept it, for app it's just work. But no for Customer Service, idk but reach out CS is very hard. Even I sending email with most information I included, they just asking for the same information I send before. Hope CS will be upgraded, because I think CS is very crucial in this Popular All-Digital Provider." Reviewer ID 8890, 156 thumbs up.

In the updated review, the customer expressed satisfaction with the functionality of the app and acknowledged the limitations of internet speed in their area, which they accepted. However, their experience with Customer Service (CS) left much to be desired. They found it challenging to reach out to CS, raising concerns about the provider's credibility and accessibility. Additionally, the recurring request for the same information by the customer service team indicated a need for more awareness about the customer's issue and the inability to provide an effective solution. This situation erodes trust and confidence between the customer and the service provider. The reviewer emphasized the critical importance of improving customer service, highlighting its pivotal role in the overall experience of this popular all-digital provider.

"...This app never allows me to open, it says "something went wrong," but no explanation at all "what is wrong" and "until it suggests us to reload the page. Actually, I don't have any problem with the speed. Perhaps you could allow us to access the Reddit site. However, just fix your app first!" Reviewer ID 7171, 102 thumbs up.

The customer also needs information about the problem they are facing, which the service provider needs help to provide. The customer also needs information about when the issue will be solved. In this review, the customer expressed frustration due to the lack of transparency and communication from the telecom company.

3.3 Responsiveness-associated failure

The Responsiveness dimension in service quality assessment encompasses several critical facets, each contributing to the service provider's ability to meet customer needs and expectations effectively. One crucial element within responsiveness is willingness, denoting the service provider's proactive attitude toward addressing customer inquiries and resolving issues promptly [11]. A high degree of willingness fosters trust and customer satisfaction. Additionally, adaptability plays a pivotal role, especially in today's dynamic business landscape. Service providers must demonstrate flexibility in adjusting their services to meet evolving customer demands, ensuring that their offerings remain relevant and practical [11]. Promptness in service delivery is equally essential, as it reduces customer frustration and enhances their overall experience by ensuring quick responses to inquiries and efficient problem resolution [12]. Effectiveness in problem handling and transparent return policies are also integral to responsiveness, reaffirming the service provider's commitment to customer well-being and satisfaction.

"After the new update, it is hard to buy topping. I got a message that said, 'You cannot continue this order' without any explanation WHY. The live chat service is also very slow to respond, so it could have helped more. In the end, I had to use my main data quota :(I hope company X can fix this topping problem. This topping feature is one of the selling points. There's no use in using this provider anymore if the feature can't be used. Reviewer ID 12910, 86 thumbs up.

The statement, "live chat service is also very slow to respond, so it didn't help much," underscores a critical aspect of responsiveness within the context of customer support in the telecommunications industry. In this context, responsiveness is synonymous with the ability of the service provider to promptly address customer inquiries and issues, ensuring that customers receive timely assistance when needed.

The observation that the live chat service is "very slow to respond" signifies a significant responsiveness challenge. When customers encounter difficulties or have questions regarding their services, they often turn to customer support channels like live chat for quick and efficient resolution. In this case, the delayed response from the live chat service implies that customers may experience frustration and prolonged waiting times, which can negatively impact their overall service experience.

"Been using company X for 6 months by now. No joke, Company X is a great one on a matter of price and speed. But for the first time, I had an encounter with the problem, tried to contact their "live" customer service, welp no reply for quite a while their first reply was, "I dont quite get the question," and then poof, gone i was with a bot again on my 2nd reply. So company X, you lost three stars because your CS admin sucks." Reviewer ID 15628

A key element of responsiveness is the expectation of immediate assistance or, at the very least, a reasonable response time. Customers value efficient and effective communication when they encounter problems or have inquiries. When the live chat service

fails to meet these expectations, it can lead to a perception of inadequate customer support, eroding trust in the service provider.

The statement, "tried to contact their 'live' customer service, welp no reply for quite a while," highlights a critical responsiveness issue within the telecommunications service provided by company X. The observation that there was a significant delay in receiving a response from the "live" customer service indicates a substantial shortcoming in this dimension. Such delays can lead to customer frustration and dissatisfaction as they perceive the service provider as unresponsive to their needs. Furthermore, the subsequent interaction with customer service, characterized by a response stating "I don't quite get the question" and a transition to an automated bot, compounds the responsiveness problem. Customers rely on live customer support to receive personalized and effective assistance, and experiences like these can erode trust and satisfaction. In this context, the delayed and ineffective customer service response contributes to a diminished overall perception of company X's service quality, leading to the withholding of three stars and highlighting the significance of improving responsiveness in customer support.

3.4 Network-associated failure

Network-associated failures, comprising the dimensions of voice clarity, area coverage [13], and the frequency of dropped calls [14, 15], are integral factors influencing network quality in the telecommunications industry. The clarity of voice and the extent of area coverage significantly impact the quality of voice communications and the reach of network signals, ensuring seamless connectivity. Concurrently, the frequency of dropped calls serves as a crucial metric for assessing network reliability and its ability to sustain uninterrupted communication. Extensive scholarly research has established that these network-related aspects play pivotal roles in defining customer satisfaction [10], shaping the level of contentment and approval customers experience with their service providers. Moreover, they are fundamental in determining customer value [13], influencing how customers perceive the worth and utility of the provider's services, underscoring their profound influence on the broader customer experience within the telecommunications domain.

"I've been using for 1 years. Most of the time, the connection is slow. The price is average, not too cheap or expensive. 6-7 first months the connection is still good (so so). But in the last 5 months I think the connection is getting worst. The connection of regular data is sloooww, and the unlimited data is the worst connection." Reviewer ID 11125, 162 thumbs up.

The prolonged experience of slow connection speed, particularly over the last five months, underscores a pro-announced decline in network performance. This deterioration affects both regular data usage and unlimited data, indicating that the network aspect, which encompasses the clarity of data transmission and area coverage, needs to meet the expected standards. Such network problems can significantly impact the overall customer

experience, as reliable and fast connectivity is paramount for various data services and communication needs.

"Bad app, opening and using it takes too much time. It is one of the worst providers, unstable connection, and can only be used to do something besides chat, which usually takes too much time. The connection is often lost without any reason. The only good thing about it is the UI, anything else is trash. Definitely not worth the money and I suggest using another provider if you're thinking of using company X." Reviewer ID 7321, 149, thumbs up.

The inability to utilize the service beyond chatting due to the unreliable network further compounds the issue. Frequent and unexplained connection losses further indicate network unreliability, which can be a source of customer frustration. While the user interface (UI) receives praise, the overall negative network-related experiences. This led to the conclusion that company X's services may not provide adequate value for the cost, urging customers to consider alternative providers for more reliable network performance and a better overall telecommunications experience.

3.5 Empathy-associated failure

Empathy-associated failures within the telecommunications industry encompass access, communication, and customer understanding, collectively emphasizing the importance of providing caring and personalized attention to customers [11]. Accessibility denotes the ease with which customers can reach out to the service provider for assistance and support. Effective and empathetic communication involves not only addressing customer inquiries but also demonstrating a genuine understanding of their concerns. Understanding the customer's unique needs and challenges and tailoring solutions accordingly is pivotal in fostering a sense of care and personalization. In the telecommunications context, empathy plays a critical role in building trust and rapport between service providers and customers, ultimately enhancing the overall customer experience and satisfaction levels.

"Review updated. Internet speed is not the fastest in my area but I accept it, for app it's just work. But no for Customer Service, idk but reach out CS is very hard. Even I sending email with most information I included, they just asking for the same information I send before. Hope CS will be upgraded, because I think CS is very crucial in this Popular All-Digital Provider." Reviewer ID 8890, 156 thumbs up.

The customer's feedback, as indicated in the statement, highlights the considerable challenges associated with contacting Customer Service (CS). The difficulty in reaching out to CS implies a notable need for more caring, a crucial facet of providing effective support. The recurrent issue of CS repeatedly requesting the same information from customers reflects a concerning pattern of limited attention to the details provided by customers. This practice not only hinders efficient issue resolution but also suggests a need for personalized attention in addressing individual concerns. In the pursuit of

empathetic and customer-centric service, it becomes evident that CS tends to employ a uniform approach by posing identical queries to multiple customers, indicating a missed opportunity to tailor their problem-solving methods to the unique needs of each customer. To enhance the overall customer experience and bolster satisfaction levels, there is a pressing need for CS to refine their accessibility, responsiveness, and personalized problem-solving capabilities, thereby ensuring that customers receive attentive and empathetic support.

3.6 Convenience-associated failure

Convenience within the telecommunications domain encompasses two pivotal aspects: the ease of subscribing to and changing services and staff friendliness during these processes [16]. Simplifying the subscription and service alteration procedures is essential for ensuring a seamless and hassle-free experience for customers. Additionally, the friendliness and helpfulness of staff during these interactions play a crucial role in fostering a positive customer experience. Recognized as one of the most influential dimensions in determining service quality, convenience is a cornerstone in ensuring that customers can easily access and tailor their telecommunications services to meet their specific needs and preferences [17]. *"The app is crashing almost every time I opened the app (Something went wrong). I cannot check my remaining quota or buy internet packages. Tried to reinstall but nothing changed."* Review ID 6370, 144 thumbs up.

The statement, "I cannot check my remaining quota or buy internet packages," underscores a significant issue within the convenience aspect of the telecommunications service. The inability to access essential features such as checking remaining data quotas and purchasing internet packages directly affects the ease and convenience of using the service. Customers expect these tasks to be straightforward and readily accessible through the app, aligning with the convenience dimension. However, the reported challenges, including the frequent crashing of the app and the persistent error message, disrupt the convenience of the service, making it inconvenient and frustrating for users. Such issues hinder the streamlined management of telecommunications services. They may deter customers from engaging with the provider's offerings, underscoring the pivotal role of convenience in shaping the overall customer experience.

3.7 Tangibles-associated failure

Tangibles, a component of the physical evidence of service, encompass the observable aspects such as physical facilities, equipment, and personnel appearance. In service interactions, where there is often no tangible product to assess, clients place significant trust in the physical evidence surrounding the service [14]. This trust is rooted in the visible elements that form part of the service experience. It includes the physical environment where the service is delivered, the equipment used during service provision, and the appearance and demeanor of the personnel involved. These tangible elements collectively contribute to the overall impression and assessment that clients form about the service, shaping their perceptions and satisfaction levels.

"Not really have a good and stable connection. Youtube is okay, but the apps itself sometimes can't be opened with this data (the apps can run perfectly if I used wifi). Problem with instagram and pinterest too. But, quite good connection when gaming ML and Genshin. The biggest annoyance is I can't check the quota on the apps because it can't load the pages (pls don't tell me to restart the phone when I just want to check the quota)." Review ID 5728, 74 thumbs up.

In the telecommunications industry, where physical evidence is typically absent due to the intangible nature of services, the provided review highlights a unique exception. Here, tangible aspects become discernible through the performance of the mobile application offered by the telecom provider. Customers rely on this app as a tangible touchpoint to access and manage their telecommunications services, making it a crucial component in their service experience. The complaints expressed in the review shed light on tangible shortcomings within the app, directly affecting the service's tangible dimension. Specifically, the app's failure to allow customers to check their remaining data quota constitutes a tangible service failure that customers can readily assess. This issue not only affects convenience, as discussed earlier but also pertains to the tangible dimension because it hampers customers' ability to interact effectively with the service. In an otherwise intangible service domain, the tangible aspects of the app's functionality and reliability are pivotal in shaping customers' perceptions of service quality.

4 Conclusion

The research findings encompass various dimensions of service quality within the telecommunications industry, ranging from reliability to tangible aspects. Regarding reliability, customers reported concerns regarding the stability of internet speed and app functionality. The frequent occurrence of errors and outages affected the reliability of the service, leading to negative reviews. Assurance-related failures were identified, particularly in customer service, where difficulties in contacting support and repetitive

inquiries indicated limited attention and personalized problem-solving. Responsiveness issues were evident, with customers facing delays and unresponsiveness from the live chat service, undermining the effectiveness of problem handling. Network-associated failures, including voice clarity, area coverage, and frequent dropped calls, contributed significantly to customer dissatisfaction.

Additionally, convenience-related challenges emerged, such as app crashes and the inability to access critical features, impacting the ease of using the service. Finally, tangibles within the telecommunications context were represented by the functionality and reliability of the mobile app, which played a tangible role in customers' experiences. These tangible elements, while typically absent in telecom services, became focal points for customer assessment, highlighting their importance in shaping service quality perceptions.

In light of the research findings, several suggestions for service improvement in the telecommunications industry emerge. To enhance reliability, service providers should prioritize network stability and address app-related issues to minimize service disruptions. Ensuring responsive and efficient customer service is crucial for addressing customer inquiries and concerns promptly. Expanding network coverage and optimizing voice clarity can mitigate network-associated failures. Convenience can be improved by addressing app crashes and enhancing accessibility to essential features. Future research in this domain could delve deeper into the impact of emerging technologies, such as 5G and AI-driven customer support, on service quality. Additionally, investigating the evolving role of mobile applications as tangible touchpoints within the largely intangible telecom service landscape would provide valuable insights for academia and industry.

While the study provides valuable insights, it is important to acknowledge potential limitations and biases, especially in the data collection method. These may include selection bias due to the focus on one specific telecom company and potential language bias, as the study primarily analyzed reviews in the Indonesian language. Additionally, excluding three-star ratings could introduce bias by omitting reviews that express mixed sentiments. Further research could explore these limitations in more depth.

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