

ABSTRACT

The rapid advancement of digital technology has significantly transformed various aspects of life, including the banking sector. Banks in Indonesia are competing to provide mobile banking services to enhance customer satisfaction. One such bank is Bank Negara Indonesia (BNI) Tbk, which has released two mobile banking applications: BNI Mobile and Wondr by BNI. However, based on 2024 data, BNI's mobile banking applications ranked only fifth in the list of the most popular mobile banking apps in Indonesia and remain below BRImo by BRI, which holds the top position in terms of performance. Given that BNI is the first national bank in Indonesia and an early adopter of mobile banking technology, this situation indicates the need for an evaluation of its service quality, particularly through the e-SERVQUAL framework.

This study aims to analyze user sentiment toward BNI's mobile banking applications, examine the distribution of user reviews based on e-SERVQUAL dimensions, and evaluate sentiment within each dimension. User review data were collected from the Google Play Store over a two-month period using web scraping. Labeling was conducted both manually and through pseudo labeling, as part of a semi-supervised learning approach. The data were then preprocessed and analyzed using the IndoBERT model for two main tasks: sentiment analysis and classification of e-SERVQUAL dimensions.

The results show that user sentiment toward both BNI mobile banking applications is predominantly negative. The reliability dimension received the most criticism, while user friendliness was the only dimension dominated by positive sentiment. The IndoBERT model achieved 96% accuracy in sentiment analysis and 75% accuracy in classifying reviews by e-SERVQUAL dimension. This research is expected to serve as an evaluation reference for BNI to improve the reliability of its mobile banking services while maintaining user convenience. Additionally, the findings may provide a foundation for future studies in developing multi-aspect text classification methods in the context of Indonesian-language data.

Keywords: BNI, e-SERVQUAL, IndoBERT, Mobile Banking, Pseudo Labeling, Sentiment Analysis