

Comparative Analysis of BNI Mobile Banking and Wondr by BNI Application Performance (Study on BNI Customers in Surabaya)

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Abstract. Mobile banking is a digital service that allows customers to conveniently access various banking features via mobile devices, such as checking balances, transferring funds, paying bills, and conducting other financial transactions. As technology advances, the quality of mobile banking services has become a key factor in enhancing user satisfaction and loyalty. This study aims to analyze and compare the performance of two mobile banking applications owned by Bank Negara Indonesia, namely BNI Mobile Banking and Wondr by BNI, based on user perceptions. This study employs a quantitative approach using a comparative method to identify performance differences between the two applications. Sampling was conducted using non-probability sampling, with a sample size of 160 respondents who are active users of both applications. The collected data was then analyzed using an Independent Sample T-Test to determine the differences in the means of each variable under study. The results of the study indicate that there are significant differences across six key variables: ease of use, transaction speed, design, security, information content, and customer support service. Based on a comparison of average scores, the Wondr by BNI app demonstrated superior performance compared to BNI Mobile Banking. This indicates that users tend to be more satisfied with Wondr by BNI, in terms of ease of use, transaction speed, a more attractive interface, higher security, the quality of information provided, and more responsive customer support. Thus, the results of this study are expected to serve as evaluation material for app developers in improving the quality of mobile banking services to better align with the needs and expectations of users in today's digital era.

Keywords: Transaction Speed; Mobile Banking; Customer Support Service

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INTRODUCTION

Interconnection-networking (Internet) is a global system of computer networks that combine one system with another around the world (Gani, 2020). Advances in information and communication technology, especially the internet, have resulted in fundamental changes in various aspects of human life. The development of internet technology has revolutionized the paradigm of access to information and communication, so that both are no longer bound by time and space constraints. The presence of the internet provides broad accessibility for individuals to obtain information quickly, easily, and deeply, without being hindered by geographical location. In Indonesia, this digital transformation is reflected in the increasing number of internet users reaching 213 million people in January 2023, or around 77% of the total population, according to the We Are Social report. This figure shows a significant upward trend compared to previous

years and confirms that Indonesians are increasingly dependent on digital technology in their daily activities.

These advancements in digital technology have had a significant impact on the development of the financial industry. These changes encourage financial institutions to adopt innovative digital solutions to meet the needs of customers who increasingly prioritize speed, security and accessibility. One of the most prominent innovations is mobile application-based banking services or mobile banking. Mobile banking is a service system initiated by financial institutions such as banks that aims to carry out a number of financial transactions that can be accessed directly by customers via mobile devices such as cell phones (Sari et al, 2021).

Bank Negara Indonesia (BNI), as the oldest state-owned bank in Indonesia established in 1946, continues to show its commitment in following the development of digital technology, especially in the financial services sector. In the face of changing consumer behavior and the increasing need for fast, easy and flexible banking services, BNI has launched two mobile banking applications designed for different market segments, namely BNI Mobile Banking and Wondr By BNI.

BNI Mobile Banking is the main application aimed at all general customers, both individuals and businesses. This application provides various standard banking features such as balance inquiry, interbank transfers, bill payments, credit purchases, debit/credit card management, as well as biometric and OTP-based security features. BNI also regularly updates this application to support additional services such as loan applications, digital account opening, and direct investment through the platform. Meanwhile, Wondr By BNI is an innovative application that is more focused on the younger generation segment, such as students, college students, and young workers. This application carries a lightweight and interactive financial concept, with features that support financial literacy, such as expense tracking, budget planning, automatic micro savings, and access to small investment products such as mutual funds or digital gold. Wondr also offers a more modern interface and a more user-friendly interface.

These two applications continue to be developed in line with BNI's digital transformation strategy which aims to increase competitiveness in the digital banking industry, and encourage customer satisfaction and loyalty through a more personalized, secure and accessible service experience. With this step, BNI seeks to not only maintain its existence as a large national bank, but also embrace the digital generation as part of the company's long-term growth. However, the presence of these two applications raises questions regarding their respective performance and efficiency.

Important aspects such as ease of use, transaction speed, interface design, security, information content, and customer service are important indicators in assessing the quality of application performance. Ease of use is indispensable in using mobile banking applications, or making online transactions to make payments. Transaction speed is an important role in improving mobile banking services. This transaction speed can help the performance of system operations or application performance in mobile banking to run effectively and efficiently. Application design can be said to be the appearance or features of the application. A good and attractive application design can make users feel comfortable and useful according to their function.

Security in information is an effort to protect information from various potential threats to ensure application continuity, reduce business risk, and optimize return on investment and business opportunities. Information content can be said to be content that refers to the information offered by a website or application. Meanwhile, customer service quality describes the level of performance of certain services provided to meet customer expectations.

Various previous studies have examined the performance and usage of mobile banking applications using diverse approaches and variables. Research by Layyinna (2024) indicates that factors such as content, accuracy, ease of use, timeliness, security, and response speed significantly influence user satisfaction with the BNI Mobile Banking application. These findings underscore that system and information quality are critical aspects in enhancing the user experience. Additionally, research by Apriandika and Shiratina (2024) revealed that service quality, ease of use, and trust have a significant influence on mobile banking user satisfaction.

This indicates that service and trust are determining factors in maintaining customer loyalty. According to data reported by the Central Bureau of Statistics (BPS), the population in Surabaya City reached 3,009,286 people. Surabaya is the capital of East Java Province and also the largest metropolitan city in the province. Surabaya's strategic role as a metropolitan city makes it the main center of economic, financial and business activities in the East Java region and beyond. Various economic sectors are growing rapidly in the city, ranging from trade, industry, services, to the digital sector. This condition makes Surabaya the region with the most rapid level of economic development among other regions in East Java. As a center of economic activity and technology, the people of Surabaya tend to be adaptive to the use of digital services, including in terms of financial transactions through mobile banking applications. Fast-paced and dynamic urban life demands easy access to practical, efficient and technology-based banking services.

This study offers a novel approach compared to previous research because it not only analyzes a single mobile banking app but also compares the performance of BNI Mobile Banking and Wondr by BNI. Additionally, this study simultaneously evaluates several indicators, including ease of use, transaction speed, interface design, security, information content, and customer service. This study was also conducted among BNI customers in Surabaya, thereby providing a more specific empirical perspective regarding user experience with both applications.

METHODS

This study uses comparative research with a quantitative approach which aims to determine and analyze the performance differences of the BNI Mobile Banking and Wondr by BNI applications in Surabaya. The research location is the place where the research has been conducted. In this case, the object of research is BNI customers who live in Surabaya. Surabaya domicile is divided into 5 namely East Surabaya, South Surabaya, West Surabaya, North Surabaya, and Central Surabaya. According to (Sugiyono, 2023: 126), population is a generalization area consisting of objects or subjects that have certain quantities and characteristics set by the author to study and then draw conclusions. Population is the whole of the objects or subjects to be studied. In this paper, the population is the people of Surabaya who are BNI customers who have made transactions on the BNI Mobile Banking and Wondr by BNI applications. The number of samples determined by the Cochran formula, resulting in 160 respondents through purposive sampling techniques with certain criteria. The characteristics in this writing are as follows:

- a. Domicile / residing in Surabaya
- b. BNI customers who use the BNI Mobile Banking and Wondr by BNI applications
- c. Have done second mobile banking transaction at least 2-3 times in one month.

This study uses an independent simple T-test hypothesis test which is used to find whether there is a difference in the performance of the BNI Mobile Banking and Wondr by BNI applications.

RESULT AND DISCUSSION

The results of data processing in this study were obtained through the help of IBM SPSS statistical software version 26, which was used to conduct comparative analysis of several key variables. Testing focused on six aspects of application performance, namely ease of use, transaction speed, design, security, information content, and customer support service. Each of these variables was analyzed to determine if there was a significant difference between the two mobile banking applications, BNI Mobile Banking and Wondr By BNI, based on user perception

and experience. The use of SPSS allows researchers to manage data systematically and perform statistical tests, such as Independent Sample T-Test, to compare the mean values of the two sample groups accurately and objectively.

Normality Test

Decision-making criteria are based on the significance value (p-value), where if the value is greater than the significance level ($\alpha = 0.05$), then the data is considered normally distributed. Conversely, if the p-value is smaller than 0.05, then the data is not normally distributed.

Table 1.
Normality Test Results

Variable	Sig	α	Description
Ease of use	0,075	0,05	Normal
Transaction speed	0,093	0,05	Normal
Design	0,119	0,05	Normal
Security	0,227	0,05	Normal
Information content	0,691	0,05	Normal
Customer support service	0,076	0,05	Normal

Source: primary data, processed 2025

Based on the table above, it shows that all variables between the BNI Mobile Banking application and Wondr by BNI are more than 0.05, so it can be said that all variables are normally distributed. So the test that will be carried out is the Independent Simple T-test.

Homogeneity Test

Decision making in this test is based on the significance value, where if the significance value is greater than 0.05, it can be concluded that the variance between groups is homogeneous.

Table 2.
Homogeneity Test Results

Variable	Sig	α	Description
Ease of use	0,051	0,05	homogeneous
Transaction speed	0,648	0,05	homogeneous
Design	0,167	0,05	homogeneous
Security	0,325	0,05	homogeneous
Information content	0,144	0,05	homogeneous
Customer support service	0,747	0,05	homogeneous

Source: primary data, processed 2025

Based on the table above, it shows that all variables in the BNI Mobile Banking and Wondr by BNI applications have a significance of more than 0.05, so it can be said to be homogeneous.

Hypothesis Test

In this analysis, a normality test was conducted using the Kolmogorov-Smirnov method to ensure that the data distribution of each variable, both in BNI Mobile Banking and Wondr By BNI applications, met the assumption of normal distribution. The test results show that all variables have a significance value (p-value) above 0.05, which means there is no significant deviation from the normal distribution. Thus, the data is declared normally distributed and qualifies for parametric testing.

Based on these results, the Independent Sample T-Test was used as a further analysis method. This test aims to determine whether there is a significant average difference between two unrelated or independent sample groups, namely the BNI Mobile Banking user group and the Wondr By BNI user group. The independent sample t-test is an appropriate statistical technique for comparing two different groups of data, as long as the assumption of normality is met and the variance between groups is relatively homogeneous.

Table 3.
Hypothesis Test Results

Variable	Mobile Banking	Mean	Sig	α	Description
Ease of use	BNI Mobile Banking	16,39	0,004	0.05	H0 rejected
	Wondr By BNI	17,02			
Transaction speed	BNI Mobile Banking	16,63	0,032	0.05	H0 rejected
	Wondr By BNI	17,14			
Design	BNI Mobile Banking	16,55	0,029	0.05	H0 rejected
	Wondr By BNI	17,06			
Security	BNI Mobile Banking	16,52	0,013	0.05	H0 rejected
	Wondr By BNI	17,11			
Information content	BNI Mobile Banking	16,68	0,020	0.05	H0 rejected
	Wondr By BNI	17,24			
Customer support service	BNI Mobile Banking	15,76	0,001	0.05	H0 rejected
	Wondr By BNI	16,58			

Source: primary data, processed 2025

By using this test, the researcher can identify significant differences in perception, satisfaction or other aspects measured in the study of the two applications. The results of this test form the basis for concluding as to whether the two apps provide an equivalent experience or have respective advantages from the user's perspective.

Based on the table above, the Independent Simple T-test test is obtained which is stated as follows:

1. Ease of Use

The Ease of use variable has a Sig value. $0.004 < 0.05$, then H_0 is rejected, which means that there is a difference in the performance of the Ease of use variable application on the BNI Mobile Banking and Wondr By BNI applications in Surabaya. The results of the Independent Simple T-test show that the ease of use variable of the BNI Mobile Banking application has a smaller mean than the Wondr By BNI application ($16.39 < 17.02$). With this, the ease of use variable of Wondr By BNI is superior to BNI Mobile Banking. The test results of the Independent Simple T-test test on the ease of use variable show that there are differences in application performance between the ease of use variables in the BNI Mobile Banking and Wondr By BNI applications.

Ease of use is seen as one of the crucial factors in digital banking services because internet banking users generally tend to choose transaction methods that are simple, efficient, and do not cause difficulties in their use. This is in line with previous research (Jahan, et al 2020) which states that the level of ease and comfort in using digital banking services plays an important role in building a strong relationship between users and the system. The difference in the ease of use of BNI Mobile Banking and Wondr By BNI is due to differences in features. BNI Mobile Banking excels in clear instructions and instructions for use, while Wondr By BNI is more practical in navigation, allowing transactions to be carried out in just a few steps.

2. Transaction Speed

The transaction speed variable has a Sig value. $0.032 < 0.05$, then H_0 is rejected, which means that there is a difference in the performance of the Transaction speed variable application on the BNI Mobile Banking and Wondr By BNI applications in Surabaya. The test results of the Independent Simple T-test are known in the transaction speed variable, the BNI Mobile Banking application has a smaller mean than the Wondr By BNI application ($16.63 < 17.14$). With this, the transaction speed variable Wondr By

BNi is superior to BNi Mobile Banking. The test results of the Independent Simple T-test on the transaction speed variable show that there is a difference in application performance between the transaction speed variables in the BNi Mobile Banking and Wondr By BNi applications.

The difference in transaction speed between BNi Mobile Banking and Wondr By BNi is due to the different number of steps in the transaction process. Wondr By BNi is faster and more practical as it only requires three main steps: selecting the transaction, entering the amount, and confirming the PIN. BNi Mobile Banking, on the other hand, requires an additional step of twice inputting the PIN, making the process longer. The number of steps in BNi Mobile Banking transactions contributes to application performance issues. According to Lestari et al. (2024), customers often experience problems such as forgetting MPIN, forgetting transaction passwords, blocked accounts, not receiving OTP codes during registration, and applications that cannot be opened. Therefore, Wondr By BNi is more suitable for users who prioritize speed and convenience in daily transactions.

3. Design

The Design variable has a Sig value. $0.029 < 0.05$, then H_0 is rejected, which means that there is a difference in the performance of the Design variable application in the BNi Mobile Banking and Wondr By BNi applications in Surabaya. The results of the Independent Simple T-test test show that the BNi Mobile Banking application design variable has a smaller mean than the Wondr By BNi application ($16.55 < 17.06$). With this, the Wondr By BNi design variable is superior to BNi Mobile Banking.

BNi Mobile Banking focuses on basic transaction needs such as transfers between accounts, credit purchases and payment of various bills. Its features are functional and aimed at daily transaction efficiency. On the other hand, Wondr By BNi offers a more comprehensive approach. In addition to transaction features, Wondr is equipped with "Insight" which displays an analysis of user expenses and income, and "Growth" which helps plan financial goals through simulations and recommendations for saving or investment strategies. In accordance with research by Havidia and Budiarnaya (2024), Wondr By BNi applies the concept of three financial dimensions: Transaction (present), Insight (past), and Growth (future), which makes this application not only a transaction tool, but also a digital financial assistant that supports comprehensive

personal financial management.

4. Security

The Security variable has a Sig value. $0.013 < 0.05$, then H_0 is rejected, which means that there is a difference in the performance of the Security variable application in the BNI Mobile Banking and Wondr By BNI applications in Surabaya. The results of the Independent Simple T-test show that the BNI Mobile Banking application security variable has a smaller mean than the Wondr By BNI application ($16.52 < 17.11$). With this, the Wondr By BNI security variable is superior to BNI Mobile Banking.

Mobile banking security includes data protection, authentication methods, and system reliability in maintaining customer privacy during transactions. BNI Mobile Banking uses OTP and PIN as the main mechanisms, but still experiences problems such as OTP delays, potential SMS tapping, and technical problems in the form of timeouts, long loading, and errors during login or transactions (Nugraha et al., 2024). In contrast, Wondr By BNI implements biometric authentication for login and transactions, which increases both security and user convenience. In addition, the app provides a digital locking feature for cards when lost or stolen, providing an additional layer of protection that reduces the risk of misuse (Putra et al., 2024). With these features, Wondr By BNI offers a security system that is more responsive and adaptive to modern digital security needs and challenges.

5. Information Content

The information content variable has a Sig value. $0.020 < 0.05$, then H_0 is rejected, which means that there is a difference in the performance of the Information content variable application in the BNI Mobile Banking and Wondr By BNI applications in Surabaya. The results of the Independent Simple T-test test show that the BNI Mobile Banking application information content variable has a smaller mean than the Wondr By BNI application ($16.68 < 17.24$). With this, the information content variable of Wondr By BNI is superior to BNI Mobile Banking.

The difference in performance between BNI Mobile Banking and Wondr By BNI can be seen in the features and information approach provided. BNI Mobile Banking offers access to investment products such as mutual funds, state bonds (e-SBN) and term savings, as well as simulation and portfolio summary features to help customers understand potential investment returns and risks. In contrast, Wondr By BNI provides

real-time information relevant to the trends and needs of the younger generation. In addition to banking products, this application provides financial education, budgeting tips, investment insights, and economic news with a light and easy-to-understand presentation, making it more attractive to digital users.

6. Customer support service

Customer support service variable has a Sig value. $0.001 < 0.05$, then H_0 is rejected, which means that there is a difference in the performance of the Customer support service variable application in the BNI Mobile Banking and Wondr By BNI applications in Surabaya. The test results of the Independent Simple T-test test are known in the customer support service variable, the BNI Mobile Banking application has a smaller mean than the Wondr By BNI application ($15.76 < 16.58$). With this, the Wondr By BNI customer support service variable is superior to BNI Mobile Banking.

Customer support service is a crucial aspect in maintaining the quality of e-banking services. According to Indrasari et al. (2024), customer service includes the application provider's efforts to provide fast assistance and the right solution to solve problems and meet user needs. In BNI Mobile Banking, the advantage is in the self-service help center feature which allows users to overcome various obstacles independently without the need to contact customer service directly, thereby reducing waiting time and service burden. In contrast, Wondr by BNI prioritizes speed and responsiveness in problem solving by providing access to assistance through in-app notifications, interactive chatbots and automated guidance that appears when users encounter problems. This approach improves service effectiveness and real-time user experience

CONCLUSIONS

Based on the results of data analysis and discussion in this study, it can be concluded that there is a significant difference in application performance between BNI Mobile Banking and Wondr By BNI. This is indicated by the significance value (p-value) of the six variables tested, namely ease of use, transaction speed, design, security, information content, and customer support service, all of which have a p-value < 0.05 . This means that statistically there is a real difference in user perception of the performance of the two applications based on these variables. From the results of the comparison of average values, the Wondr By BNI application shows superior performance compared to BNI Mobile Banking. This advantage can be seen in various aspects, such as a more attractive and intuitive interface, a simpler and more convenient user experience, and a security system that is considered better by respondents. In addition, Wondr By BNI also provides additional features that are not available in the BNI Mobile Banking

application, such as personal financial management tools and future financial planning, which are considered very relevant and needed by today's young generation. Thus, it can be concluded that Wondr by BNI is better able to meet user expectations and needs, especially in the context of digital banking services that are practical, modern, and adaptive to the lifestyles of urban and digital-native users.

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