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FROM PERCEPTIONS TO ADOPTION: ANALYZING BLU BCA DIGITAL THROUGH THE LENS OF THE TECHNOLOGY ACCEPTANCE MODEL

Vivi Natalia, Agung Stefanus Kembau, Julius Sutrisno, Julia Loisa
Bunda Mulia University

A R T I C L E I N F O

Keyword: *Digital Banking, Technology Acceptance Model (TAM), Blu BCA Digital, Branchless Banking, Perceived Ease of Use, Perceived Usefulness, Attitude Toward Use, Behavioral Intention to Use*

Kata Kunci: Perbankan Digital, Technology Acceptance Model (TAM), Blu BCA Digital, Branchless Banking, Persepsi Kemudahan Penggunaan, Persepsi Kegunaan, Sikap Terhadap Penggunaan, Perilaku Niat Penggunaan

Corresponding author:

Agung Stefanus Kembau
akembau@bundamulia.ac.id

Abstract. *The rapid advancement of information and communication technology has transformed interactions with financial institutions, particularly through digital or branchless banking. Bank Central Asia (BCA), a leading private bank, has introduced Blu BCA Digital, a digital banking application designed to meet the growing demand for convenient banking solutions. Despite its promising features, Blu BCA Digital faces significant challenges due to the increasing number of competing digital banking platforms. This study aims to assess users' intentions to adopt Blu BCA Digital using the Technology Acceptance Model (TAM). A quantitative approach was employed, utilizing questionnaires distributed to 159 Blu BCA customers in DKI Jakarta, with data analyzed using SmartPLS 3.2.9 software and the Partial Least Squares (PLS) method. The results indicate that perceived ease of use and perceived usefulness positively and significantly affect users' attitudes toward the application and their behavioral intentions to use it.*

Abstrak. Pesatnya kemajuan teknologi informasi dan komunikasi telah mengubah interaksi dengan lembaga keuangan, khususnya melalui perbankan digital atau tanpa kantor cabang. Bank Central Asia (BCA), bank swasta terkemuka, telah memperkenalkan Blu BCA Digital, aplikasi perbankan digital yang dirancang untuk memenuhi permintaan yang terus meningkat akan solusi perbankan yang nyaman. Meskipun memiliki fitur yang menjanjikan, Blu BCA Digital menghadapi tantangan yang signifikan karena semakin banyaknya platform perbankan digital yang bersaing. Penelitian ini bertujuan untuk menilai niat pengguna untuk mengadopsi Blu BCA Digital menggunakan Technology Acceptance Model (TAM). Pendekatan kuantitatif digunakan, menggunakan kuesioner yang disebarkan kepada 159 nasabah Blu BCA di DKI Jakarta, dengan data dianalisis menggunakan perangkat lunak SmartPLS 3.2.9 dan metode Partial Least Squares (PLS). Hasil penelitian menunjukkan bahwa persepsi kemudahan penggunaan dan persepsi kegunaan secara positif dan signifikan mempengaruhi sikap pengguna terhadap aplikasi dan niat perilaku mereka untuk menggunakannya.

INTRODUCTION

The ongoing digital transformation has significantly impacted various industrial sectors in Indonesia, with the financial sector experiencing notable changes (Suryono, et al. 2020). The proliferation of internet use has not only created new opportunities but also necessitated substantial adaptations and innovations by financial institutions to maintain competitiveness in the digital era (Khalatur, et al. 2022). As noted by Klaus Schwab, founder of the World Economic Forum, "The Fourth Industrial Revolution is characterized by a range of new technologies that are fusing the physical, digital, and biological worlds." Among the outcomes of this digital shift is the rapid advancement of financial technology (Barroso & Laborda, 2022), which encompasses digital payment systems, peer-to-peer lending, online insurance, and online investment platforms.

Digital banks have emerged as a prominent form of fintech in Indonesia (Mutiara, et al, 2019). Operating exclusively online, digital banks provide more efficient and accessible banking services through advanced technological platforms. This model eliminates the need for physical branches, reducing operational costs and enabling greater scalability (Pazarbasioglu, et al, 2020). Bank Indonesia initiated the concept of digital banking in 2013 under the designation Layanan Keuangan Digital (LKD), or branchless banking. This initiative aimed to enhance financial inclusion by offering banking services to underserved and remote areas through digital means.

Bank Central Asia (BCA), a leading private banking institution in Indonesia (Xu, et al. 2024), has pioneered digital banking with the introduction of Blu BCA Digital. This service, resulting from the acquisition of Bank Digital BCA in 2019, represents a significant evolution in digital banking. Blu BCA Digital was officially launched on July 2, 2021, marking a pivotal development in the digital banking landscape in Indonesia.

Despite its notable achievements, including a user base exceeding 1.1 million and third-party funds amounting to Rp 6.85 trillion by the end of 2022, Blu BCA Digital is confronted with several critical issues:

- Technical Challenges and User Experience: Reports indicate that users have encountered various technical difficulties with Blu BCA Digital, including access issues, error messages during login, and unexpected session terminations. Problems related to account creation and transaction processing have led to failed transfers and errors during video interactions with bank representatives (Redaksi, 2023). These issues impact the Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) of the digital banking service, crucial components of the Technology Acceptance Model (TAM).
- Revised Fee Structures: The recent introduction of transfer fees between Blu and BCA, previously waived, has raised concerns among users. This policy change may adversely affect users' perceptions of the service's convenience and value, potentially leading to reduced engagement with Blu BCA Digital (Iswinarno & Fauzi, 2023). The adjustment in fee structures influences users' Behavioral Intention to Use (BIU), as changes in perceived value can alter their overall attitude toward the service.
- User Satisfaction and Service Efficiency: While Blu BCA Digital has achieved a prominent ranking in global digital banking assessments, persistent technical issues

and policy modifications pose risks to user satisfaction and overall service effectiveness. These challenges could undermine customer contentment and diminish the service's competitive advantage within the Indonesian digital banking market. According to TAM, a user's Attitude Toward Use (ATU) is influenced by their satisfaction and perceived utility of the service, which in turn affects their intention to continue using the service.

Rationale for Applying the Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is highly relevant for addressing the issues faced by Blu BCA Digital due to its focus on understanding user acceptance of new technologies. TAM posits that Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) are fundamental determinants of a user's Behavioral Intention to Use (BIU) and Attitude Toward Use (ATU) (Davis, 1989). Previous research on digital banking has demonstrated that these TAM constructs are effective in identifying and resolving user challenges related to digital banking services. For example, studies have shown that improving the ease of use and perceived benefits of digital banking platforms can significantly enhance user satisfaction and adoption rates (Venkatesh & Bala, 2008; Khatri, et al. 2020). By applying TAM, Blu BCA Digital can systematically address technical issues that impact PEOU and evaluate how changes in fee structures affect PU. This approach will help in understanding user attitudes and intentions, guiding the development of strategies to enhance user experience and service effectiveness.

Prior research has also highlighted the utility of TAM in predicting user behavior and acceptance in digital banking contexts. For instance, a study by Ahmad (2018) demonstrated that TAM effectively predicts users' willingness to adopt digital banking services by evaluating their perceptions of ease of use and usefulness. Therefore, integrating TAM into the evaluation and improvement processes for Blu BCA Digital will provide valuable insights into user needs and preferences, facilitating targeted enhancements to address the identified challenges.

LITERATURE REVIEW AND HYPOTHESIS SUBMISSION

Bank Digital

Digital banking refers to banking services delivered through digital platforms that enable customers to perform a wide range of activities remotely (Kaur, et al. 2021). These activities include communication with the bank, conducting transactions, managing accounts, and accessing information without the need for physical visits to a branch (Chauhan, et al. 2022). Beyond traditional banking products, digital banking often integrates additional services such as investments, financial consultations, and e-commerce transactions into a single digital ecosystem (OJK, 2016). This comprehensive approach allows customers to manage their financial needs efficiently through a unified platform, often referred to as a "digital branch," which consolidates various e-banking services into one integrated solution (Kholid & Soemarso, 2019). Furthermore, digital banking enhances convenience by offering 24/7 access and reducing the need for physical paperwork, aligning with the increasing demand for seamless and instant financial services (Skinner, 2014:67). This shift not only improves customer experience but also streamlines bank operations, contributing to overall efficiency in financial service delivery.

Digital Bank and TAM

Digital banks have significantly transformed the financial sector by offering efficient and accessible services through digital platforms, eliminating the need for physical branches (Wewege, et al. 2020). This innovation has led to greater financial inclusion and heightened competition within the industry (Juniantika & Hapsari, 2020). To understand user adoption of these services, the Technology Acceptance Model (TAM) is instrumental. TAM, introduced by Davis (1989), asserts that Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) are critical factors influencing Behavioral Intention to Use (BIU) and Attitude Toward Use (ATU). Research shows that in the context of digital banking, higher PEOU and PU are strongly associated with positive user experiences and higher engagement levels (Chauhan, et al. 2022)

Recent studies have reaffirmed the relevance of TAM in evaluating digital banking adoption, highlighting its effectiveness in predicting user behavior (Hu, et al. 2019). However, emerging challenges such as evolving security concerns and regulatory changes suggest the need for an updated approach. Integrating TAM with additional models like the Unified Theory of Acceptance and Use of Technology (UTAUT) could offer a more comprehensive understanding of user acceptance and enhance the effectiveness of digital banking services (Rahi, et al, 2019) This integration is crucial for addressing the complexities of the rapidly evolving digital banking landscape.

Perceived Ease of Use

Perceived ease of use a key component of the Technology Acceptance Model (TAM), refers to the degree to which a user believes that using a technology will be effortless (Venkatesh, et al, 2008). In the realm of digital banking, PEOU significantly influences user adoption and satisfaction (Amin, et al. 2014). Research consistently shows that when digital banking platforms are perceived as easy to navigate and operate, users are more likely to adopt and continue using these services (George & Kumar, 2013). Studies, such as those by Ooi and Tan (2016), further highlight that simplifying user interfaces and reducing operational complexity can enhance user experience, thereby boosting engagement and loyalty. Thus, PEOU is crucial for digital banks to ensure effective user acceptance and long-term success.

Perceived Usefulness

A central concept in the Technology Acceptance Model (TAM), refers to the extent to which a user believes that using a technology will enhance their performance or effectiveness (Davis, 1989; Venkatesh & Bala, 2008). In digital banking, PU significantly influences user adoption and sustained engagement, as users are more likely to embrace digital banking platforms that they perceive as providing substantial benefits such as convenience, efficiency, and improved financial management(Prastiawan, et al .2021). Research shows that features like instant transactions, 24/7 access, and streamlined financial processes boost the perceived usefulness of digital banking services, leading to higher adoption rates and continued use (Hu, et al, 2014). Therefore, effectively demonstrating the advantages of digital banking is crucial for attracting and retaining users.

Attitude Toward Use

Davis (1993) defines attitude toward use in TAM as a user's acceptance or rejection attitude toward a technology or system when implemented in their work (Wijaya & Setiawan, 2022). Attitude is defined by oleh Fishbein dan Ajzen (1975) as the extent to which a user accepts or rejects a specific behavior or object involving emotions or sentiments. Rosenberg and Hovland (1960) describe three components that form attitude toward use (Hasan et al., 2022), such as: cognition, affect, dan behaviour. Attitude Toward Use refers to the user's overall evaluation of and feelings towards using a particular technology, which encompasses their positive or negative perceptions and the level of enthusiasm or reluctance they feel towards its use (Davis, 1989). In the context of digital banking, ATU is a critical factor influencing user adoption and continued use. Research indicates that a positive attitude toward digital banking services—shaped by perceived ease of use and perceived usefulness—leads to higher adoption rates and more frequent engagement (Venkatesh & Bala, 2008). Studies such as those by Hu et al. (2019) and Ooi and Tan (2016) show that users with favorable attitudes towards digital banking are more likely to view these services as beneficial and user-friendly, thereby enhancing overall satisfaction and loyalty. Consequently, cultivating a positive attitude towards digital banking is essential for digital banks to attract and retain customers effectively.

Behavioral Intention to Use

Behavioral Intention to Use refers to the user's intention or willingness to use a particular technology, reflecting their likelihood of engaging with the technology in the future based on their perceptions and attitudes (Davis, 1989). In the realm of digital banking, BIU is a crucial predictor of actual usage behavior. Research has shown that BIU is strongly influenced by factors such as Perceived Ease of Use (PEOU) and Perceived Usefulness (PU), with positive perceptions leading to a higher likelihood of adoption and continued use of digital banking services (Venkatesh & Bala, 2008). Studies by Hu et al. (2019) and Ooi and Tan (2016) indicate that users who express a strong intention to use digital banking are more likely to engage with these services regularly, driven by their belief in the technology's benefits and ease of use. Therefore, understanding and enhancing BIU is essential for digital banks to foster user engagement and ensure the successful deployment of their services.

If the relationships between the explained variables are illustrated, the research framework can be obtained as follows:

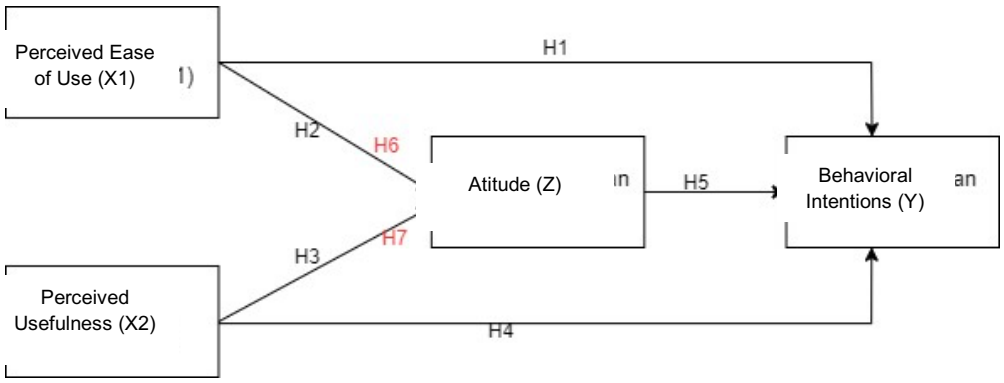

Figure 1: Research Model

Hypothesis	Description	Direct Influence	Indirect Influence
H1	Perceived ease of use has an influence on behavioral intention to use.	Direct	-
H2	Perceived ease of use has an influence on attitude toward use.	Direct	-
H3	Perceived usefulness has an influence on attitude toward use.	Direct	-
H4	Perceived usefulness has an influence on behavioral intention to use.	Direct	-
H5	Attitude toward use has an influence on behavioral intention to use.	Direct	-
H6	Perceived ease of use has an influence on behavioral intention to use through attitude toward use as a mediator.	Indirect (through ATU)	Mediation through Attitude Toward Use
H7	Perceived usefulness has an influence on behavioral intention to use through attitude toward use as a mediator.	Indirect (through ATU)	Mediation through Attitude Toward Use

The table outlines seven hypotheses regarding the relationships between Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Use (ATU), and Behavioral Intention to Use (BIU) in digital banking. Hypotheses H1 through H5 examine direct influences: PEOU on BIU (H1), PEOU on ATU (H2), PU on ATU (H3), PU on BIU (H4), and ATU on BIU (H5). Hypotheses H6 and H7 explore indirect effects, testing whether PEOU (H6) and PU (H7) impact BIU through their influence on ATU, highlighting the role of ATU as a mediator in the relationship between PEOU, PU, and BIU.

RESEARCH METHODS

This study uses associative quantitative methods using questionnaires as primary data. This research is cross sectional in nature which only observes a phenomenon at a certain time (Sugiyono, 2022). The object of this study specifically analyzes the impact of Perceived Ease of Use and Perceived Usefulness on user intentions and attitudes regarding Blu BCA Digital. The subjects of this study include customers and users who have interacted with the Blu BCA Digital digital bank application in DKI Jakarta. The sampling method used was purposive sampling. The criteria are Blu BCA digital bank customers who live in DKI Jakarta and are aged 17 to 45 years. In the questionnaire that has been distributed, a rating scale with a Likert scale of 1-4 is used, including strongly disagree, disagree, agree, and strongly agree (Imam Ghozali, 2021). The target sample size in this study uses the Cochran formula due to the unknown population size (Sugiyono, 2022):

$$n = \frac{z^2 pq}{e^2} \text{.....}$$

$$n = \frac{(1{,}96)^2 (0{,}5)(0{,}5)}{(0{,}10)^2}$$

$n = 96{,}04 = 97$ person

The research data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with SmartPLS 3.2.9 software to measure a certain scale with a small sample size well (Ghozali, 2021). In this study, reflective indicators were used because each indicator is a manifestation or reflection of the latent variable. Two tests were carried out on the data obtained, namely the outer model test and the inner model test.

Variable	Measurement	Reference
Perceived Ease Of Use	It is easy for me to learn how to operate the Blu BCA application The Blu BCA application has clear interfaces and information. It is easier to use the Blu BCA application compared to visiting a branch. Interaction through the Blu BCA application is flexible. I can easily understand the workings and features of financial services available on the Blu BCA application. Overall, the Blu BCA application is clear and understandable.	(Ananda et al., 2020; Hu et al., 2019; Kitsios et al., 2021)
Perceived Usefulness	The Blu BCA application facilitates my financial transactions. The Blu BCA application enhances my effectiveness and efficiency in utilizing financial services. The Blu BCA application allows me to transact and transfer money easily and quickly.	(Ananda et al., 2020; Hu et al., 2019; Kitsios et al., 2021)

	The Blu BCA application provides many benefits, such as promotions, cashback, free administrative fees, or transfers. The Blu BCA application can fulfill various financial needs, such as saving, deposits, bill payments, and e-wallet top-ups. The Blu BCA application updates my knowledge in the field of E-Banking.	
Attitude Toward Use	I enjoy using the Blu BCA application. I find the Blu BCA application appealing. The Blu BCA application is user-friendly. Using the Blu BCA application for banking transactions is a great and enjoyable experience. Opting for the Blu BCA application for banking transactions is a wise decision.	(Hu et al., 2019; Nurahmasari et al., 2023)
Behavioral Intention to Use	I will continue to use the Blu BCA application consistently. I am committed to using the Blu BCA application regularly, given its numerous advantages. I intend to utilize the Blu BCA application because it meets my various financial needs. I will advocate for the Blu BCA application to those in my social circle. Over the next few months, I aim to persist in my usage of the Blu BCA application.	(Hu et al., 2019; Lin et al., 2020)

Table 1. Measurement Scale

This table outlines the measurement scales used to evaluate the Blu BCA application across four key variables. Perceived Ease of Use assesses how easily users can learn and operate the app, including factors such as clear interfaces, ease of use compared to branch visits, and flexibility in interaction. Perceived Usefulness examines the app's effectiveness in facilitating financial transactions, enhancing efficiency, and providing various benefits like promotions and cashback. Attitude Toward Use evaluates users' overall enjoyment, appeal, and user-friendliness of the app, as well as their perception of its value in banking transactions. Finally, Behavioral Intention to Use measures users' commitment to continued and regular use of the app, their intention to utilize it for various financial needs, and their willingness to recommend it to others. Each variable is supported by references from relevant studies, ensuring a comprehensive assessment of the application's impact and user satisfaction.

RESULTS

The characteristics of the respondents were analyzed based on the demographic characteristics of the respondents, this study used 159 samples in the form of questionnaires from Blu BCA digital bank customers with the following criteria:

Category & Classification	Frequency	Percentage
Gender		
Male	66	42%
Female	93	58%
Age		
17-25 y.o	100	63%
26-35 y.o	47	30%
35-45 y.o	7	4%
>45 y.o	5	3%
Location		
North Jakarta	52	33%
West Jakarta	56	35%
Central Jakarta	26	16%
South Jakarta	23	15%
East Jakarta	2	1%
Education		
Elementary School	-	-
Junior High School	1	1%
Senior High School	67	42%
Diploma	23	15%
Bachelor Degree	61	38%
Master Degree	7	4%
Occupation		
Student	49	31%
Private/Government Employee	65	41%
Entreprenur	30	19%
Housewife	15	9%
Respondent's Income		
<1 million per month	20	12%
1-5jt million per month	52	33%
5-10jt million per month	52	33%
>10jt million per month	35	22%

Table 2. Profil Respodent

The questionnaire's criteria for respondents encompass customers and users who have interacted with the Blu BCA Digital application in DKI Jakarta. The collected questionnaire results are predominantly from female respondents aged 17 to 25 residing in West Jakarta with a final education level of senior high school/vocational high school. They are also predominantly respondents employed as private/government employees with a monthly income range of 1-5 million IDR and 5-10 million IDR.

After obtaining the respondent profiles, the outer model or measurement model testing is conducted, which includes validity and reliability testing. In the first step of the outer model testing, namely the convergence validity and discriminant validity testing, it is observed from the PLS Algorithm results.

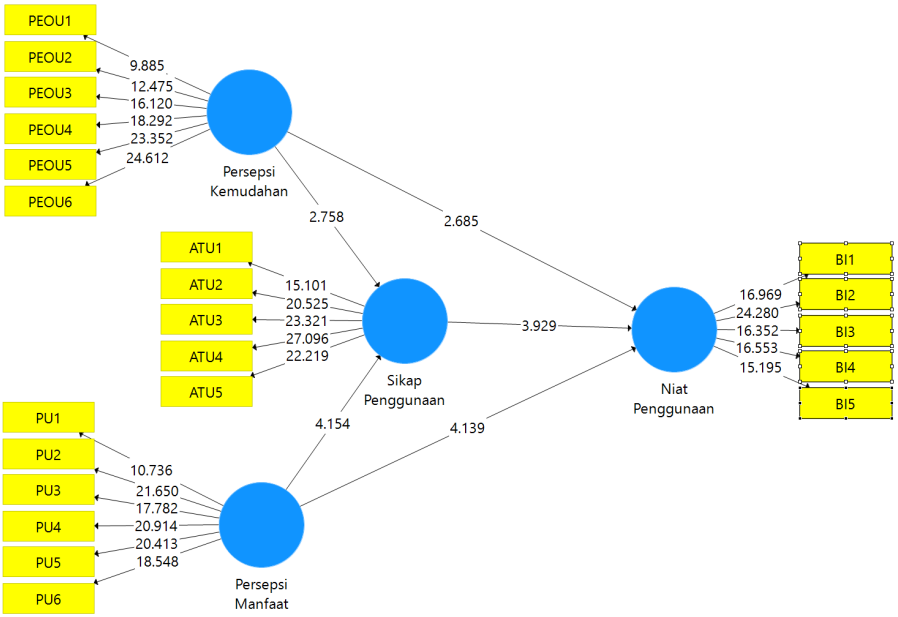

Figure 2. The Results of PLS Algoritma

In assessing the convergence validity test on reflective constructs, it is conducted by examining: first, the loading factor values must exceed 0.7; second, the AVE (average variance extracted) must surpass a value of 0.5. When both of these criteria are met, the test results are deemed valid.

Variable	Indicator	Value	Results
Perceived Ease of Use	PEOU1	0.735	Valid
	PEOU2	0.770	Valid
	PEOU3	0.810	Valid
	PEOU4	0.816	Valid
	PEOU5	0.809	Valid
	PEOU6	0.820	Valid
Perceived Usefulness	PU1	0.750	Valid
	PU2	0.813	Valid
	PU3	0.805	Valid
	PU4	0.814	Valid
	PU5	0.818	Valid

	PU6	0.784	Valid
Attitude Toward Use	ATU1	0.767	Valid
	ATU2	0.792	Valid
	ATU3	0.840	Valid
	ATU4	0.858	Valid
	ATU5	0.803	Valid
Behavioral Intention to Use	BI1	0.817	Valid
	BI2	0.820	Valid
	BI3	0.805	Valid
	BI4	0.823	Valid
	BI5	0.819	Valid

Table 3. The Results of Loading Factor

Based on the table above, it is evident that all loading factor values exceed 0.70, as demonstrated by the loading factor results in Table 3. Hence, it can be inferred that all indicators comprising the variables Behavioral Intention to Use, Attitude Toward Use, Perceived Ease of Use, and Perceived Usefulness have met the criteria for convergence validity testing and are considered valid.

In assessing convergence validity, this study does not solely rely on loading factor values but also incorporates the Average Variance Extracted (AVE) values, which should exceed 0.5 for each variable. AVE is utilized to signify the high correlation level among the indicators employed to gauge the research concepts, as recommended by (Imam Ghozali, 2021). ut differently, when variables exhibit sound convergence validity, it signifies that the items in this study exhibit a positive correlation with alternative items measuring the same construct, as elucidated by (Imam Ghozali, 2021). Data analysis outcomes indicate that:

	Average Variance Extracted (AVE)	**Results**
Perceived Ease of Use	0.630	Valid
Perceived Usefulness	0.636	Valid
Attitude Toward Use	0.661	Valid
Behavioral Intention to Use	0.667	Valid

Table 4. The Results of AVE

Based on the AVE values presented in Table 4, it is concluded that all AVE values for each variable exceed 0.50. Thus, the AVE test results regarding the intention to use, Attitude Toward Use, Perceived Ease of Use, and Perceived Usefulness can be considered valid. This indicates that the constructs have a sufficient level of convergent validity, meaning they effectively capture the intended dimensions of the model. Furthermore, high AVE values reinforce that the indicators collectively represent a significant portion of the variance in their respective constructs, thus supporting the reliability and validity of the measurement model.

Next, discriminant validity testing is conducted where cross-loading values are utilized to evaluate the discriminant value of constructs to ensure adequacy. The loading values of constructs should be greater than those of other constructs. This approach confirms that each construct is sufficiently distinct from the others, preventing overlap and ensuring that each variable measures a unique aspect of the model. Additionally, when cross-loading values are consistently lower than the corresponding factor loadings, it provides further validation of the construct's discriminant validity. Below are the cross-loading values obtained from the calculations performed with Smart PLS 3.2.9:

	Perceived Ease of Use	**Perceived Usefulness**	**Attitude Toward Use**	**Behavioral Intention to Use**	**Results**
PEOU1	0.735	0,283	0,397	0,397	Valid
PEOU2	0.770	0,327	0,380	0,439	Valid
PEOU3	0.810	0,374	0,406	0,534	Valid
PEOU4	0.816	0,418	0,403	0,542	Valid
PEOU5	0.809	0,513	0,495	0,484	Valid
PEOU6	0.820	0,496	0,480	0,497	Valid
PU1	0,488	0.750	0,454	0,556	Valid
PU2	0,418	0.813	0,481	0,515	Valid
PU3	0,430	0.805	0,471	0,581	Valid
PU4	0,390	0.814	0,466	0,589	Valid
PU5	0,363	0.818	0,417	0,512	Valid

PU6	0,361	0.784	0,501	0,568	Valid
ATU1	0,454	0,478	0.767	0,464	Valid
ATU2	0,411	0,453	0.792	0,536	Valid
ATU3	0,393	0,402	0.840	0,509	Valid
ATU4	0,484	0,495	0.858	0,601	Valid
ATU5	0,442	0,537	0.803	0,542	Valid
BI1	0,454	0,617	0,528	0.817	Valid
BI2	0,470	0,559	0,488	0.820	Valid
BI3	0,438	0,540	0,641	0.805	Valid
BI4	0,545	0,506	0,467	0.823	Valid
BI5	0,581	0,612	0,545	0.819	Valid

Table 5. The Results of Cross Loading

Cross-loading validity or all discriminant validity tests on the indicators are considered valid if the cross-loading values in the same indicator column exceed the correlation values between variables, as outlined in Table 5 presented earlier. Furthermore, the Fornell-Larcker criterion is utilized by comparing the square root of AVE values, where it can be determined that the square root of AVE for a construct must exceed its correlation value with other constructs. This ensures that each construct is distinct and uniquely measures its intended variable. Additionally, convergent validity is supported if the AVE values are above the threshold of 0.50, indicating that the indicators capture a significant amount of the variance in their respective constructs. Together, these criteria provide a comprehensive validation framework for assessing the robustness of the measurement model.The values obtained from the Fornell-Lacker's measurement are as follows:

	Behavioral Intention to Use	**Perceived Ease of Use**	**Perceived Usefulness**	**Attitude Toward Use**	**Results**
Behavioral Intention to Use	0,817				Valid
Perceived Ease of Use	0,610	0,794			Valid

Perceived Usefulness	0,696	0,513	0,798		Valid
Attitude Toward Use	0,656	0,539	0,585	0,813	Valid

Table 6 The Results Fornell-Lacker's

Referring to the measurement results in Table 6, the Fornell-Larcker values for each construct variable indicate higher values compared to the correlation values between other constructs. It is concluded that the discriminant validity criteria are met and deemed valid. In the latest version of Smart PLS 3, discriminant validity testing is also conducted by examining the HTMT values. The required HTMT values should be below 0.90, indicating excellent discriminant validity. This approach provides an additional layer of validation, ensuring that constructs are adequately differentiated from each other. When HTMT values are well below the threshold, it confirms that the constructs do not share excessive variance, thus supporting the robustness of the measurement model. Furthermore, this method helps in addressing potential issues of multicollinearity among the constructs, thereby enhancing the overall model accuracy.

HTMT (Heterotrait-Monotrait)

	Behavioral Intention to Use	**Perceived Ease of Use**	**Perceived Usefulness**	**Attitude Toward Use**	**Results**
Behavioral Intention to Use					Valid
Perceived Ease of Use	0,690				Valid
Perceived Usefulness	0,786	0,572			Valid
Attitude Toward Use	0,745	0,611	0,661		Valid

Table 7 The Results of HTMT

Based on the data measurement results of HTMT in Table 7, all HTMT values are less than 0.90. The lower the HTMT value, the better the discriminant validity of the reflective constructs. Thus, the criterion for discriminant validity with HTMT values has been met and considered valid. After conducting validity tests on the sample data, the next step is to perform reliability tests using two methods, namely through composite reliability. To be considered reliable, the composite reliability value is expected to be greater than 0.7, as per the theory explained by Ghozali (2021). The reliability analysis results from the processed data are shown in the following table:

	Composite Reliability	Results
Perceived Ease of Use	0,911	Reliabel
Perceived Usefulness	0,913	Reliabel
Attitude Toward Use	0,907	Reliabel
Behavioral Intention to Use	0,909	Reliabel

Table 8. The Results of Composite Reliability

Based on the composite reliability values listed in Table 8, it is evident that all variables have composite reliability exceeding the value of 0.70. It can be stated that all these variables are reliable and demonstrate a high level of reliability. From the results of validity and reliability testing, it can be concluded that the indicators and variables used to measure the model have shown adequate consistency and accuracy in the measurement process. The next step involves testing the inner or structural model to explore and test the correlations between latent variables (unobserved constructs) in a model, and also to assess whether the path coefficients connecting these latent variables are significant or not. Initial evaluation is performed through R-square testing.

	R Square	Keterangan
Behavioral Intention to Use (Y)	0,619	Moderate
Attitude Toward Use (Z)	0,420	Moderate

Table 9. The Results of R-square

Based on Table 9, it is concluded that Attitude Toward Use, along with Perceived Ease of Use and Perceived Usefulness, moderately influences Behavioral Intention to Use by 61.9%. Meanwhile, 38.1% of the Behavioral Intention to Use variable is influenced by other variables not discussed in this study. Furthermore, the Perceived Ease of Use and Perceived Usefulness variables moderately influence up to 42% of Attitude Toward Use, while the remaining 58% is influenced by factors not included in this study. This indicates that while the studied variables account for a significant portion of the influence, there are other potentially relevant factors that could further affect the Behavioral Intention to Use and Attitude Toward Use. Identifying and analyzing these additional factors could provide a more comprehensive understanding of the variables influencing the constructs in question. Therefore, future research should consider exploring these other variables to enhance the accuracy and applicability of the model.

The F-square or Effect Size plays a role in measuring the relative influence of exogenous variables on endogenous variables. The determination of the strength of the relationship can be expressed by the F-square value, where a minimum value of 0.19 indicates a weak relationship, a value of 0.33 reflects a moderate relationship, and a value of 0.67 or higher indicates a strong relationship between variables. This metric helps in evaluating the practical significance of the predictors in the model, beyond just their statistical significance. By assessing the F-square values, researchers can better understand which variables have a substantial impact on the endogenous

variables and make informed decisions on model adjustments and improvements. The calculation results of F-square conducted by the Smart PLS 3.2.9 algorithm are presented below:

	F-square	Results
Perceived Ease of Use --> Behavioral Intention to Use	0,107	Lemah
Perceived Ease of Use --> Attitude Toward Use	0,134	Lemah
Perceived Usefulness --> Behavioral Intention to Use	0,254	Moderat
Perceived Usefulness --> Attitude Toward Use	0,222	Moderat
Attitude Toward Use --> Behavioral Intention to Use	0,125	Lemah

Table 10. The Results of F-square

Based on the results in Table 10, the F-square values provided for each relationship indicate how much of the variability of the dependent variable can be explained by the related independent variable. From these results, it can be concluded that the relationship between Behavioral Intention to Use and Perceived Ease of Use, as well as Attitude Toward Use and Perceived Ease of Use, show weak influences, while Perceived Usefulness is moderately influenced by Behavioral Intention to Use, and Attitude Toward Use has a moderate impact on Perceived Usefulness. Next, a Goodness of Fit test is conducted to evaluate the sustainability of the path model formed. To qualify as a suitable path model, several evaluation criteria must be met, one of which is the SRMR value, which should be below 0.08.

	Saturated Model	Estimated Model
SRMR	0,070	0,070

Table 11. The Results of Model Fit

With reference to the data presented in Table 11, an SRMR value of 0.070 is found. Based on this SRMR value, it can be concluded that the path model constructed in this study can be considered a well-fitting model (Ghozali, 2021). This SRMR value falls within the commonly accepted threshold for good model fit, indicating that the discrepancies between the observed and predicted covariances are minimal. Consequently, the model demonstrates a strong alignment with the empirical data, supporting the robustness of the proposed relationships and hypotheses.

The next step in data analysis involves hypothesis testing, aimed at evaluating the path coefficients and specific indirect effects. Resampling techniques using bootstrapping methods are employed to test hypotheses about the relationships between exogenous and endogenous variables through mediating variables. Significance is measured by T-statistic values exceeding 1.65, P-values less than 0.05, and positive confidence interval values on the initial sample, all of which are important indicators in hypothesis testing. Additionally, the bootstrapping approach enhances the robustness of the results by providing reliable estimates of standard errors and confidence intervals. This method ensures that the inferences drawn about the hypothesized relationships are both accurate and generalizable. The results of this hypothesis testing are presented in the following table:

	Hypothesis	Original Sample (O)	T Statistics	P Values	Conclusion
H1	Perceived Ease of Use -> Behavioral Intention to Use	0,250	2,471	0,007	Accept
H2	Perceived Ease of Use -> Attitude Toward Use	0,325	2,880	0,002	Accept
H3	Perceived Usefulness -> Attitude Toward Use	0,418	4,451	0,000	Accept
H4	Perceived Usefulness -> Behavioral Intention to Use	0,400	4,003	0,000	Accept
H5	Attitude Toward Use -> Behavioral Intention to Use	0,287	4,177	0,000	Accept

Table 12. The Results of Path Coefficients

The hypothesis testing results in Table 12 indicate that all hypotheses are accepted, as they have positive original sample values, t-statistics exceeding 1.65, and P-values less than 0.05. These findings suggest that all hypotheses have a positive and significant effect. Furthermore, the results of the mediation tests indicate that all hypotheses can be accepted well. This is interesting because the presence of mediating variables does not disrupt the direct relationships, and all relationships between variables become stronger when using mediating variables. The mediation test results show positive and significant outcomes, as per the specified criteria of positive original sample values, t-statistics > 1.65, and P-values < 0.05. The results of the mediation tests can be seen in the following table:

	Hypothesis	Original Sample (O)	T Statistics	P Values	Conclusion
H6	Perceived Ease of Use -> Attitude Toward Use -> Behavioral Intention to Use	0,093	2,176	0,016	Accept
H7	Perceived Usefulness -> Attitude Toward Use -> Behavioral Intention to Use	0,120	3,186	0,001	Accept

Table 13. The Results of Spesific Indirect Effect

Based on Table 13, Attitude Toward Use is considered a mediating factor according to Hypotheses 6 and 7. The concept of partial mediation, as defined by Baron and Kenny in (Ghadani et al., 2022), refers to a situation where the exogenous variable has a significant impact on the endogenous variable, and this impact is also significant through the mediating variable. Therefore, it can be concluded that Hypotheses 6 and 7 fall under the category of partial mediation. This indicates that while Attitude Toward Use partially mediates the relationship between the exogenous and endogenous variables, there remains a direct effect from the exogenous variable to the endogenous variable. Thus, the presence of partial mediation underscores the importance of considering both direct and indirect pathways in understanding the dynamics of user attitudes and their effects.

DISCUSSION

This study applies the Technology Acceptance Model (TAM) to assess the adoption of digital banking services, focusing on the BLU BCA Digital platform in Indonesia. The findings substantiate TAM's core propositions, highlighting that both perceived ease of use (PEOU) and perceived usefulness (PU) are pivotal in shaping users' behavioral intentions to utilize digital banking services. In this context, attitude toward use serves as a crucial mediating variable, reinforcing TAM's assertion that user attitudes are instrumental in the adoption of new technologies.

Alignment with TAM Principles

According to TAM, perceived ease of use and perceived usefulness significantly influence users' attitudes towards technology, which, in turn, impacts their behavioral intentions to use the technology (Davis, 1989; Hu, et al. 2019). The study’s results align with this model, demonstrating that users' perceptions of BLU BCA Digital's ease of use and its benefits are integral to their adoption decisions. A high perception of usefulness enhances users' attitudes, leading to a stronger intention to use the platform. This relationship is corroborated by the significant t-statistic of 4.451

for perceived usefulness, underscoring its critical role in driving user adoption.

Contextual Factors and Challenges

In the Indonesian digital banking landscape, several challenges affect adoption, including accessibility, digital literacy, and user trust (Setiawan, et al. 2021). The study finds that these challenges are partly mitigated by the high level of technological proficiency among millennials, who are the predominant users of digital banking services. Their advanced digital skills and understanding of the benefits of digital services contribute to the positive results observed in the study. However, the study also reveals that 38.1% of the behavioral intention to use digital banking is influenced by factors beyond the scope of this research. These factors may encompass concerns about security, privacy, and reliance on technical support, which are critical barriers to digital banking adoption in Indonesia. Addressing these concerns is essential for enhancing user acceptance and overcoming resistance to digital banking technologies.

The Role of Attitude Toward Use

The findings emphasize the mediating role of attitude toward use between perceived ease of use, perceived usefulness, and intention to use. TAM posits that a favorable attitude towards technology, facilitated by its perceived ease of use and usefulness, can significantly enhance the intention to use (Venkatesh & Bala, 2008; Ananda, et al. 2022). In the case of BLU BCA Digital, fostering a positive attitude through improvements in service usability and demonstrable benefits is crucial for increasing user adoption.

Strategic Implications for Digital Banks in Indonesia

To effectively navigate the challenges and opportunities in the digital banking sector, digital banks in Indonesia must implement a multifaceted strategy focused on enhancing user experience, perceived usefulness, and security, while also improving digital literacy. First and foremost, optimizing user experience is crucial. This involves addressing technical issues promptly and refining user interfaces to be more intuitive and user-friendly (Wijaya & Setiawan, 2022). Ensuring that users can easily navigate the platform and resolve issues swiftly will significantly enhance perceived ease of use and overall satisfaction. Additionally, boosting perceived usefulness is essential. Digital banks should clearly articulate the benefits and value-added features of their services, such as faster transactions and personalized financial insights, to highlight how these advantages surpass those offered by traditional banks. Ongoing innovation and the introduction of new features that cater to evolving user needs can further reinforce the perceived value of digital banking.

Addressing security concerns is another critical area. Digital banks must implement robust security measures, including advanced encryption, multi-factor authentication, and real-time fraud detection, to safeguard user data and transactions (Khalatur, et al. 2022). Transparent communication about these security practices will help build user trust and alleviate concerns about data privacy. Moreover, providing digital literacy training is vital for overcoming barriers related to digital skills (Barroso & Laborda, 2022). Developing educational programs and resources, such as workshops, webinars, and interactive tutorials, can empower users to navigate digital banking platforms more effectively. By offering accessible support resources, digital banks can assist users

in becoming more comfortable and proficient with online banking services.

By focusing on these strategic areas—enhancing user experience, emphasizing the value of services, addressing security concerns, and improving digital literacy—digital banks in Indonesia can significantly increase user adoption rates and satisfaction. These efforts will not only help in addressing current user concerns but also position digital banks as leaders in the rapidly evolving financial technology landscape.

CONCLUSION

This research reaffirms the relevance of the Technology Acceptance Model (TAM) in analyzing the usage of BLU BCA Digital and understanding user perceptions and challenges in adopting digital banking services in Indonesia. By leveraging TAM's principles, this study provides a comprehensive evaluation of how perceived ease of use and perceived usefulness impact users' behavioral intentions toward adopting BLU BCA Digital. The insights gained highlight the critical role of user perceptions in shaping adoption outcomes and emphasize the importance of addressing challenges to enhance service quality. The findings underscore that financial institutions can significantly benefit from applying TAM to develop targeted strategies that address specific user concerns, such as usability issues and perceived value. Enhancing these aspects can lead to improved user satisfaction and higher adoption rates for digital banking services.

For a more in-depth understanding of digital banking adoption, future research should explore additional factors influencing user perceptions, such as security and privacy concerns, which were beyond the scope of this study. Additionally, longitudinal studies would offer valuable perspectives on how user perceptions and behaviors evolve over time, contributing to a more nuanced understanding of the dynamics influencing digital banking adoption. This comprehensive approach will be essential for financial institutions to effectively navigate the challenges and opportunities in the digital banking landscape, ultimately fostering a more user-centric and adaptive service environment.

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