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Operational and Security Risk Understanding on Behavioral Intention to Use Digital Banking

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A B S T R A C T

This study examines the effect of customers' understanding of operational risk and security risk on behavioral intention to use digital banking services at Bank Neo Commerce (BNC). Using a quantitative approach with a causal associative design, data were collected from BNC customers via questionnaires and analyzed using multiple linear regression. The study integrates the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and Perceived Risk Theory to explain the relationship between risk understanding and intention to use. The findings indicate that customers' understanding of both operational and security risks positively and significantly influences their behavioral intention to use BNC's digital banking services, both simultaneously and individually. Greater risk awareness does not discourage service usage; instead, it strengthens trust and acceptance of digital financial technology. Digital banks are therefore encouraged to enhance transparency, security communication, and customer risk literacy programs to support sustainable customer engagement and loyalty.

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1. INTRODUCTION

The development of technology and digitalization has had a significant impact on various sectors, including the economy. In the economic context, one of the major changes that occurred was the existence and massive growth of digital banks. Digital banks are present as an alternative to banking that utilizes online platforms to provide easy access and services to customers (Meuthia, 2024). A digital bank is an institution that uses online media in banking services such as mobile banking and e-banking (Ferozi Ramdana Irsyad et al., 2024; Saputra et al., 2023). Both media are vulnerable to threats (*threat*). Based on the results of a survey by the Directorate of IKPRIIKN, the profile of the biggest threats to mobile banking is as follows:

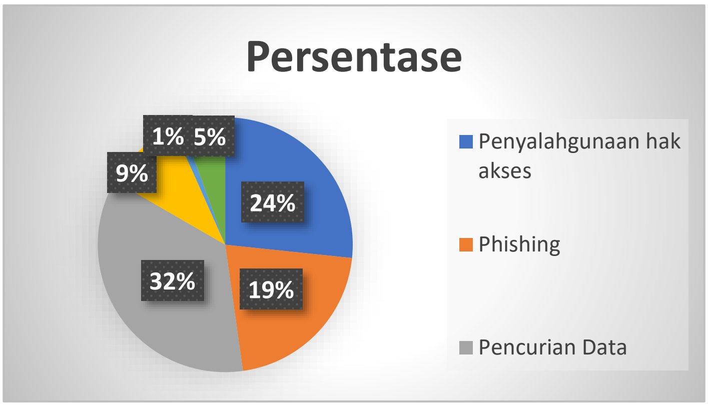

Figure 1. 1 Percentage of cyber threats

Source: (National Cyber and Cryptography Agency, 2022)

Cyber threats to mobile banking services can come from external or internal factors. Based on the survey results, there are six main types of cyber threats that are most common in mobile banking in Indonesia during 2020. Based on the graph data, the biggest threats are data theft with a percentage of 32%, followed by misuse of access rights at 24%, phishing attacks at 19%, malware attacks at 15%, errors in application management at 9%, and the smallest cases are SIM card hijacking cases with a percentage of 1%.

Data theft became the most dominant cyber threat of the year, reflecting that in addition to financial aspects, customers' personal data is also a major target for hackers. Furthermore, data theft incidents can trigger various other threats, such as misuse of access rights, fraud, and other security breaches that have a wide impact. This emphasizes the importance of strengthening digital security systems to mitigate the layered risks that may arise from data theft incidents.

These threats are examples of operational risks and security risks. Operational and security risks are one of the main challenges that can affect service quality and customer trust. The risk of using digital banking services has a significant impact on consumer decisions, where the reliability of operational systems and security are the main factors that affect customer perception and attitudes towards a service (Sunaryanto & Jenyfer, 2024).

Operational risk based on Operational risk, as regulated in the Financial Services Authority Regulation (POJK) No. 18/POJK.03/2016, is a risk arising from insufficient or failure of internal processes, human error, system failure, and external events that may interfere with the bank's operations (Financial Services Authority of Indonesia, 2016). Meanwhile, cybersecurity

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risks in banking, as described in SEOJK Number 29/SEOJK.03/2022 concerning Resilience and Cybersecurity for Commercial Banks, include potential threats to the confidentiality, integrity, and availability of bank information systems (Board of Commissioners of the Financial Services Authority, 2022).

Sunaryanto and Jenyfer's research revealed that the risks felt by customers do not directly shape their attitudes towards digital banking services. Instead *perceived usefulness, perceived ease of use, trust,* and *attitude towards the service* has a positive influence on *intention to use*, which means that the higher the perception of convenience, benefits, trust and the less risk that customers have with the service, the more likely they are to use it (Sunaryanto & Jenyfer, 2024).

An example of a case study on customers of Bank Central Asia (BCA) and Bank Rakyat Indonesia (BRI) identifies that risks stemming from human factors, such as errors in transaction execution and officer negligence, as well as system risks, such as disruptions in internet banking services, have the potential to affect customers' perceptions of the security and reliability aspects of digital banking services (Tanic & Atahau, 2021).

Research conducted by Nabbila et al, revealed that operational risk management is a crucial effort in overcoming the occurrence of things arising from operational risks. Implementation of operational risk management carried out at Bank Syariah Indonesia (Nabbila et al., 2023). This is in line with research conducted by Nafsiah and Mubarokah which shows that banking operational risk management has a varied impact on Bank Mandiri's profitability during the 2015-2020 period. Thus, good credit and operational risk management is an important aspect for banks to maintain their profitability and competitiveness in the financial industry (Nafsiah & Mubarokah, 2024).

The risk of customer data leakage is a crucial issue in the digital banking ecosystem. Financial institutions have an obligation to implement a comprehensive security system to avoid data leak incidents that can have implications for public integrity and trust. On the other hand, customers also need to increase awareness in protecting personal information to mitigate the risk of cybercrime (Tanic & Atahau, 2021). This condition emphasizes the urgency of implementing a comprehensive operational risk management strategy in digital banking to ensure reliable service continuity and maintain customer trust in the digital-based banking system.

These risks will certainly affect customer preferences in utilizing digital banking services. Moreover, the entire digital banking service system operates in an integrated manner in the network. According to Meuthia (2024), factors that affect the interest of digital bank users in Indonesia include security, *Brand image*and *easy to use* (convenience) (Meuthia, 2024). Ryu (2018) in Putri explained that financial losses in the use of digital payments are caused by the failure of the financial transaction system, fraudulent acts (*fraud), moral hazard*, as well as the additional costs that arise when you first adopt the service. These factors have a negative relationship with users' intentions to continue using digital payment services in a sustainable manner (Putri et al., 2021).

Based on research from Pradila and Teofilus, Indonesian digital bank customers every year experience an increase in literacy. In 2021, there were 47.72 users or equivalent to 25% of adults in Indonesia. This number is projected to continue to increase to 74.79 million people in 2026 (Pradila et al., 2024). West Java is one of the provinces with the largest bank users in Indonesia (A. A. Putri, 2023). The city of Bandung as the center of West Java, is ranked ninth

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with the largest digital bank users in West Java. With a population of 2.58 million people as of 2024, Bandung is ranked first as the highest digital bank service in West Java (West Java Portal, 2024).

Bank Neo Commerce is a digital bank with more than 20 million users *Stuart T* as of 2023 (Bank Neo Commerce, 2024). Originally known as Bank Yudha Bhakti, BNC underwent a major transformation by adopting a digital banking model to meet the needs of modern society for fast, easy, and flexible services (Swetasoma, 2022). Until the first quarter of 2024, PT Bank Neo Commerce Tbk (BNC) has more than 26 million customers in Indonesia. This number represents a significant increase compared to the end of 2022, where BNC had around 20.9 million customers. This growth in the number of customers reflects the increasing public trust in digital banking services offered by BNC (Dwijayanto, 2024).

Bank Neo Commerce (BNC) has shown significant financial performance in recent periods. In the third quarter of 2024, BNC managed to book a net profit of IDR 4.06 billion, reversing a loss of IDR 566.06 billion in the same period the previous year. This achievement was supported by a decrease in operating expenses and an increase in credit disbursement, especially in the corporate segment which reached IDR 2.31 trillion in September 2024, an increase of 88.01% compared to IDR 1.23 trillion in September 2023 (Laras, 2024).

In addition, in the first quarter of 2024, BNC recorded a net profit of IDR 14.23 billion, reversing from a loss of IDR 68.40 billion in the same period the previous year. This improvement was achieved through measurable operational efficiency, as seen from the reduction in the ratio of Operating Expenses to Operating Income (BOPO) to 98.83% from the previous 106.74%. However, credit disbursement decreased by 13.87% to IDR 9.40 trillion as of March 31, 2024, compared to IDR 10.91 trillion in the same period the previous year. Nevertheless, BNC has succeeded in improving credit quality by lowering its net Non-Performing Loan (NPL) ratio to 1.30% from the previous 2.67% (Laras, 2024). As a digital bank that focuses on the ease of technology-based services, BNC faces a major challenge in maintaining customer trust amid various potential risks that can disrupt the reliability and security of the system. Operational risks, such as system outages and technical errors, as well as security risks involving the threat of cybercrime and data leaks, can affect customers' perception of risk.

Although previous studies have discussed risk factors in digital banking adoption, several limitations remain. First, most prior studies focus on perceived risk as a general construct without specifically distinguishing between operational risk and security risk as separate dimensions influencing customers' behavioral intention to use digital banking services. As a result, the unique contribution of each type of risk to customer behavior remains unclear. Second, previous research has predominantly examined conventional banks, Islamic banks, or digital payment platforms, while empirical evidence focusing on fully digital banks in Indonesia is still limited. Third, many studies investigate risk perceptions indirectly through mediating variables such as trust, perceived usefulness, and attitude, rather than examining the direct influence of customers' understanding of operational and security risks on behavioral intention to use.

This study addresses these limitations by examining operational risk understanding and security risk understanding as distinct variables that directly influence customers' behavioral intention to use digital banking services. Furthermore, this research focuses on Bank Neo Commerce (BNC), one of the fastest-growing digital banks in Indonesia, providing empirical

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evidence from a digital banking context that has received limited attention in previous studies. The novelty of this study lies in the integration of Operational Risk Theory, Cybersecurity Risk concepts, Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and Perceived Risk Theory to explain how customers' understanding of operational and security risks influences their intention to use digital banking services. Therefore, this study contributes to the literature by offering a more comprehensive understanding of risk-related factors affecting digital banking adoption in Indonesia.

2. METHODOLOGY

The approach in this study is quantitative with a causal associative research design. In this study, the object of research focuses on three variables consisting of dependent variables and independent variables. The dependent variable in this study is the behavioral interest of Neo Bank Commerce digital bank users (Y), while the independent variables in this study are understanding operational risks (X1) and understanding security risks (X2). The subject of this study is a customer of the digital bank Neo Bank Commerce. This study uses Second-Order Factor Analysis (SOFA) because the concept analyzed consists of several interrelated dimensions in explaining the behavioral intention to use Bank Neo Commerce (BNC) services. By referring to the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and Perceived Risk Theory, each theory has sub-dimensions that form a single unit, such as Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) in TAM, as well as perceived operational risk and perceived security risk in perceived risk theory.

Each indicator contains five representative questions from several references to relevant journal articles. Each variable is proxied with two variables. The variable of customer understanding of operational risks is proxied by *perceived operational risk* and *perceived ease of* use. In Tanuwijaya and Arifin's research, *perceived operational risk* focused on the user experience in dealing with technical obstacles in digital bank services. System stability, smooth transactions, and the speed of service providers in handling problems are the key factors assessed. Through this question, it can be identified whether users feel that digital bank services are reliable enough or are actually vulnerable to technical glitches that can hinder their convenience in transactions (Tanuwijaya & Zainul Arifin, 2023). On the *Perceived Ease of Use* (PEOU), the question that was compiled focused on the user's subjective experience in understanding and operating digital bank services. Ease of use is a major factor in the adoption of financial technology, so questions about learning speed, difficulty level, and system intuitiveness are very relevant. By delving into the user experience regarding ease of use, it can be understood whether this service is really user-friendly or still has obstacles that need to be overcome (Meuthia, 2024). The variable of customer understanding of security risks is proxied by *perceived security risk* and *perceived usefulness.* Indicators *Perceived Usefulness* (PU) is based on the goal of measuring the extent to which users feel the benefits of digital banks in their daily lives. These aspects include transaction efficiency, ease of access, and relevance of services to modern lifestyles. By asking about the user experience in various situations, it is possible to get an idea of how much digital banks contribute to the ease and effectiveness of their financial transactions (Meuthia, 2024). *Perceived security risk* It is related to how safe users feel when using digital bank services. Factors such as data protection, convenience in transactions, and the effectiveness of security procedures are the main focus. By asking questions about these aspects, it can be known whether users have confidence in the security system of digital banks or feel vulnerable to the risk of misuse of information and access by uninterested parties (Meuthia, 2024). Variable

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behavioral intention to use proxied with *attitude towards behavior* and *perceived behavioral control. Attitude Towards Behavior* explored through users' understanding of the risks that exist in digital bank services. Risk factors such as fraud and misuse of financial information are a major concern, so the question is directed to measure how aware users are of these potential risks. Users' attitudes towards risk can influence their decision to use these services, so their understanding of the various threats that may occur is an important aspect of this study (Tanuwijaya & Zainul Arifin, 2023). *Perceived Behavioral Control* (PBC), a question designed to assess users' perceptions of the controls they have in the face of the risks that arise when using digital banks. Risks such as personal data leakage and risk comparison between digital banks and conventional banks were aspects tested. By understanding the extent to which users feel they have control over the security of their accounts, it can be known whether their level of literacy and vigilance is sufficient in dealing with digital security threats (Tanuwijaya & Zainul Arifin, 2023).

The selection of this population is based on the relevance of their experience in digital transactions, so that it can provide accurate information regarding operational risks, security risks, and their behavioral interests in using BNC services.

According to Sugiyono, if the population is large, the margin of error used is 10% (Scott, 2018).

Known:

Population (N) = 1,662,353

Margin of error (e) = 10% or 0.1

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{1.662.353}{1 + 1.662.353(0{,}1^2)}$$

$$n = \frac{1.662.353}{1 + 16.623{,}53}$$

$$n = \frac{1.662.353}{16.624{,}53}$$

$$n = 99{,}99 \approx 100$$

So, the sample size needed is 100 respondents (rounded up).

Data collection in this study used a survey method. The data analysis in this study used multiple linear regression analysis with t-test and f-test. The hypotheses of this study include:

H1: The level of customer understanding of operational risks and security risks has a positive effect on the behavioral intention to use Bank Neo Commerce (BNC) services simultaneously.

H0: The level of customer understanding of operational risks and security risks does not have a positive effect on the behavioral intention to use Bank Neo Commerce (BNC) services simultaneously

H2: The level of customer understanding of security risks has a positive effect on the behavioral intention to use Bank Neo Commerce (BNC) services.

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H0: The level of customer understanding of security risks does not have a positive effect on the behavioral intention to use Bank Neo Commerce (BNC) services

H3: The level of customer understanding of operational risks has a positive effect on the behavioral intention to use Bank Neo Commerce (BNC) services.

H0: The level of customer understanding of operational risks does not have a positive effect on the behavioral intention to use Bank Neo Commerce (BNC) services.

3. RESULTS AND DISCUSSION

Research Overview

Descriptive Analysis of Research Variables

The results of the SPSS test in the descriptive statistical test are as follows:

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Pemahaman atas Risiko Operasional	121	24.00	26.00	50.00	42.5455	0.50847	5.59315	31.283
Pemahaman atas Risiko Keamanan	121	28.00	22.00	50.00	38.0826	0.54780	6.02576	36.310
Keputusan Nasabah	121	23.00	27.00	50.00	39.8099	0.53259	5.85849	34.322
Valid N (listwise)	121							

Figure 4. 1 Descriptive Statistical Results

Based on the results of descriptive statistical analysis obtained through SPSS, it is known that this study involved as many as 121 respondents who were customers of Bank Neo Commerce (BNC). The first variable, namely Understanding of Operational Risks, has an average of 42.55 with a minimum score of 26 and a maximum of 50. This fairly high average value shows that most customers have a good understanding of operational risks in using digital bank services. Meanwhile, for the variable Understanding of Security Risks, the average obtained of 38.08 shows that the level of customer understanding of security risks is in the category of quite good, although slightly lower than the understanding of operational risks. This indicates that some customers are more aware of potential risks in the operational aspect than in the digital security aspect. These two variables show a moderate level of variation, as seen from the standard deviation values that are not too high.

Meanwhile, for the Behavioral Intention to Use variable, which in this study is interpreted as a customer's decision to use BNC's digital bank services, an average of 39.80 was obtained with a score range of 27 to 50. This fairly high average indicates that in general, the customer's intention to continue using Bank Neo Commerce's digital services is relatively strong, even though they already have an understanding of various risks that may occur. These descriptive results provide an initial picture that despite the risks, both operational and security, customers still show positive interest and intentions in using digital bank services. These findings will be further tested through multiple linear regression analysis to determine how much an understanding of these risks affects behavioral intention to use

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Validity Test

Correlations

		VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007
VAR00001	Pearson Correlation	1	.701**	.362**	.452**	.607**	.539**	.763**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
	N	121	121	121	121	121	121	121
VAR00002	Pearson Correlation	.701**	1	.385**	.522**	.603**	.562**	.781**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000
	N	121	121	121	121	121	121	121
VAR00003	Pearson Correlation	.362**	.385**	1	.693**	.443**	.511**	.724**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.000
	N	121	121	121	121	121	121	121
VAR00004	Pearson Correlation	.452**	.522**	.693**	1	.565**	.716**	.830**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000
	N	121	121	121	121	121	121	121
VAR00005	Pearson Correlation	.607**	.603**	.443**	.565**	1	.719**	.823**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000
	N	121	121	121	121	121	121	121
VAR00006	Pearson Correlation	.539**	.562**	.511**	.716**	.719**	1	.848**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000
	N	121	121	121	121	121	121	121
VAR00007	Pearson Correlation	.763**	.781**	.724**	.830**	.823**	.848**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	
	N	121	121	121	121	121	121	121

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 4. 2 Validity Test

Based on the results of the correlation analysis between the question items displayed in the output of the Correlations table, all items in this study showed a significant relationship with each other at a significance level of 0.01 (2-tailed). This can be seen from the significance value (Sig.) of 0.000 in each correlation pair. The Pearson Correlation value in the table shows the strength of the relationship between variables/items, which ranges from 0.362 to 0.848, which means that it is in the category of moderate to very strong correlation (Sugiyono, 2019). For example, the correlation between VAR00001 and VAR00002 has a value of 0.701, which indicates a strong relationship. The higher the correlation value, the more consistent the respondents' answers to the question items measured in a single variable construct.

The strong relationship between the items showed that the questions in the questionnaire were positively and significantly correlated with each other, which means that all of the items were consistent in measuring the variables used in this study. This supports the validity of the construct of the research instrument. In addition, the high correlation value of items related to Behavioral Intention to Use (such as in VAR00007 that has a correlation of 0.763 to 0.848 with other items) indicates that the customer's decision construct to use Bank Neo Commerce services is well illustrated through these items. Thus, the results of this correlation reinforce that the instruments used in the study are feasible to proceed to the stage of multiple linear regression analysis, to test the influence of customers' understanding of operational risks and security risks on behavioral intention to use in more depth.

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.882	6

Figure 4. 3 Reliability Test

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Based on the results of the reliability analysis obtained through the Reliability Statistics test using SPSS, Cronbach's Alpha value of 0.882 shows that this research instrument has a very good level of reliability. According to the criteria put forward by Sugiyono (2019), Cronbach's Alpha value above 0.80 is included in the category of very reliable, which means that the question items in the questionnaire have a high internal consistency. In other words, all questions asked to respondents are able to consistently measure the constructs or variables studied.

The N of Items value of 6 indicates that this reliability is calculated based on the six question items used in the study. This high reliability reinforces the belief that the data obtained from the questionnaire can be trusted to be used in advanced analysis processes, such as multiple linear regression. Thus, the questionnaire used to measure customers' understanding of operational risks, security risks, and behavioral intention to use, has been proven to meet reliability standards, so that the results of the research produced are reliable and have a good level of accuracy.

Normality Test

One-Sample Kolmogorov	
	Unstandardized Residual
N	121
Normal Parametersa,b	
Mean	0.0000000
Std. Deviation	3.77643886
Most Extreme Differences	
Absolute	0.044
Positive	0.031
Negative	-0.044
Test Statistic	0.044
Asymp. Sig. (2-tailed)	0.200[d]
a.Test distribution is Normal	
b.Calculated from data	
c.Lilliefors Significance Correction	
d.This is a lower bound of the true	

Figure 4. 4 Normality Test

Based on the results of the One-Sample Kolmogorov-Smirnov Test on unstandardized residuals, an Asymp value was obtained. Sig. (2-tailed) is 0.200. This significance value is greater than 0.05, so it can be concluded that the residual data in the regression model are normally distributed. This is also supported by a Test Statistical value of 0.044 with an absolute difference of 0.044, which shows that there is no significant deviation from the

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normal distribution. This test uses the Lilliefors Significance Correction approach which further strengthens the result that the assumption of normality is met.

Residual normality is one of the important requirements in multiple linear regression so that the results of the analysis are valid and reliable. With this assumption of normality met, the multiple linear regression model used to test the influence of customer understanding of operational risks and security risks on behavioral intention to use can be continued to the next stage of testing. This good residual normality indicates that the error distribution or prediction error of the regression model is symmetrically scattered around the value of zero, which is a hallmark of the normal distribution.

Hypothesis Test

T test (Partial test)

Coefficient

Type		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.638	2.850		1.277	.204
	X1	.490	.072	.467	6.814	.000
	X2	.403	.067	.414	6.040	.000

a. Dependent Variable: Y

Figure 4. 5 T test

Based on the results of the multiple linear regression test, the following regression equations were obtained: Y = 3.638 + 0.490X1 + 0.403X2, where Y is the behavioral intention to use, X1 is the customer's understanding of operational risks, and X2 is the customer's understanding of security risks. The value of constant (a) of 3.638 indicates that if the variables X1 and X2 are zero, then the behavioral intention to use is worth 3.638. Furthermore, an X1 coefficient of 0.490 means that every one-unit increase in the understanding of operational risk will increase the behavioral intention to use by 0.490, assuming the other variables are constant. Similarly, an X2 coefficient of 0.403 indicates that every one-unit increase in security risk understanding will increase behavioral intention to use by 0.403.

The results of the partial significance test showed that the two independent variables had a significant effect on the dependent variables, as evidenced by the significance values (Sig.) for X1 of 0.000 and X2 of 0.000, both of which were smaller than 0.05. This is reinforced by the value of t-count X1 of 6.814 and t-count of X2 of 6.040, which is much larger than the t table at a significance level of 5%. In addition, standard Beta values for X1 (0.467) and X2 (0.414) showed that X1's contribution (understanding of operational risk) was slightly greater in influencing behavioral intention than X2 (understanding of security risk). Thus, alternative hypotheses 1 and 2 are accepted, while null hypotheses are rejected.

F Test (Simultaneous Test)

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Type		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2407.521	2	1203.761	83.013	.000b
	Residual	1711.107	118	14.501		
	Total	4118.628	120			

a. Dependent Variable: Y
b. Predictors: (Constant), X2, X1

Figure 4. 6 Test F

Based on the results of the ANOVA (Analysis of Variance) test, an F value was obtained calculated of 83.013 with a significance (Sig.) of 0.000. This significance value much smaller than 0.05 indicates that the multiple linear regression model used in this study is simultaneously significant. This means that the variables of understanding operational risk (X1) and understanding security risk (X2) together have a significant influence on the behavioral intention to use in Bank Neo Commerce (BNC) users. Thus, the alternative hypothesis of three is acceptable and the hypothesis of zero three is rejected.

Coefficient of Determination

Model Summary										
					Change Statistic					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimat e	R Square Change	F Change	Df1	Df2	Sig. F Change	
1	.765	0.585	0.578	3.808	0.585	83.013	2	118	0.000	
a.Predictors: (constant),X2,X1										

Figure 4. 7 Coefficient of Determination

Based on the results of the Model Summary, the R Square value was obtained as 0.585. This shows that 58.5% of the variation in the dependent variable, namely behavioral intention to use, can be explained by independent variables, namely the customer's understanding of operational risks (X1) and security risks (X2). In other words, these two variables have a considerable contribution in influencing customers' decisions to use Bank Neo Commerce (BNC) services. Meanwhile, the remaining 41.5% was explained by factors other than the model not studied in this study.

Discussion

The Effect of Customer Understanding of Operational Risks on Behavioral Intention To Use (Study on Bank Neo Commerce (BNC)

Customers' understanding of operational risks has an important role in influencing their decision to use digital bank services such as Bank Neo Commerce (BNC). Operational risks include a wide range of possible losses caused by internal process failures, human resources, systems, or due to unforeseen external events. In the context of digital banks, system failures, application failures, and human error in transactions are real examples of operational risks that can affect customer perception. The better customers understand these risks, the more they can anticipate and adjust their behavior in using digital services.

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The results of the study show that there is a positive and significant influence between the understanding of operational risks and *the behavioral intention to use*. This is shown by the value of the regression coefficient of 0.490 with a significance level of 0.000 which is below the tolerance limit of 0.05. This means that the higher the level of customer understanding of operational risks, the greater their intention to continue using Bank Neo Commerce services. These findings show that customers' confidence in operational risk management makes them feel more secure in digital transactions.

Based on the results of the research that has been conducted, it is known that customer understanding of operational risks has a significant effect on the behavioral intention to use Bank Neo Commerce (BNC). The higher the customer's level of understanding of operational risks, the more likely they are to continue using BNC's services. This shows that understanding risk is not always an obstacle, but can increase customer confidence in using digital-based services. Understanding the risks actually helps customers have realistic expectations about possible obstacles, so that they are better prepared and steady in using the service.

These findings are in line with the Technology Acceptance Model (TAM) framework developed by Davis (1989). In TAM, behavioral intention is influenced by perceived usefulness and perceived ease of use. However, in subsequent developments, researchers integrated the perceived risk variable as one of the external factors that also affect a person's attitude and behavioral intention in using technology (Nysveen et al., 2005). In the context of this study, the customer's understanding of operational risks serves to strengthen the perception of usability. When customers understand the risks well, they can assess the benefits of the service more objectively, thus increasing the tendency to continue using digital banking services such as BNC.

This research is in line with research conducted by Darmawan (2022) which examines the influence of risk perception on the intention to use fintech services in the Greater Jakarta area. The results of Darmawan's research show that risk perception has a positive effect on behavioral intention. (Darmawan, 2022). This finding is in line with the condition of Bank Neo Commerce (BNC) customers, where customers who have a better understanding of operational risks actually have a higher tendency to use BNC services. This can be explained because the more they understand the risks, the more they feel able to anticipate potential losses, especially since BNC as a digital bank already offers various transaction protection features.

In addition, the results of this study are also in line with research conducted by Wicaksono and Hidayah (2025) regarding the effect of perceived risk on the intention to use digital banks among university students in Surakarta. In the study, it was found that perceived risk had a significant effect on behavioral intention positively (Wicaksono & Hidayah, 2025). This conformity occurs because both digital bank users in Surakarta and BNC customers operate in a digital, technology-based financial context, so that customers' understanding of risk is the main capital in increasing trust to continue using digital banking services. With good education, the known risks are not an obstacle, but a rational basis for consideration to continue using the service.

However, this study has results that are contrary to the research conducted by Hardiningtyas (2016). In Hardiningtyas' research on the internet banking of Bank Muamalat Jember Branch, it was found that risk perception did not have a significant effect on behavioral intention. This difference in results is very likely due to the development of the

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times and technology (Hadiningtyas, 2016). Hardiningtyas' research was conducted when the adoption of internet banking was not too familiar, while this research was conducted in the era of massive banking digitalization, where people are more familiar with application-based transactions. In addition, BNC as a digital bank has strengthened the security system and transparency of risk information to customers.

In the context of Bank Neo Commerce, transparency of operational procedures and improving security features in the application are effective strategies in building customer trust. Bank Neo Commerce, as one of the pioneers of digital banks, is considered quite responsive in developing its services based on customer needs and convenience. Therefore, the better the customer's understanding of operational risks, the more likely they are to choose to continue using BNC services.

In terms of risk management, this understanding is important not only to maintain user loyalty, but also to minimize the potential for greater operational losses due to user negligence. Application-based digital banking requires digitally savvy users to be able to minimize risks due to misuse. Therefore, education on operational risks is one of the important agendas in BNC's service development strategy.

The Effect of Customer Understanding of Security Risks on Behavioral Intention To Use (Study on Bank Neo Commerce (BNC)

In addition to operational risks, security risks are a very important aspect in determining customers' decisions to use digital bank services. The security risks in question include the potential for data leakage, identity theft, hacking, and account misuse by irresponsible parties. In the era of banking digitalization, security issues are one of the main concerns of the public in choosing to use digital bank applications, including Bank Neo Commerce (BNC).

Based on the results of the study, it is known that understanding security risks has a positive and significant influence on behavioral intention to use. This is evidenced by the value of the regression coefficient of 0.403 with a significance value of 0.000, which shows that the higher the customer's understanding of security risks, the higher their intention to use Bank Neo Commerce services. This shows that education about security risks can increase customer confidence in using digital banking services.

These results show that the higher the level of customer understanding regarding potential security risks, the greater their intention to continue using BNC services. Understanding security risks is no longer seen as a barrier, but rather as a rational consideration for customers in making decisions. This is because customers feel that these risks can be anticipated with various security features that have been provided by BNC, such as multi-layered authentication, data encryption systems, and real-time notifications of account activity.

These findings are in line with the results of research conducted by Wijanarko (2024), which shows that the perception of security has a positive effect on the behavioral intention to use the BRImo service (Wijanarko, 2024). The suitability of these results shows that there is a change in people's mindset regarding security risks in digital banking services. Today, customers not only see risk as something to be avoided, but also as part of a system that can be controlled with personal knowledge and readiness. Therefore, the higher the level of understanding of security risks, the greater the tendency of customers to use BNC services consistently.

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However, the results of this study are different from the research conducted by Fernandrez and Pujani (2019), which found that perceived risk has a significant negative effect on behavioral intention to use mobile banking among BCA customers (Fernandrez & Pujani, 2019). This difference is very likely influenced by the context of time and the level of digital literacy of the community. In 2019, the mobile banking user community still does not fully trust the security of digital services, while at this time, the development of cybersecurity technology and the increasing user experience of digital applications make the perception of security risks a factor that drives the intention to use, as happened to BNC customers.

The results of this study are in line with the concept of Perceived Risk Theory which was first introduced by Bauer (1960). In the framework of Perceived Risk Theory, it is explained that in the decision-making process, individuals always consider the existence of perceived risks, be it functional, physical, financial, psychological, or security risks (Putritama, 2021). Perceived risk is a person's subjective perception of potential losses that may arise from a decision, including in this case the use of digital banking services such as Bank Neo Commerce (BNC).

Security risks do not hinder interest in using digital banks as long as customers have a good understanding of how to overcome these risks. This emphasizes the importance of the role of security education carried out by banks in supporting the growth of digital-based banking services. From a practical perspective, this finding provides recommendations to Bank Neo Commerce to continuously socialize security features and training on the safe use of applications to its customers. This effort will further strengthen customer loyalty to BNC's services in the long term.

The Effect of Customer Understanding of Security Risks and Operational Risks on Behavioral Intention To Use (Study on Bank Neo Commerce (BNC)

Simultaneous testing of the effect of understanding operational risks and security risks on behavioral intention to use showed significant results. Based on the results of the F test, a value of 83.013 was obtained with a significance level of 0.000, which indicates that the two variables together have a significant effect on the customer's intention to use Bank Neo Commerce (BNC) services. This shows that the success of digital bank services does not depend only on one aspect of risk, but is the result of a combination of customers' understanding of various potential risks.

The magnitude of the determination coefficient value (R^2) of 0.585 strengthens the conclusion that 58.5% of the change in the intention of using Bank Neo Commerce's services can be explained by an understanding of operational risks and security risks simultaneously. The rest is influenced by other factors such as the ease of use of the application, service quality, product features, and other external factors. These findings underline that these two aspects of risk are the main foundation for customers in making decisions to use digital bank services.

For Bank Neo Commerce, these findings provide practical implications in developing a more integrated risk communication strategy. The education provided to customers must be comprehensive, including how the bank's systems manage operational risks as well as digital security protection measures. This is expected to increase customer confidence that BNC is a safe and reliable digital banking service.

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4. CONCLUSION

This study concludes that customers' understanding of risks plays an important role in shaping their intention to use digital banking services. A better understanding of both operational and security risks is associated with a stronger willingness to continue using Bank Neo Commerce (BNC) services. These findings indicate that risk awareness does not necessarily become a barrier to technology adoption; instead, it can support customer confidence in utilizing digital banking services.

The study also demonstrates that customers who possess adequate knowledge regarding potential risks and their mitigation tend to have a more positive perception of digital banking. This condition encourages greater acceptance and utilization of technology-based financial services. Therefore, improving customer literacy related to operational and security risks is essential for strengthening trust, enhancing user experience, and supporting the sustainable growth of digital banking services.

Overall, this research contributes to the understanding of factors influencing digital banking adoption by highlighting the importance of risk comprehension as a determinant of customers' behavioral intention to use digital banking services.

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