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## Study of the Effect of Habit, Perceived Enjoyment, and Perceived Risk on Adoption and Recommendation, Mediated by Behavioral Intention on Bank Negara Indonesia Mobile Banking Application

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### ABSTRACT

*This study aims to investigate, under behavioral intention, the link between habit, perceived enjoyment, and perceived risk on adoption and recommendation mediated. There were 255 respondents in total from a survey approach for data collection. This study gathers questions online using Google Forms from consumers using primary data. This study applies non-probability sampling as its method. Respondents for this survey have used mobile banking from Bank Negara Indonesia. The study used Smart PLS (Partial Least Square) software version 4.1.0 in a variant-based structural equation modeling method. The findings of this study reveal that habit has a significant and favorable effect on behavioral intention; perceived enjoyment has a substantial and favorable impact on behavioral intention; perceived risk has an essential and favorable effect on behavioral intention; behavioral intention has a significant and favorable impact on adoption; behavioral intention has a substantial and favorable effect on recommendation. The originality of this study is the submission of an empirical research model never done to determine the impact of the relationship between habit, perceived enjoyment, and perceived risk on adoption and recommendation mediated by behavioral intention on the Bank Negara Indonesia mobile banking application. This study is supposed to give Bank Negara Indonesia management insights on how to raise the mobile banking application user count.*

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## Introduction

The progress of human civilization is intricately linked to the technological advancements humanity possesses. In the present era, technology has become pervasive in nearly all aspects of human daily routines. The advancement of technology in the present era is no longer measured in decades or years but rather in months or even days. Technology is experiencing rapid growth in the business sector, particularly in the banking industry. According to data from the World Bank in 2023, there has been a gradual shift in banking transaction patterns, with cash-based transactions being replaced by non-cash-based transactions. This is commonly interpreted as a progression and obstacle for the human species. Additionally, the source highlights inclusive innovations in financial services to attract consumers in Indonesia. According to data from the World Bank, there have been substantial transformations in the banking industry in Indonesia, particularly in the technology that facilitates corporate operations.

Technology is essential and cultivated for the banking industry but necessitates extensive research and upkeep. Consequently, not all banks can develop technology that effectively supports their business operations. Using the bank's primary capital, four banks can build technology, specifically mobile banking applications that are user-friendly for retail customers. Based on data sourced from [kontan.co.id](http://kontan.co.id) BRI mobile is the mobile banking application with the highest number of users, followed by BCA Mobile, Livin by Mandiri, and BNI mobile banking. BCA mobile has the top position in transaction volume, with a total of Rp.24.82 Trillion in transactions during 2023. It is followed by Livin by Mandiri, BRImo, and BNI mobile banking.

According to the data provided in the 2023 Annual report of PT Bank Negara Indonesia Tbk, the user base experienced a growth rate of 26.1%, reaching a total of 13.63 million users. The annual report of Bank Negara Indonesia reveals consistent and positive growth over the years. Nevertheless, the actual situation needs to align with Bank Negara Indonesia's aspirations to be the leading contender in terms of mobile banking users. Despite its ongoing operations, Bank Negara Indonesia needs help as it consistently ranks below other players in terms of user count and transaction volume in the mobile banking application industry. Marketing strategies for banking products and services are similar across different companies. Banks' interest or return to consumers is uniform, as it is determined by government regulators such as Bank Indonesia and Otoritas Jasa Keuangan.

Nevertheless, the output outcomes observed in the field exhibit substantial disparities. Several factors can impact an individual's choice to become a bank customer, such as utilizing the bank's services and features to facilitate the handling and control of their finances. Technology in the banking business is paramount as it is a very efficient means of delivering services to consumers via banking companies. The advancement of technology in the banking sector is driven by consumer demand for convenient access to banking services that are now unlimited by time and location. This refers to customers being able to access their funds at the bank from anywhere and at any time. To increase the number of users of the Bank Negara Indonesia mobile banking application, examining the impact of habit, perceived enjoyment, and perceived risk on adoption and recommendation is crucial. This can be achieved by understanding how these factors influence behavioral intention.

Habit is formed by gradually repeating actions or activities over a specific duration. Rahmiati et al. (2022) found that in the realm of technology, namely mobile banking, a habit is formed when clients utilize mobile banking applications more frequently than previously. Prior studies have primarily focused on the impact of habit among older males, particularly those with extensive technological expertise, as Venkatesh et al. (2012) demonstrated. Rahmiati et al. (2022) state that gender, age, and experience level impact habits. Pratama et al. (2022) indicate that the regular activities of technology users in mobile banking applications, such as checking balances and conducting online transactions, will develop into habitual behaviors and appear effortless.

Perceived enjoyment refers to an individual's subjective experience of feeling at ease and having a positive attitude while utilizing a particular system. This experience is considered to be a pleasurable activity. According to Monica et al. (2022), a person's increased comfort will motivate them to spend more time using technology. Perceived enjoyment encompasses three primary aspects: fun, pleasure, and entertainment. These qualities have been shown to influence customer approval of the technology being utilized significantly.

Perceived risk refers to an individual's subjective evaluation of potentially unfavorable outcomes, as Wibhisono et al. (2022) described. Perceived risk can be forecasted based on interpersonal discussion activities, information-seeking proficiency, government trust, media trust, and efficacy belief. These elements are reliable markers of the perceived risk that an individual believes while encountering a specific situation. Subjective perceived danger is not erroneous, as it originates from an individual's cognition. The components above will contribute to forming a risk perception, which may vary among individuals.

Pratama et al. (2022), defines behavioral intention as an individual's appraisal of the subjective probability of engaging in a specific activity. The research was undertaken following a pandemic, during which mobile banking was optimized to the fullest extent feasible in response to government-imposed restrictions on population movement and activity. Indah et al. (2019) assert that behavioral intention is a significant determinant in using technology to enhance one's quality of life. A study conducted in 2021 by Anh Tho To and colleagues found that performance expectancy, effort expectancy, facility circumstances, and social impact were confirmed as primary factors influencing behavioral intention. This study was carried out in Vietnam to investigate the participants' usage of mobile wallets. The findings of this study indicate that the utilization of mobile wallets does not directly impact trust.

According to a study by Septiani et al. (2020) from Bengkulu University, adoption refers to the ongoing decision-making process about utilizing ideas, products, or services. The adoption of mobile banking technology refers to an individual's decision to either employ or abstain from using mobile banking services

provided by a banking institution. The inclination to utilize mobile banking will emerge when an individual possesses a favorable attitude and embraces the concept of mobile banking: mobile banking usage, trust in its use, and the likelihood of increased usage impact adoption activities.

In 2022, a study on tourism in Lake Toba, North Sumatra, revealed that recommendation actions in the tourism sector are influenced by tourist satisfaction, leading to enhanced word-of-mouth (WOM) retention. This research extends beyond technology and economics, focusing specifically on tourism. Asmara Wildani and colleagues (2022). Oliveira et al. (2016) argue that signs of direct recommendations and positive experiences significantly facilitate recommendations from one party to another for mobile banking. Establishing trust in a product and creating meaningful experiences for consumers significantly enhance the strength of a recommendation compared to previous instances. According to Amin et al. (2022), Word-of-Mouth (WOM) marketing is widely regarded as the most compelling and powerful means of transmitting data or disseminating information since the earliest days of human culture.

A habit can be defined as a behavior that is developed naturally via learning or adapting to technology usage. The primary determinant of consumer desire to use mobile banking applications is habit. Rahmiati et al. (2022) found that habit had a beneficial impact on behavioral intentions. Establishing a habit occurs organically through consistent repetition over an extended duration. These acts will gradually become ingrained in the consumer's routine. Ultimately, this habitual conduct will result in the attainment of consumer loyalty. Due to the fundamental nature of the banking industry relying on trust, customer loyalty is significant to banking firms. Mobile banking technology produced by these companies serves to foster and enhance this loyalty. Utilizing technology, namely mobile banking, can enhance client convenience. This behavior will influence the customer's inclination to use additional banking services, such as electronic funds or opening different accounts. Nevertheless, it is crucial to prioritize the quality of mobile banking services offered to clients. Adequate quality might result in customers staying in banking activities and diminishing their established habits.

According to a study by Anh Tho To et al. (2021), the level of enjoyment that users perceive when using mobile wallets in Vietnam notably impacts their desire to engage in related behaviors. Consumers are willing to engage in transactions with a payment system, provided the system is user-friendly. Monica et al. (2022) found that satisfaction significantly impacts users' behavior intention in digital applications. Enhanced consumer perception of fun will positively impact customer awareness and inclination to utilize mobile banking, hence influencing customer behavior and satisfaction.

Aldammagh et al. (2021) found that Risk Perception negatively impacts the inclination to utilize mobile banking. According to Wibhisono et al. (2022), there is a positive correlation between the use of masks and the feeling of risk related to the COVID-19 pandemic. Customers are aware of the potential hazards of depositing their funds into the bank. However, consumers should be informed of the bank's strategies to mitigate future occurrences. The Company must raise awareness of this through multiple accessible media channels for customers. A clear understanding of customers' perceived risk might enhance customers' desire to use mobile banking applications. Such a desire of consumers, typically ordinary individuals, falls into the lowest-risk knowledge category maintained by banks.

According to Septiani et al. (2020), a strong positive relationship exists between behavioral intention and adopting BNI mobile banking. The relationship is demonstrated by the fact that students with a higher attitude toward behavioral intention are likelier to use BNI mobile banking. Conversely, users with a lower attitude towards behavioral intention are likelier to decrease their BNI mobile banking usage. The adoption of mobile banking technology is influenced by behavioral intention, which is shaped by perceptions during the adoption process. Consumers are expected to fulfill many adoption requirements. Furthermore, exogenous aspects exist whereby external social influence might impact the adoption process.

Saprikis et al. (2022) found a substantial correlation between behavioral intention and recommendation. According to Asmara Wildani et al. (2022), in the tourism industry, the factors determining visitor satisfaction include their likelihood to suggest the destination to others and visit again. These factors contribute to enhanced word-of-mouth promotion and customer loyalty. The feeling of contentment felt by consumers will create a favorable perception, leading to the possibility of loyal consumers endorsing the product to others, either potential consumers or existing ones. Recommendations not only encompass favorable opinions but also entail solicitations from these devoted consumers to encourage other consumers to partake in events or utilize products and services that the recommender has endorsed or experienced. In the realm of technology, specifically mobile banking, the effectiveness of mobile banking significantly impacts the recommendations made. The performance, features, appearance, and overall offerings of the mobile banking

application are universally accepted by customers. These customer perceptions then shape their behavioral intentions, which in turn influence the recommendations made by loyal consumers to others.

The study's findings are anticipated to provide valuable understanding for Bank Negara Indonesia in formulating a marketing strategy that effectively incorporates the concepts of habit, perceived pleasure, perceived risk, and behavioral intentions of customers. This strategy aims to enhance the adoption and recommendation of the Bank Negara Indonesia mobile banking application.

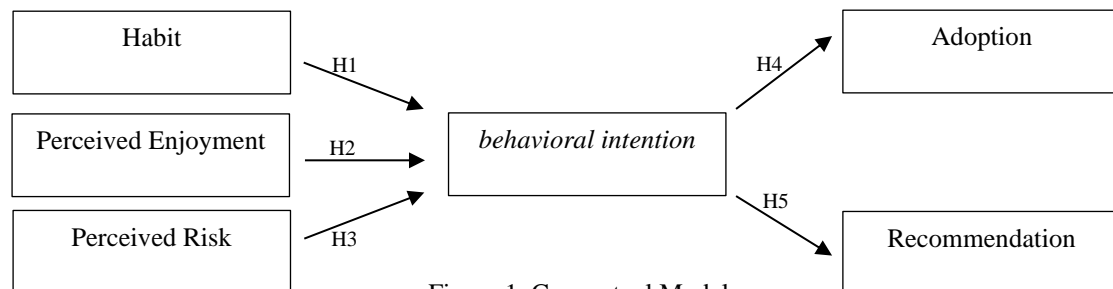


Figure 1. Conceptual Model

## Research Method

This study employs a quantitative methodology, as defined by Sugiyono (2019), which is a strategy for investigating samples or populations to collect data for quantitative analysis. This study aims to determine how the independent variable affects the dependent variable. This study employs a quantitative statistical approach with a cross-sectional study approach in which observational research analyses the independent and dependent variables, and all sample data is collected at the same time, implying that each subject is only observed once the subject variable is measured during the examination, according to Adiputra et al., (2021). According to Bougie et al. (2020), variables can equalize or differentiate the value of anything. They are divided into independent and dependent variables. The research objects in this study's independent variables are habit, perceived enjoyment, and perceived risk; the mediating variable is behavioral intention, and the dependent variables are adoption and recommendation. This study aimed to examine the effect of habit, perceived enjoyment, and perceived risk on behavioral intention, as well as their impact on adoption and recommendation among BNI mobile banking application users in Jabodetabek.

Data was collected through a survey by distributing questionnaires online to BNI mobile banking users in Jabodetabek using an online form from the Google form tool, which made it easier to contact the correct respondents. In this study, the questionnaire was separated into two sections. The first section includes questions regarding the respondent's general information and the characteristics of respondents who fulfilled the researcher's targeted sample criteria. The second section provides core questions for gathering study data. The questionnaire prioritizes questions about the main study, as specified by Hair et al. (2021) and Sarstedt et al. (2022). Operational factors are essential in developing questionnaires and determining instruments for measuring study variables. The questionnaire was based on a prior study and employed a 5-point Likert Scale. There are five points on the Likert Scale: 1 for severely disagree, 2 for disagree, 3 for neutral, 4 for agree and 5 for strongly agree.

Regarding the minimum sample size for research using the PLS-SEM statistical approach, it is recommended to employ the Inverse Square Root approach. If the power cannot be found, the minimum sample necessary is at least 160 respondents. Kock et al. (2018). As a result, 160 samples were required for this investigation, and researchers collected 255 of them.

The operationalization of variables in this study consists of 44 questions that include indicators of the respective variables:

1. Variable Habit Merhi et al. (2019) define a habit as understanding and responding to an unconscious input that produces pleasant effects. Venkatesh et al. (2012) define habit as how people behave instinctively due to previous experiences.
2. Variable Perceived Enjoyment described as perceived delight is a feeling of comfort that a person has and enjoys when utilizing a system, and he views his involvement in using the technology as a fun activity. According to Monica et al. (2022), the better the comfort level, the more time consumers spend with technology.

3. Variable Perceived Risk according to Wibhisono et al. (2022), efficacy and risk perception influence mask use during the COVID-19 pandemic. Aldammagh et al. (2021), perceptions of risk resulting from trust in mobile banking and trust in banks will enhance mobile banking usage.
4. Variable Adoption according to Septiani et al. (2020), intention to use positively influences mobile banking adoption, indicating that students who use mobile banking have greater levels of attitude in behavioral intentions.
5. Variable Recommendation according to Pasaribu et al. (2022), the outcome factors of visitor satisfaction include recommendation intentions and return visits, indicating the extent of word-of-mouth retention.
6. Variable Behavioral Intention described by Pratama et al. (2022) is a person's perception of the subjective possibility that someone will be related to a given activity. So it can be interpreted that behavioral intention creates a possibility for someone to do something. Performance Expectancy, Effort Expectancy, Facility Condition and Social Influence are some indicators in this variable.

After gathering data via a questionnaire, a model evaluation will be performed. This work will employ a variant-based structural equation modeling (SEM) approach with smart-PLS software version 4.1.0.0. According to Ghozali (2018), the advantage of PLS analysis is that it does not require many assumptions, making it a powerful analytical tool. The respondents' ages range from 17 to 56. The data includes measurement and structural model analysis. The measurement model test includes instrument validity and reliability. Validity is measured using convergent and discriminant validity. Convergent validity is a validity test that assesses the link between indicators and their derivatives as a construct, as evidenced by the loading factor values. A high loading factor number means each indicator consistently shows the same construct value. Ideally, the loading factor value should be more than 0.7, indicating a strong link between the indicator and the latent variable based on the outer loading, cross-loading, and average variable extract (AVE) values. The reliability instrument is evaluated using the reliability composition and Cronbach alpha. The structural model is tested using the R-squared ( $R^2$ ) value, path coefficient, and relationship significance while also accepting the hypothesis' rejection.

## Results and Discussion

Table 1 exhibits respondent profile features, and the data below was acquired via a survey method dispersed to 255 respondents of varied occupational backgrounds and ages. According to the table, of the 255 respondents who participated in this survey, 157 were female (61.60%), while 98 were male (38.40%). Users of the BNI mobile banking application come from various age groups. The Millennial or Generation Y age group, consisting of 183 people born between 1981 and 1996, accounts for 71.76% of the total respondents in this survey, followed by the Gen Z age group, consisting of 49 people born between 1997 and 2012, which accounts for 19.21% of the total respondents. Furthermore, 22 persons in the Gen X age group born between 1965 and 1980 account for 8.62% of all respondents. The Baby Boomers age group, born between 1946 and 1964, is represented by one person, accounting for 0.01% of the total number of respondents in this survey. Gen Alpha respondents were excluded from this study because they were under 17. Users of mobile banking applications must have a valid ID or be at least 17 years old.

Regarding work background, state-owned company employees placed first with 123 respondents (48.24%), followed by private sector employees with 85 people (33.33%). Housewives accounted for 17 people, or 6.67% of total respondents, followed by government employees (16 people, or 6.27%) and students (7 people, or 2.74%). The figures indicate that BNI mobile banking appeals to a wide range of people rather than just one. According to the loyalty of users who have used the BNI mobile banking application, most users have used it for more than a year, accounting for 219 users or 85.88% of all responses, showing that BNI mobile banking has a reasonable customer retention rate. The circumstances are a positive sign for the BNI mobile banking application and Bank Negara Indonesia because it demonstrates that the app adds value to its users.

Looking at customer behavior when using the BNI mobile banking application, the results show that users of the BNI mobile banking application are pretty varied, with 36.47% or 93 people using the BNI mobile banking application more than ten times a week, followed by 52 people or 20.39% of people using the BNI mobile banking application between 6-10 times. Customers who use the BNI mobile banking application 3-5 times per week account for 68 people, or 26.67%, of the total respondents, while 42 customers, or around 16.49%, utilize the app. Overall, the profile data of BNI mobile banking application responses demonstrates



that customers or users of the BNI mobile banking application come from all age groups, demonstrating that BNI has been able to recruit and retain a large user base.

Table 1. Respondent Characteristics

Variable	Categories	Frequency	Percentage
Gender	Men	98	38.40%
	Women	157	61.60%
Age Category	Gen Alpha	0	0%
	Gen Z	49	19.21%
	Millennials	183	71.76%
	Gen X	22	8.62%
	Baby Boomers	1	0.01%
Occupation	Student	7	2.75%
	Entrepreneur	7	2.75%
	Private Sector Employee	85	33.33%
	Government Employee	16	6.27%
	State-owned Company Employee	123	48.24%
Length of time as a user of the BNI mobile banking application	Housewife	17	6.67%
	Less than a month	3	1.18%
	1-3 months	13	5.10%
	4-6 months	6	2.35%
	7-12 months	14	5.49%
Frequency of use of BNI mobile banking application	More than a year	219	85.88%
	1-2 times	42	16.49%
	3-5 times	68	26.67%
	6-10 times	52	20.39%
	More than 10 times	93	36.47%

According to Hair et al. (2021), outside loading is prioritized in a study to determine the dependability of specific indicators. An indicator is deemed to have a considerable contribution if its value is more than 0.708, suggesting that the construct accounts for more than half of the indicator variation. Cronbach's Alpha and Composite Reliability are used to evaluate Construct Reliability (CR). Hair et al. (2021) state that Cronbach's Alpha values greater than 0.70 imply a trustworthy concept. A higher Composite Reliability rating suggests increased reliability. The Composite Reliability number must be more than 0.70 to be considered dependable. Table 2 demonstrates that the Cronbach's Alpha value for each variable used in the test corresponds to the expected results. Considering that each variable in this study has a Cronbach's Alpha value of more than 0.6, we can conclude that each variable is reliable enough to be employed in this research model.

Table 2. Reliability Indicators and Construct Reliability

Constructs	Items	Cronbach's Alpha
Habit (HAB)	Hab1	0.894
	Hab2	
	Hab 3	
	Hab 4	
	Hab 5	
Perceived Enjoyment (PE)	PE1	0.880
	PE2	
	PE3	
	PE4	
	PE5	
Perceived Risk (PR)	PR1	0.935
	PR2	
	PR3	

Table 2. Reliability Indicators and Construct Reliability

Constructs	Items	Cronbach's Alpha
Behavioral Intention (BI)	PR4	0.914
	PR5	
	PR6	
	PR7	
	PR8	
	PR9	
	PR10	
	BI1	
	BI2	
	BI3	
Adoption (A)	BI4	0.929
	BI5	
	A1	
	A2	
	A3	
Recommendation (R)	A4	0.944
	A5	
	R1	
	R2	
	R3	
	R4	
	R5	

According to Hair et al.'s research (2021), the effect size ( $f^2$ ) is utilized to assess the relative impact of predictor constructs on the variable constructs under consideration in this study. The value of  $f^2$  is 0.02, suggesting a modest impact; 0.15, indicating a moderate impact; and 0.35, indicating a significant impact.

Table. 3 Effect Size

Construct	$f^2$	Effect Size
Hab - > BI	0.134	Small Effect
PE - > BI	0.067	Small Effect
PR - > BI	0.252	Big Effect
BI - > A	1.392	Big Effect
BI - > R	1.302	Big Effect

Since the data processing procedures have been completed, the findings can be used to address the study's hypotheses. The hypothesis testing technique analyzes the T-statistic value and the P-value. The coefficient results reveal the same outcomes as the initial hypothesis, and the T-statistic is greater than the T-table value of 1.645, indicating that hypothesis testing in this study is accepted. The assertion was derived from the hypothesis test results of this study's application of the inner model.

Table 4. Hypothesis Test Result

Hypothesis	Path Direction	Coefficient	T-Statistic	P-Values	Result
H1	Hab - > BI	0.294	4.158	0.000	Hypothesis Accepted
H2	PE - > BI	0.239	2.861	0.004	Hypothesis Accepted
H3	PR - > BI	0.406	5.326	0.000	Hypothesis Accepted
H4	BI - > A	0.763	17.290	0.000	Hypothesis Accepted
H5	BI - > R	0.752	20.528	0.000	Hypothesis Accepted

Habit (Hab) has a positive impact on behavioral intention (BI), with a T-test value of 4.158, exceeding the critical value of the T-test (5%). The coefficient connection between habit (Hab) and behavioral intention (BI) is 0.294, indicating that a higher habit value will improve behavioral intention even more. Habits formed because of repeated actions boost motivation in terms of behavioral intention. The performance and quality of the mobile banking application will influence the existing habit. Because this habit takes time to acquire naturally and impacts existing behavioral intention, these two factors will interact. The study's findings are consistent with Pratama and Renny's 2022 research, which found that habit favors behavioral intention. In this study, age, gender, and experience moderately influence behavioral intention. In this study, characteristics such as age, gender, and experience moderately affected behavioral intention. Pratama and Renny conducted their research after the pandemic when the government continued to limit and regulate community movements.

According to Rahmiati et al.'s (2022) research, the habit has the most significant influence on behavioral intentions for mobile banking. This study found that mobile banking transactions are a habit that increases customers' behavioral intentions. Transactions carried out regularly and continuously, particularly practically every day, will strengthen the desire to use the mobile banking application, resulting in a better behavioral intention. Other research conducted by Amarullah et al. (2022) shows that habit has a favorable effect on behavioral intention, concluding that millennials are numerous, acclimated to utilizing technology, and understand how to use technology such as mobile banking apps. Karjaluoto et al. (2020) reported similar findings on the notion that habit has a favorable link with the behavioral intention of contactless payment systems. Nguyen et al. (2020) found that habit had a beneficial impact on behavioral intention to use digital banking in Vietnam. So, in this study, the outcomes of the hypothesis, which claims that habit positively influences behavioral intention, are consistent with prior research findings.

Perceived enjoyment significantly impacts behavioral intention in digital application users, specifically mobile banking, with a T-test value of 2.861, exceeding the critical value of 5% and an impact value of 0.239. Perceived delight increases consumers' willingness to utilize mobile banking, influencing their satisfaction. The findings of this study are also consistent with the findings of Ahn Tho To et al. (2021), who found that perceived enjoyment had a favorable effect on customer behavioral intention. According to the study, *perceived enjoyment* is defined as 'fun, pleasure, entertainment, or playfulness that comes from utilizing technology' and has a major impact on consumer technology acceptance. This study yielded the same results as (Monica et al., 2022) from Petra Christian University Surabaya, who found that perceived enjoyment favors behavioral intention toward digital payments.

According to Li. Y. (2016), perceived enjoyment includes three key dimensions: fun, enjoyment, and pleasure, similar to the indicators employed in this study. According to Rouibah et al. (2018), trust and perceived enjoyment are the most influential elements in determining a customer's behavioral intention to use an electronic payment system (EPS). In H3, the T-test value of 5.326 exceeds the critical value of 5%, with a coefficient value of 0.406, indicating that high perceived risk has a high effect on behavioral intention when using mobile banking applications. Customers may perceive risk when using mobile banking applications. However, this high rating indicates that clients know the hazards they will face and believe that PT Bank Negara Indonesia can mitigate such risks. The findings of this study are also consistent with prior research, which found that perceived risk in the COVID-19 pandemic is positively related to behavioral intention to use masks Widiyanto et al. (2022). Choi et al. (2018) found that media exposure, internet exposure, information-seeking skills, trust in government, and trust in the media can all predict perceived danger in South Korea. Still, according to the same study, these factors can predict perceived danger, affecting socioeconomic behavioral intention in MERS patients in South Korea. Another study by Hanafizadeh et al. (2014) from Iran found that the higher the risk users tolerate, the lesser their intention to use mobile banking applications.

Table 4 shows that behavioral intention has a strong influence on adoption. The T-test results show a value of 17.290, which is in line with H4 and has exceeded the critical value of the T-test value (: 5%). The coefficient value of 0.763 indicates that the higher the behavioral intention value, the more adoption increases. Adoption is becoming more popular due to the goal and motive behind it. Although various external factors influence adoption, one's viewpoint and motivation might drive behavioral intention. The findings of this study are consistent with prior research, which found that behavioral intention has a large favorable effect on adoption, according to Septiani et al. (2020). The comfort of use, behavioral intentions, and adoption intentions are all characteristics that influence the behavioral intention to adopt. Kim et al. (2005) found that behavioral intention has a strong beneficial impact on adoption and is impacted by prior experience with technology acceptance. H5 demonstrates that behavioral intention significantly impacts recommendations. The T-test results in Table 3 show a value of 20.528, exceeding the critical value of 5%. The coefficient value of 0.752 indicates that the higher the behavioral intention value, the higher the recommendation by customers to use



this mobile banking application. A customer recommends an application after having a positive experience with it. This experience will influence behavioral intention, allowing motivation and intention to develop spontaneously. It is consistent with previous research findings, including in the field of tourism.

According to Asmara Wildani et al. (2022), the variable results of tourist satisfaction include recommendation intentions and return visits, implying an increase in word-of-mouth retention. According to Sparikis et al. (2022) at the University of Western Macedonia in Greece, behavioral intention benefits mobile banking application suggestions. A favorable experience and the willingness to promote mobile banking applications have a beneficial impact on making recommendations to friends and family. In another study, Leong et al. (2013) found that customers with stronger behavioral intentions toward technological innovation are likely to become adopters.  $R^2$  calculates the entire effect size and variation accounted for in the endogenous constructs of the research model structure, which indicates predictive model precision. According to Kadir et al. (2019),  $R^2$  is a measurement analysis designed to determine how well the independent variable describes the associated variable.

The  $R^2$  values are  $R^2 = 0.75$  (strong),  $R^2 = 0.50$  (moderate), and  $R^2 = 0.25$  (weak). Table 5 presents the  $R^2$  results, which reveal that H4 and H5 have values of 0.580 and 0.564, respectively, based on various behavioral intentions. According to the findings, two distinct components account for 58% and 56% of behavioral intention variability, respectively.  $R^2$  in the link between  $R^2$  and H4 is 0.580, indicating that changes in the adoption of mobile banking applications are influenced by 58% behavioral intention, resulting in a Moderate Level  $R^2$ . Furthermore, the link between  $R^2$  and H5 yields a value of 0.564, which indicates that behavioral intention influences 0.56% of customer referrals to others to utilize mobile banking services. The  $R^2$  value is moderate, indicating that the model's independent variables can adequately explain the dependent variable.

Table 5.  $R^2$  and  $Q^2$

Constructs	$R^2$	$Q^2$
Behavioral Intention	0.687	0.501
Adoption	0.580	0.447
Recommendation	0.564	0.457

The  $Q^2$  statistics evaluate the PLS Path Model. The purpose of  $Q^2$  is to demonstrate that the conceptual model can estimate the hidden constructs. In the structural equation model (SEM), endogenous latent components must have a  $Q^2$  value greater than zero. The  $Q^2$  values for H1, H2, and H3 are 0.501, H4 is 0.447, and H5 is 0.457. All values surpass 0.000, indicating that the examined structural model is consistent and meaningful for prediction.

## Conclusion

Human civilization's progress is closely associated with technological advancement. Every day, business, which is closely related to human existence and is carried out daily, grows. Currently, the banking industry is highly beneficial to people regarding financial management. Mobile banking applications are one of the services banks offer their consumers. Mobile banking offers users convenience because numerous banking transactions may be completed in the palm of their hand. In Indonesia, banking organizations are classified as big banks with specified core capital that offer mobile banking application services to their consumers. Bank Negara Indonesia falls under book IV banks, with over Rp 30 trillion in core capital.

Regarding user base and sales volume, the BNI mobile banking app ranks fourth among Indonesian bank mobile banking apps. In this study, researchers attempted to understand the adoption (A) and recommendation (R) of mobile banking applications by consumers based on habit (Hab), perceived enjoyment (PE), and perceived risk (PR), as mediated by the customer's behavioral intention (BI). The findings of this study suggest that habit and perceived enjoyment have a minor impact on behavioral intention. Meanwhile, perceived risk has a significant impact on customer behavioral intentions. In this study, behavioral intention significantly impacts customer uptake and recommendations for the BNI mobile banking application. This study makes a significant contribution to PT Bank Negara Indonesia, Tbk.'s efforts to develop a company strategy that focuses on customer habit, perceived enjoyment, perceived risk, and behavioral intention in order to increase adoption and recommendation of its BNI mobile banking application and compete with other banks.

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