

THE INFLUENCE OF PERCEIVED USEFULNESS, PERCEIVED EASE OF USE, PERCEIVED TRUST, AND PERCEIVED CONVENIENCE ON THE INTENTION TO USE INTERNET BANKING

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Abstract

This study aims to analyze the influence of perceived usefulness, perceived ease of use, perceived trust, and perceived convenience on the interest in using internet banking among students of STIE Satria Purwokerto in Purwokerto. This research employed a quantitative approach using a survey method. Data were collected through questionnaires distributed to students who use internet banking services. The sampling technique used was purposive sampling, with a total of 56 student respondents. Data analysis was conducted using multiple linear regression. The results of the study indicate that perceived usefulness, perceived ease of use, perceived trust, and perceived convenience positively influence the interest in using internet banking. Among these variables, perceived ease of use has the most dominant influence on the interest in using internet banking. Simultaneously, all independent variables significantly affect the interest in using internet banking. This study implies that banks need to improve transaction security, system usability, and the convenience of digital services in order to increase students' interest in using internet banking.

Keywords: perceived usefulness, perceived ease of use, perceived trust, perceived convenience, interest in using, internet banking.

INTRODUCTION

Computer technology is an inevitable phenomenon of progress for humanity. It can be said that today, there is no organization unfamiliar with computers. We see even the smallest government organizations, such as sub-district or village offices, utilizing the internet to access information. The use of computer technology has simplified tasks that were once difficult and complex into easy and straightforward processes.

There are two types of computer technology commonly used by institutions: the first requires employee-computer interaction, and the second requires customer-computer interaction (Rose, 2006). The first type is used to enhance employee productivity and organizational efficiency. For instance, report preparation that previously took a long time can now be completed much faster using computers. The second type is often called self-service technology because customers, who originally received services through employees, can now be served directly by computers. This second type is currently widely used in the banking world through internet networks—global computer networks where users can perform specific transactions without being limited by time or space. This technology, known as internet banking or e-banking, includes activities such as checking account balances, transferring funds between accounts or banks, and paying bills like electricity, telephone, and credit cards. The advantage for customers is the significant amount of time and energy saved, as these services can be accessed anywhere and anytime, provided the customer has the supporting facilities.

Despite the numerous benefits enjoyed by customers, banks face problems regarding the adoption of new technology. When technology is introduced, some community members may resist, meaning they prefer to stick with the old technology or refuse to accept innovation (Robbins, 1996). First, some individuals worry that the presence of new technology will harm their interests, such as being displaced by it. This applies particularly to the first type of technology that reduces the need for human labor within an organization. Or, at the very least, new technology may cause a shift in one's position, forcing them into a new and unfamiliar role that requires an effort to adapt. Second, the introduction of the second type of technology creates psychological effects for customers. Customers may question whether the new technology is useful, easy to use, safe for transactions, and comfortable to use. The first question is crucial because individuals generally perform tasks that provide benefits or improve their performance. The second is important because people engage in activities they believe they can handle without difficulty. The third question regarding safety is vital because banking transactions involve money and confidentiality. Finally, the fourth question is significant because individuals need to feel comfortable while performing an activity.

Based on this background, the researcher is interested in conducting a study titled: **"The Influence of Perceived Usefulness, Perceived Ease of Use, Perceived Trust, and Perceived Comfort on the Interest in Using Internet Banking."**

Research Questions

Based on the background above, the researcher formulates the research problems as follows:

1. Does perceived usefulness influence the interest in using internet banking?
2. Does perceived ease of use influence the interest in using internet banking?
3. Does perceived trust influence the interest in using internet banking?
4. Does perceived comfort influence the interest in using internet banking?

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

- A. The presence of internet banking in Indonesia can be described as both a revolution and an innovation that leverages advancements in information technology and computing within banking services. Every introduction of an innovation triggers a reaction among the target community, namely the acceptance or rejection of that innovation. The Technology Acceptance Model (TAM) by Davis and Bagozzi (1989) is a fundamental behavioral theory that explains human behavior when facing the introduction of new technology. According to this theory, there are two considerations for whether humans accept or reject an innovation. First is the consideration of perceived usefulness. This means the decision to accept or reject an innovation is determined by the extent of the benefits obtained by the user from using that technology. Second is the consideration of perceived ease of use. If the technology is easy to use, individuals tend to accept it. Conversely, if the technology is difficult to use, people tend to reject it.

Based on the description above, the researcher has formulated the following hypotheses:

H1: Perceived usefulness influences the intention to use internet banking.

H2: Perceived ease of use influences the intention to use internet banking.

B. Trust

According to Lau and Lee in Tjini (2012), trust is defined as "an individual's willingness to rely on another party with certain risks." The results of a study by Suh and Han in 2002 (Tjini, 2012) indicate that trust significantly influences the interest in using

internet banking. Similarly, Al Somali et al. (2008) state that trust affects the interest in using internet banking.

Based on the description above, the researcher formulates the following hypothesis:

H3: Perceived trust influences the interest in using internet banking among students of STIE Satria Purwokerto in Purwokerto.

C. Convenience

According to Pikkarnaen in Davis (Tjini, 2012), convenience is defined as "the reliability where an individual's use of a technology in performing their activities is considered enjoyable for themselves." A study by Qureshi (2008) states that convenience has a positive influence on the interest in using online banking.

Based on the description above, the researcher formulates the following hypothesis:

H4: Perceived convenience influences the interest in using internet banking among students of STIE Satria Purwokerto in Purwokerto.

RESEARCH METHODS

- a. This is a survey-based study, where data were collected from the field through questionnaires completed by respondents.
- b. Research Location : This research was conducted at STIE Satria Purwokerto.
- c. Research Subjects : The subjects of this research are the students of STIE Satria Purwokerto.
- d. Research Objects : The objects of this research are perceived usefulness, perceived ease of use, perceived trust, perceived convenience, and the intention to use internet
- e. Types of Data : Primary data regarding the research objects and Secondary data
- f. Population The population in this study consists of 70 students from STIE Satria Purwokerto in Purwokerto. Using the Isaac and Michael table, the sample members were determined through convenience sampling.

ANALYSIS TOOLS

- a. Regression Analysis : This study utilizes multiple linear regression analysis as the analytical tool.
- b. Measurement Scale : Primary data were obtained using a 5-point Likert scale, consisting of five levels of preference: strongly agree, agree, neutral, disagree, and strongly disagree.

RESULTS AND DISCUSSION

RESULTS

A. The Development of Banking Technology in Indonesia

Commercial banks entered Indonesia (then the Dutch East Indies) in the 1880s when the colonial government began implementing the "Open Door Policy" (Politiek Pintu Terbuka). Since then, the plantation industry grew, requiring banking support. During that period, banks were opened solely to serve the plantation sector in both domestic and international trade.

Since the independence era, the mission of banking has changed, specifically to improve the prosperity of the people. This is stated in Law Number 7 of 1992 concerning Banking, Chapter I, Article 1, Point 1, which states that "a bank is a business entity that collects funds from the public in the form of deposits and distributes them to the public in order to improve the standard of living of the masses." Furthermore, Point 3 mentions that

commercial banks are banks that can provide services in payment transactions. From the explanation of these two definitions, it can be concluded that there is a diametrical difference between colonial-era banks and independence-era banks. Colonial banks played a role in supporting the colonial economy, whereas independence-era banks are dedicated to creating public welfare.

As modern organizations, banks utilize technology to enhance service, efficiency, and work productivity. Until the 1960s, banks used simple technology such as manual typewriters, adding machines, and at most, landline telephones, which were the sophisticated communication tools of that time. Telephones played a crucial role as branch offices were opened to attract as many customers as possible. This was necessary because all customer activities could only be performed at the specific bank office where the customer was registered.

In the next stage of development, the 1970s era, computer technology was introduced, possessing a great capacity to handle storage, data processing, and generating information faster, more timely, and at a lower cost. The capability of computers became increasingly evident with the development of Local Area Networks (LAN), which connected computers within a single network in one location. During this stage of development, the role of branch offices remained important. In the 1980s, broader online networks began to be introduced, allowing branch offices of the same bank to communicate with each other, and customer services could be conducted from any branch. At the end of the 1980s, Automated Teller Machine (ATM) services emerged. This technology enabled certain transactions, such as cash withdrawals and money transfers, to be performed at ATMs, meaning customers no longer needed to visit a bank office for those purposes, thereby reducing queues at bank offices. Entering the year 2000, expanded online services were introduced through internet banking, mobile banking, and phone banking.

The basic idea of internet banking is how customers can perform financial transactions that are more flexible and broader in scope than those of an ATM. The following is an explanation of each type of electronic banking service along with their functions:

- a. **Internet banking:** is a banking transaction service provided through a computer connected to the internet network.
- b. **Mobile banking:** is a banking service that can be accessed directly through a mobile phone using SMS.
- c. **Phone banking:** is a service provided for the convenience of obtaining banking information and performing non-cash financial transactions via telephone.
- d. **SMS banking:** is a banking information service that can be accessed directly through a mobile phone using the SMS medium.

The electronic banking products accessible include fund transfers, balance inquiries, account statements, exchange rate information, payments for electricity, telephone, and water bills, as well as purchases of tickets, mobile credit, and others.

According to Rose (2006), when examined from the perspective of human-technology relations, there are two types of technology used by banking:

- a. Technology that influences the employee-machine relationship.

This technology is used to replace or reduce the role of humans in tasks by replacing employees with machines. This technology is employed to enhance employee efficiency and productivity. By utilizing this technology, employees are able to work more productively and efficiently. The purpose of using this technology is to save costs and increase productivity.

- b. Technology that influences the customer-employee relationship.

In this technology, the relationship between customers and employees is reduced or eliminated, becoming a customer-machine relationship. The main objective of this technology is to improve the quality and variety of services that customers can enjoy. This type of technology is now widely used by major banks.

B. Overview of Respondents

As mentioned in the previous section, this study employed a survey method for data collection by distributing questionnaires to students at STIE SATRIA Purwokerto. Data collection was conducted over a period of two weeks, and the results of the data collection process are as follows. The sample size was set at 58, determined using the Isaac and Michael table (Sugiyono, 1999); from a population of 70 with a 5% margin of error, a sample of 58 was obtained.

Table 1. Data Collection

Sample Size	58
Number of non-returned questionnaires	2
Questionnaires used	56
Male Respondents	25
Female Respondents	31

C. Classical Assumption Test

Since the analysis tool used is multiple regression, it is necessary to first conduct classical assumption tests to produce the **Best Linear Unbiased Estimator (BLUE)**. The classical assumption tests include normality, multicollinearity, heteroscedasticity, linearity, and autocorrelation tests.

4.1 Normality Test

This test is intended to determine whether the residuals are normally distributed. The curve takes a normal shape if there are no extreme data points (outliers). Detection is carried out using standardized regression residual histograms and statistical tests.

Table 2: Kolmogorov-Smirnov Test
One-Sample Kolmogorov-Smirnov Test

		Standardized Residual
N		56
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.96295001
Most Extreme Differences	Absolute	.128
	Positive	.061
	Negative	-.128
Kolmogorov-Smirnov Z		.956
Asymp. Sig. (2-tailed)		.320

a. Test distribution is Normal.

b. Calculated from data.

The Asymp. Sig. value $> \alpha$ ($0.320 > 0.05$), which means it is not significant; therefore, the data is not normally distributed.

This test aims to determine whether there is a high or perfect correlation between independent variables in the regression model. From the coefficients table, it is known that all independent variables have a VIF < 10 ; thus, multicollinearity does not occur.

Table 3: Multikolinearitas Test

		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
Model		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.885	1.779		1.621	.111		
	manfaat (X1)	2.348E-02	.125	.023	.187	.852	.807	1.240
	mudah (X2)	.318	.117	.350	2.720	.009	.719	1.391
	percaya (X3)	.133	.115	.159	1.156	.253	.626	1.597
	nyaman (X4)	.245	.140	.246	1.744	.087	.598	1.673

a. Dependent Variable: ABRESID

4.2 Uji Heteroskedasitas

The heteroscedasticity test is intended to detect symptoms of heteroscedasticity using the Glejser test: $|e| = b_1 + b_2X_2 + V$. Heteroscedasticity symptoms are indicated by the regression coefficients of each independent variable against the absolute residual value (e). If the probability value $> \alpha 0.05$, it can be concluded that the model does not contain elements of heteroscedasticity. From the coefficients table, it is known that the t-statistic values of all independent variables ($\text{sig} > 0.05$) indicate that heteroscedasticity is not present

Table 4: Heteroskedasitas Test

		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
Model		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.658	.988		1.678	.100		
	manfaat (X1)	-9.59E-02	.070	-.206	-1.378	.174	.807	1.240
	mudah (X2)	9.140E-02	.065	.223	1.408	.165	.719	1.391
	percaya (X3)	3.398E-02	.064	.090	.532	.597	.626	1.597
	nyaman (X4)	-7.86E-02	.078	-.175	-1.007	.319	.598	1.673

b. Dependent Variable: ABRESID

4.3 Otokorelasi Test

This test aims to examine whether a linear regression model has a correlation between the disturbance error in period t and the error in period t-1. If a correlation exists, it is called an autocorrelation problem. Since the data being analyzed is cross-sectional, autocorrelation is relatively rare.

The autocorrelation test was conducted using the Durbin-Watson (DW) test. The Model Summary table shows a DW value of 2.361, which, compared to the DL value of 2.580, indicates that the model does not fall within the autocorrelation region.

Table 5: Uji Durbin Watson untuk otokorelasi

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbi-Watson
1	.627 ^a	.393	.346	1.261	2.361

a. Predictors: (Constant), nyaman (X4), manfaat (X1), mudah (X2), percaya (X3)

b. Dependent Variable: minat (Y)

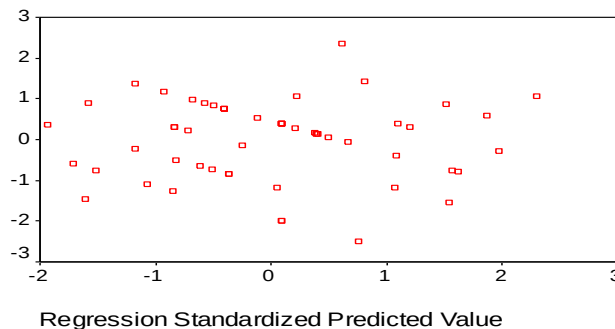
4.4 Uji Linearitas

The linearity test can be performed by observing the scatter plot distribution of standardized residual values against standardized predictions. If the scatter plot distribution does not form a specific pattern, it can be interpreted that the linearity requirement is met. From the scatter plot printout, it can be seen that the data distribution does not form any specific pattern.

Figure 1: Grafik Scatterplot

Scatterplot

Dependent Variable: minat (Y)



The statistical linearity test can be performed using the MacKinnon-White-Davidson (MWD) test..

Table 6: Uji Linearitas dengan Z1

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.033	.005		-6.856	.000
manfaat (X1)	.003	.000	.640	8.126	.000
mudah (X2)	.003	.000	.723	8.666	.000
percaya (X3)	-.002	.000	-.561	-6.277	.000
nyaman (X4)	-.002	.000	-.377	-4.124	.000

a. Dependent Variable: Z1

A model is said to be linear if the t-test for variable Z1 < t-table and the sig. value of Z1 > α . However, the sig. value of Z1 (0.000) < 0.05, which indicates it is not linear.

Table 7: Linearitas Test with Z2

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.301	.050		-6.088	.000
manfaat (X1)	.031	.003	.668	8.904	.000
mudah (X2)	.028	.003	.674	8.487	.000
percaya (X3)	-.023	.003	-.600	-7.049	.000
nyaman (X4)	-.020	.004	-.441	-5.063	.000

a. Dependent Variable: Z2

A model is considered linear if the t-test for variable Z2 > t-table and the sig. value of Z2 < α . The sig. value of Z2 (0.000) < 0.05, which indicates it is linear)

Criteria :

if Z1 and Z2 linear : The model uses a linear equation.

if Z1 and Z2 Non linear : The model uses a non-linear equation.

If one of the variables is non-linear : The model may use either linear or non-linear equations

Since one of the variables is linear, the model may use a linear equation.

D. Regression Analysis Results

Multiple linear regression analysis was performed using SPSS version 17. The accuracy of the sample regression function—with a sample size of $n=56$ from $N=70$ —in estimating actual values can be measured by the Goodness of Fit, which is statistically measured by the coefficient of determination, the F-statistic, and the t-statistic or significance probability value. Statistical calculations are considered significant if the test value falls within the critical region or the significance probability value is less than $\alpha = 0.05$. Conversely, it is considered non-significant if the test value falls within the region where H_0 cannot be rejected, or the significance probability value is greater than 0.05..

1. Coefficient of Determination

The 'Model Summary' table below shows an R-squared value of 0.393, which means that 39.30% of the variation in the interest in using electronic banking (Y) is explained by the four independent variables: Benefits (X1), Ease of Use (X2), Trust (X3), and Convenience (X4), while the remaining 60.70% is determined by other variables outside the model. A small R-squared coefficient implies that the ability of the four independent variables to explain the variation in the dependent variable is very limited. In other words, the predictive power of this model is relatively poor. Table 8 : Uji Analisis Regresi.

Table 8
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	.627 ^a	.393	.346	1.261	.393	8.268	4	51	.000

a. Predictors: (Constant), nyaman (X4), manfaat (X1), mudah (X2), percaya (X3)

2. Simultaneous Significance Test

The 'ANOVA' table shows an F-value of 8.268 with a probability of 0.000. Since the probability value is less than 0.05, it can be concluded that the regression coefficients for benefits, ease of use, trust, and convenience are not equal to zero, meaning that all four simultaneously influence interest. This also means that the R-squared value is not equal to zero, or is significant

Table 9 : Significance Test using ANOVA
ANOVA^b

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	52.601	4	13.150	8.268	.000 ^a
	Residual	81.113	51	1.590		
	Total	113.714	55			

a. Predictors: (Constant), nyaman (X4), manfaat (X1), mudah (X2), percaya (X3)

b. Dependent Variable: minat (Y)

3. Individual Parameter Significance Test

The results of the individual parameter test can be seen in the coefficients table. Of the four independent variables, it appears that only one, the Ease of Use variable, is significant; this is evident from its significance probability of 0.009, which is less than 0.05. Meanwhile, the other three independent variables—Benefits, Trust, and Convenience—have significance probabilities of 0.852, 0.253, and 0.087, respectively, each of which is greater than 0.05 and therefore not significant. Thus, the second hypothesis is accepted, while the first, third, and fourth hypotheses are rejected.

DISCUSSION

1. The results of the coefficient of determination analysis show that although it is significant, the value is too small, as this model is only able to explain 39.30% of the variation in interest. In other words, variables not included in the model play a larger role in explaining the value of Y. Therefore, it is suggested that future research include other theoretically justifiable variables to improve the model's predictive power.
2. Although it is simultaneously significant, individually only one variable is significant. This means that the model is only suitable for the sample data, whereas the same does not apply at the population level. Ease of Use plays a significant role likely because the respondents are mostly relatively young people who are very accustomed to operating mobile phones. This finding is consistent with research by Al-Somali (2006) conducted in Saudi Arabia; conversely, it is inconsistent with the research results of Tjini (2006) conducted at Unibraw, which rejected the hypothesis that ease of use influences the interest in using internet banking.
3. The results of the first hypothesis test show that the individual probability value for the Benefit variable is not significant. This is consistent with Tjini's (2006) research, which does not support the hypothesis that perceived usefulness influences the interest in using internet banking. It is suspected that this phenomenon occurs because students are merely following a trend without considering its actual benefits.
4. The third hypothesis test results show that the influence of trust on the interest in using electronic banking is not significant; this conclusion is inconsistent with many previous studies, such as Al-Somali (2006), Tjini (2006), and Artha in Tjini (2006). A possible cause is that the respondents have not yet or do not consider the weaknesses of the electronic banking system discussed previously.
5. The results of the fourth hypothesis test show that convenience does not have a significant effect on the interest in using electronic banking. This is due to the small variance in the convenience data values, rendering it insignificant; however, as long as there is a positive influence in the regression equation, the convenience variable still warrants attention.

CONCLUSION

The research findings indicate that perceived benefits, perceived ease of use, perceived trust, and perceived convenience have a positive influence on the interest in using internet banking. The perceived ease of use variable has the most dominant influence on the interest in using internet banking. Simultaneously, all independent variables have a significant effect on the interest in using internet banking.

This research implies that banking institutions need to improve transaction security, ease of system use, and the convenience of digital services to increase student interest in using internet banking.

Equation

The resulting Multiple Linear Regression equation is as follows:

$$(Y = 2.8845 + 0.0235X_1 + 0.3178X_2 + 0.1330X_3 + 0.2450X_4)$$

The following are the details of the constant and coefficients for each variable:

Table 10: Regression Test Results

Komponen	Nama Variabel	Nilai Koefisien
Konstanta ((b ₀))	-	2,8845
Koefisien (X ₁) ((b ₁))	Persepsi Manfaat (Perceived Usefulness)	0,0235
Koefisien (X ₂) ((b ₂))	Persepsi Kemudahan (Perceived Ease of Use)	0,3178
Koefisien (X ₃) ((b ₃))	Persepsi Kepercayaan (Perceived Trust)	0,1330
Koefisien (X ₄) ((b ₄))	Persepsi Kenyamanan (Perceived Convenience)	0,2450

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