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DETERMINING FACTORS OF CARDLESS CASH WITHDRAWALS USAGE AT ISLAMIC BANKS IN ACEH

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ABSTRACT

Digital transformation in Islamic banking has driven the development of cardless cash withdrawal services as an effort to enhance transaction convenience and flexibility for customers. However, the decision to use this service is influenced by various perceptual factors. This study aims to analyze the effects of efficiency, convenience, risk, and trust on customers' decisions to use cardless cash withdrawal services at Bank Syariah Indonesia and Bank Aceh Syariah in Aceh. This research employs a quantitative approach using a survey method involving 100 respondents who are active mobile banking users. The data were analyzed using multiple linear regression with the assistance of SPSS software. The results indicate that, partially, convenience and trust have a positive and significant effect on the decision to use cardless cash withdrawal services, while efficiency and risk do not have a significant effect. Simultaneously, all variables have a significant effect on usage decisions. These findings suggest that customers' decisions are primarily influenced by service convenience and the level of trust in the security and reliability of digital Islamic banking services.

Keywords: Efficiency, Convenience, Risk, Trust, Cardless Cash Withdrawal, Islamic Banking.

ABSTRAK

Transformasi digital dalam perbankan syariah mendorong pengembangan layanan tarik tunai tanpa kartu sebagai upaya meningkatkan kemudahan dan fleksibilitas transaksi nasabah. Namun, keputusan penggunaan layanan ini dipengaruhi oleh berbagai faktor persepsi. Penelitian ini bertujuan untuk menganalisis pengaruh efisiensi, kenyamanan, risiko, dan kepercayaan terhadap keputusan penggunaan layanan tarik tunai tanpa kartu pada nasabah Bank Syariah Indonesia dan Bank Aceh Syariah di Aceh. Penelitian ini menggunakan pendekatan kuantitatif dengan metode survei terhadap 100 responden pengguna aktif mobile banking. Data dianalisis menggunakan regresi linear berganda dengan bantuan SPSS. Hasil penelitian menunjukkan bahwa secara parsial kenyamanan dan kepercayaan berpengaruh positif dan signifikan terhadap keputusan penggunaan layanan tarik tunai tanpa kartu, sedangkan efisiensi dan risiko tidak berpengaruh signifikan. Secara simultan, seluruh variabel berpengaruh signifikan terhadap keputusan penggunaan. Temuan ini menunjukkan bahwa keputusan nasabah lebih dipengaruhi oleh kemudahan layanan dan tingkat kepercayaan terhadap keamanan serta keandalan layanan perbankan syariah digital.

Kata Kunci: Efisiensi, Kenyamanan, Risiko, Kepercayaan, Tarik Tunai Tanpa Kartu, Perbankan Syariah.

INTRODUCTION

The adoption of digital banking services within Islamic economics is evaluated not only in terms of efficiency and convenience but also in relation to their capacity to safeguard wealth *(ḥifẓ al-māl)* and uphold trust *(amānah)* between financial institutions and their customers. Within this normative framework, technological innovation in Islamic banking must adhere to *Sharīʿah* principles that emphasize transparency, accountability, and the protection of financial assets. One of the emerging digital innovations in Islamic banking is cardless cash withdrawal, which enables customers to withdraw cash through mobile banking applications without the use of physical debit cards, thereby enhancing transaction efficiency and convenience. However, the implementation of such services also raises important considerations regarding data protection, system reliability, and information transparency, which are essential to maintaining compliance with Sharīʿah-based ethical standards. Consequently, customers' adoption of Islamic digital banking services is strongly influenced by perceptual and behavioral factors, particularly trust and perceived risk. In the context of Aceh, cardless cash withdrawal services have been introduced by Bank Syariah Indonesia (BSI) and Bank Aceh Syariah (BAS). Nevertheless, the level of adoption among customers remains shaped by several perceptions, including efficiency, convenience, perceived risk, and institutional trust.

The significance of this study arises from the increasing reliance on digital banking services within Islamic financial institutions, where technological innovation must be aligned not only with functional performance but also with customers' psychological perceptions and compliance with Sharīʿah principles. In this context, efficiency and convenience represent key determinants influencing whether cardless cash withdrawal services provide practical advantages over conventional banking methods, thereby affecting customers' willingness to adopt the service. At the same time, perceived risk reflects customers' concerns regarding security, system reliability, and operational uncertainties, which may discourage the adoption of digital financial services. Trust therefore plays a crucial role in mitigating the negative effects of perceived risk and strengthening customer confidence. This factor is particularly significant in Islamic banking, where ethical integrity and religious compliance constitute essential elements of institutional credibility. Despite the rapid expansion of digital banking services, empirical evidence examining the combined influence of efficiency, convenience, perceived risk, and trust on the adoption of cardless cash withdrawal services in Aceh remains limited. This study therefore seeks to address this gap by providing empirical insights into the determinants shaping customers' adoption of Islamic digital banking services in the region.

By addressing this gap, the study provides valuable insights for Islamic banks to enhance service design, strengthen customer trust, and promote the effective and sustainable implementation of digital financial services. Despite the growing adoption of digital banking, empirical studies examining the influence of efficiency, convenience, risk, and trust on cardless cash withdrawal usage within the context of Islamic banking in Aceh remain limited. This study addresses this research gap by investigating how these factors shape customers' decisions to use cardless cash withdrawal services in Islamic banks in Aceh. This study contributes practically, theoretically, and academically. Practically, the findings provide empirical insights for Islamic banks in Aceh, particularly Bank Syariah Indonesia and Bank Aceh Syariah, to improve cardless cash withdrawal services through enhanced mobile banking interfaces, strengthened security systems, and optimized ATM networks. From a theoretical perspective, this study extends the Technology Acceptance Model/TAM by incorporating risk and trust as key variables influencing digital banking adoption in Islamic contexts, emphasizing the central role of trust in mitigating perceived risk and supporting technology acceptance based on Islamic values and local culture. In the era of digital banking transformation, BSI and BAS have implemented cardless cash withdrawal services to improve transaction efficiency and customer convenience. BSI recorded a 31 percent increase in customers using the BSI Mobile application for digital transactions as of June 2024, from 655,162 users in June 2023 to 861,733 users.[1]

Bank Aceh Syariah (BAS) has introduced the Actioncash feature within its Action Mobile Banking application, enabling customers to perform cardless cash withdrawals and deposits through ATMs and Cash Recycling Machines (CRMs) located across Aceh, Medan, and Jakarta. As of February 2025, approximately 500,000 customers have adopted the Action Mobile application, indicating a substantial level of acceptance of digital banking services. Within this system, cash withdrawals are limited to IDR 5 million per transaction, while cash deposits can reach up to IDR 35 million per customer per day. This study employs a quantitative research approach using a questionnaire survey administered to respondents who are active users of Islamic mobile banking services in Aceh Province. The collected data were analyzed using multiple linear regression in order to examine the relationships between the proposed variables within the theoretical framework of the study.

[1] Aceh, *"Pengguna BSI Mobile Di Aceh Tumbuh 31 Persen."*

METHOD

This study employs a quantitative approach using a survey method through the distribution of questionnaires to customers of Bank Syariah Indonesia (BSI) and Bank Aceh Syariah in Aceh. The research population consists of all active mobile banking users, totaling more than 1.36 million customers. The sample size was determined using Slovin's formula with a margin of error of 10% and a significance level of 0.05 (α = 5%), resulting in a minimum sample of 100 respondents. The sampling technique used was purposive sampling, with criteria that respondents must be customers domiciled in Aceh, actively using mobile banking services, and having previously conducted cardless cash withdrawal transactions. Based on this framework, respondent selection was carried out using a simple random sampling method through the SPSS application by generating random numbers, ensuring that respondents were selected randomly and that the process could be replicated.[2] This approach was chosen to consider efficiency in terms of time and resources while maintaining the validity and reliability of the research results.

Slovin Formula

Given:

N= 1.361.733

e=0,1

Slovin Formula

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

$$n = \frac{1.361.733}{1+1.361.733.(0,1)^2} = \frac{1.361.733}{1+1.361.733\ (0,01)}$$

$$n = \frac{1.361.733}{1+13.617,33}\ \frac{1.361.733}{13.618,33} = \approx 100$$

Thus, the minimum sample size required in this study is 100 respondents. Data were collected through the distribution of online questionnaires using the Google Forms platform. The questionnaire was designed to measure respondents' perceptions of efficiency, convenience, risk, and trust in relation to their decisions to use cardless cash withdrawal services. The research instrument consisted of a questionnaire using a five-point Likert scale, ranging from "strongly disagree" to "strongly agree." The questionnaire was tested for validity and reliability to ensure measurement accuracy. Data analysis was conducted using multiple linear regression to examine the effects of the independent variables (efficiency, convenience, risk, and trust) on the

[2] Sekaran, U., & Bougie, *"Research Methods for Business: A Skill-Building Approach (7th Ed.)."*

dependent variable (decision to use the service). Data processing was performed with the assistance of SPSS statistical software. The data used in this study consisted of primary and secondary data. Primary data were obtained through questionnaires distributed directly to respondents in accordance with the research criteria. Secondary data were obtained from literature sources, books, scientific journals, annual reports of Islamic banks, and other sources relevant to the research topic.

The questionnaire instrument was developed based on the indicators of the research variables using a five-point Likert scale, ranging from a score of 1 for "strongly disagree" to a score of 5 for "strongly agree".[3] This scale was selected because it is capable of measuring respondents' attitudes, opinions, and perceptions toward the social phenomena under investigation. The operational definitions of the research variables are described as follows. Efficiency (X_1) refers to customers' perceptions of the ease, speed, and effectiveness of cardless cash withdrawal services. Convenience (X_2) refers to feelings of comfort, ease of access, and flexibility in terms of time and location when using the service. Risk (X_3) refers to the perceived possibility of losses, transaction errors, or security constraints experienced by customers. Trust (X_4) refers to customers' confidence in the security, reliability, and integrity of Islamic banking services. Meanwhile, the usage decision (Y) refers to customers' tendency to continue using cardless cash withdrawal services as part of their banking activities. Indicators for each variable were developed based on previous literature.[4]

The stages of data analysis were conducted with the assistance of the latest version of SPSS software. Validity testing was performed to ensure that each questionnaire item accurately measured the intended construct, using item–total correlation and exploratory factor analysis as recommended in recent methodological studies.[5] Reliability testing was carried out using Cronbach's Alpha to assess the internal consistency of the measurement instrument, with a minimum acceptable threshold of 0.70, which remains widely endorsed in contemporary social science research.[6] Descriptive statistical analysis was employed to summarize respondent characteristics and the distribution of responses. Subsequently, classical assumption tests were conducted to ensure the robustness of the regression model. These tests included residual normality testing using the Shapiro–Wilk test and Q–Q plots, multicollinearity testing using the Variance Inflation Factor (VIF), homoscedasticity testing through residual scatter plots, and residual

[3] Sugiyono, *"Metode Penelitian Kuantitatif, Kualitatif, Dan R&D."*

[4] Suhartanto, D., Ali, M. H., Tan, K. H., & Sjahroeddin, *"The Effect Of Perceived Risk On Customer Trust And Loyalty In Mobile Banking: The Moderating Role Of Religiosity."*

[5] Hair, Joseph F., William C. Black, Barry J. Babin, Multivariate Data Analysis. 8th Ed. Boston: Cengage Learning.

[6] Andy Field, *Discovering Statistics Using IBM SPSS Statistics,* 5th Ed.

independence testing using the Durbin Watson statistic, in line with recent econometric and applied statistics guidelines.

Table 1. Classical Assumption Tests

Assumption / Test	Purpose	Method /Statistical Test	Decision Criteria (Rule of Thumb)	Action if Violated
Residual Normality	To ensure that residuals (ε) are normally distributed so that t and F tests are valid	Shapiro–Wilk test (p-value), Kolmogorov–Smirnov test (for large samples), Q–Q plot, residual histogram	p > 0.05 (Shapiro–Wilk) → fail to reject normality; points on Q–Q plot close to the diagonal line	Variable transformation (log/sqrt), use bootstrapping, or apply nonparametric tests
Multicollinearity	To ensure that independent variables are not highly correlated with each other	Variance Inflation Factor (VIF), tolerance, correlation matrix among independent variables	VIF < 10 (more conservative: < 5); tolerance > 0.10; correlations among independent variables not > 0.80	Remove or combine variables, apply Principal Component Analysis (PCA), or use ridge regression
Homoscedasticity	To ensure constant variance of residuals across all values of predictors	Breusch–Pagan test / White test; residuals vs. fitted values plot (scatterplot)	p > 0.05 → no heteroskedasticity; scatterplot shows no systematic pattern	Apply transformation (log), use robust standard errors (White), or weighted least squares

The primary analytical method employed in this study is *multiple linear regression***,** which is used to examine the effects of efficiency, convenience, risk, and trust on the decision to use cardless cash withdrawal services. The regression model applied in this study is expressed as follows, where the regression coefficients are calculated using the following formulas:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

$$b=\frac{n(\sum XY)-(\sum X)(\sum Y)}{n(\sum X^2)-(\sum X)^2} \qquad a=\frac{\sum \mathbf{Y}-\mathbf{b}(\sum \mathbf{X})}{n}$$

In this model, Y represents the decision to use the service, X1 denotes efficiency, X2 refers to convenience, X3 represents perceived risk, and X4 denotes trust. The parameter aaa is the constant term, b1 to b4 are the regression coefficients for each independent variable, and eee is the error term. The analysis produces regression coefficients, the coefficient of determination (R^2), *t*-tests, and an *F*-test, which are used to test the research hypotheses.

Table 2. Hypothesis Testing

Type of Test	Objective	Formula / Test Basis	Decision Criteria	Interpretation
T-test (Partial)	To examine the partial effect of each independent variable (X) on the dependent variable (Y)	$t = \frac{\beta i}{SE\ (\beta i)}$ $df = (n - k - 1)$	If p-value < 0.05 → H_0 is rejected (X has a significant effect on Y). If p-value ≥ 0.05 → H_0 is accepted (X has no significant effect on Y).	Indicates which independent variables have a dominant or significant influence on Y.
F-test (Simultaneous)	To test the joint effect of all independent variables (X_1, X_2, …, X_k) on the dependent variable (Y)	$F = \frac{R^2}{(1 - R^2)/\ (n - k - 1)}$ df1 = k , df2 = (n– k– 1)	If p-value < 0.05 → H_0 is rejected ($X_1 \ldots X_k$ jointly have a significant effect on Y). If p-value ≥ 0.05 → H_0 is accepted.	Indicates whether the regression model is appropriate and statistically feasible (goodness of fit).
R^2 Test (Coefficient of Determination)	To measure the extent to which variations in Y can be explained by variations in $X_1 \ldots X_k$	$R^2 = \frac{SSR}{SST}$ or $1 - \frac{SSE}{SST}$ The R^2 value is between 0–1. The closer to 1 → the better the model explains Y. Adjusted R^2 is used if there are many independent variables.	R^2 ranges between 0 and 1. A value closer to 1 indicates a better model. Adjusted R^2 is used when multiple independent variables are included.	Indicates the proportion (%) of variation in Y explained by the independent variables, while the remainder is explained by factors outside the model.

Hypothesis testing in this study was conducted at a significance level of 5% (α = 0.05), which is commonly used in social science and econometric research to balance Type I and Type II errors.[7] A hypothesis is accepted when the p-value is less than 0.05, indicating that the independent variable has a statistically significant effect on the dependent variable; conversely, the hypothesis is rejected when the p-value is equal to or greater than 0.05.[8] Hypothesis testing was performed both partially and simultaneously. Partial testing was conducted using the t-test to examine the individual effect of each independent variable on the dependent variable, while simultaneous testing was carried out using the F-test to assess the joint effect of all independent variables on the dependent variable within the regression model.[9]

[7] Andy Field. *Discovering Statistics Using IBM SPSS Statistics, 5th Ed.*
[8] Andy Field. *Discovering Statistics Using IBM SPSS Statistics, 5th Ed.*
[9] Ghozali, *"Aplikasi Analisis Multivariate Dengan Program IBM SPSS."*

Variable Indicators

1. Efficiency

   In digital banking systems, efficiency encompasses elements such as transaction speed, time savings, and the simplification of operational steps. Perceived efficiency significantly contributes to customer satisfaction and the adoption of banking technology. The measurable indicators of the efficiency variable are as follows:[10]

   a. Transaction speed: The time required to complete a cardless cash withdrawal process through the mobile application and ATM.
   b. Time savings**:** The convenience of accessing the service without the need to carry a physical card or visit a bank branch.
   c. Reduction of transaction steps**:** A shorter and less complicated process compared to conventional cash withdrawals.

2. Ease of Use (Convenience)

   Ease of use refers to an individual's level of confidence in using technology that provides flexibility without requiring substantial effort. This concept reflects a condition free from obstacles, where effort is viewed as a limited resource used to perform activities according to one's intentions or responsibilities. The measurable indicators of the ease-of-use variable are as follows:[11]

   a. Ease of using the mobile banking application: A user-friendly and easily understandable interface for cardless cash withdrawals.
   b. Service accessibility anytime and anywhere: Transactions can be conducted at more than 300 Bank Aceh ATMs located in Aceh, Medan, and Jakarta without being constrained by branch operating hours.
   c. No need to carry a physical card: Eliminating the risk of forgetting or losing an ATM card.

3. Risk

   Perceived risk refers to the uncertainty experienced by consumers regarding potential negative consequences arising from the use of a product or service. In the context of mobile banking and cardless cash withdrawals, primary concerns typically focus on security risks, system failures, and misuse by unauthorized parties. The measurable indicators of the risk variable include:[12]

   a. Transaction security risk**:** The potential for data theft or misuse of unique transaction codes generated by the application.

[10] Jefry Gasperz, "*Pengaruh Efisiensi, Kemudahan, Dan Keamanan Terhadap Minat Nasabah Menggunakan Layanan Tarik Tunai Tanpa Kartu Bank Mandiri Jefry*."

[11] Gabriella Antoni*, "Kemudahan Penggunaan, Manfaat, Dan Risiko Terhadap Penggunaan Mobile Banking Gabriella."*

[12] Suhartanto, D., Ali, M. H., Tan, K. H., & Sjahroeddin, "*The Effect Of Perceived Risk On Customer Trust And Loyalty In Mobile Banking: The Moderating Role Of Religiosity."*

b. Transaction failure risk: Network or system disruptions that hinder the cardless cash withdrawal process.
c. Risk of misuse by unauthorized parties**:** Threats to the security of personal data such as MPINs, mobile phone numbers, and transaction codes.

4. Trust

   In digital banking, trust is associated with customers' confidence in the bank's ability to protect their personal and financial information while ensuring smooth service delivery. The indicators of the trust variable include:[13]

   a. Reliability: The extent to which customers believe the bank can process cardless cash withdrawal transactions accurately and consistently.
   b. Security assurance: Confidence that digital systems and customers' personal data are adequately protected.
   c. System integrity: The perception that the digital banking system operates properly, without disruptions or errors.
   d. Benevolence: Customers' belief that the bank has good intentions and prioritizes customer comfort, security, and interests.
   e. Transparency: The extent to which the bank provides clear and easily understandable information regarding procedures and risks associated with using this feature.

5. Usage Decision

   The Extended UTAUT + Perceived Risk model is an extension of the UTAUT theory used to explain technology usage behavior, particularly in the context of cardless cash withdrawal features. This model integrates functional factors such as performance expectancy and facilitating conditions with emotional factors in the form of perceived risk. Its objective is to provide a more comprehensive understanding of user decisions, not only based on ease of use and technological usefulness, but also by considering users' sense of security and trust in digital banking services. The measurable indicators of the usage decision variable are as follows:[14]

   a. Belief that the cardless cash withdrawal feature accelerates transactions**.**
   b. Perception that the feature simplifies daily banking activities**.**
   c. Assessment that the cardless feature is more flexible than conventional cash withdrawals**.**

[13] Suhartanto, D., Ali, M. H., Tan, K. H., & Sjahroeddin. "*The Effect Of Perceived Risk On Customer Trust And Loyalty In Mobile Banking: The Moderating Role Of Religiosity*.

[14] Napitupulu and Cahyadi, *"The Adoption Of Cardless Cash Withdrawal Using Extended Utaut Model."*

Table 3. Operationalization of Variables

Variable	Definition	Indicators	Measurement Scale	Source
Efficiency (X_1)	Customers perceptions of the convenience, speed, and effectiveness of cardless cash withdrawal services through mobile banking applications.	1. Transaction speed. 2. Time savings. 3. Reduction of transaction steps.	Likert 1–5	Gasperz, J., & Lekatompessy, O. L. (2024)
Convenience (X_2)	The sense of comfort and flexibility in using cardless cash withdrawal services in terms of time, location, and ease of access.	1. Ease of using the application. 2. Access anytime and anywhere. 3. No need to carry a physical card.	Likert 1–5	Gabriella et al. (2024)
Risk (X_3)	Customers' perceptions of the likelihood of losses, transaction errors, or security threats when using digital services.	1. Transaction security risk. 2. Transaction failure risk. 3. Risk of misuse by unauthorized parties.	Likert 1–5	Suhartanto et al. (2022).
Trust (X_4)	Customers confidence in the reliability, security, and integrity of cardless cash withdrawal services provided by Islamic banks.	1. System reliability. 2. Security assurance. 3. System integrity. 4. Bank benevolence. 5. Information transparency	Likert 1–5	Suhartanto et al. (2022).
Usage Decision (Y)	Customers' tendency to continue using cardless cash withdrawal services as part of their banking activities.	1. The feature accelerates transactions. 2. Simplifies banking activities. 3. More flexible than conventional methods.	Likert 1–5	Napitupulu et al. (2024).

RESULTS AND DISCUSSION

CLASSICAL ASSUMPTION TESTS

1. Normality Test

   The normality test was conducted to determine whether the residuals of the regression model and the dependent variable (Y) were normally distributed. The normality assumption is essential in multiple linear regression, as the normal distribution of residuals ensures the validity of statistical inference, particularly the t-test and the F-test.[15] In this study, residual normality was assessed using graphical methods, namely the Histogram and the Normal P–P Plot, as well as a formal statistical test using the Kolmogorov–Smirnov test. These approaches are commonly applied in regression analysis to evaluate whether residuals approximate a normal distribution.[16]

   a. Histogram

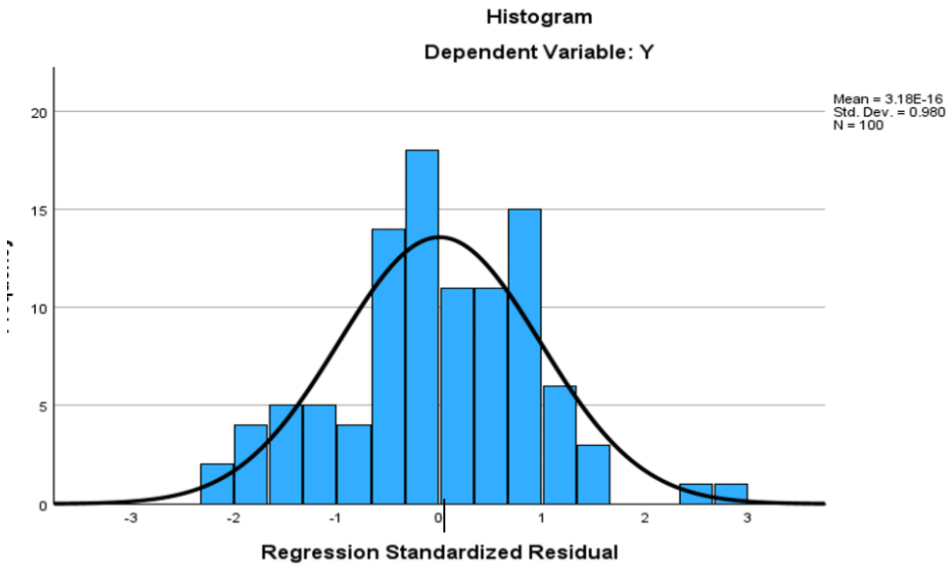

Figure 1. Histogram

   b. P. Plot

[15] Ghozali, *"Aplikasi Analisis Multivariate Dengan Program IBM SPSS."*
[16] Ghozali. "*Aplikasi Analisis Multivariate Dengan Program IBM SPSS*."

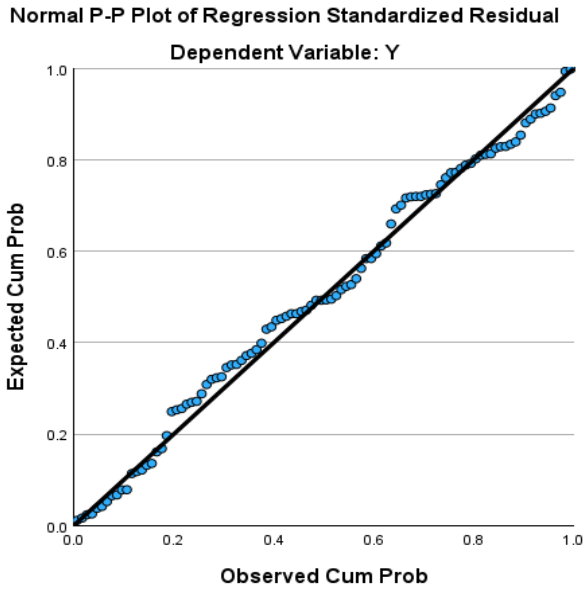

Figure 2. P. Plot

c. Kolmogorov Smirmov

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			100
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		2.31495302
Most Extreme Differences	Absolute		.060
	Positive		.046
	Negative		-.060
Test Statistic			.060
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.485
	99% Confidence Interval	Lower Bound	.472
		Upper Bound	.498

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Residual normality was tested using a histogram, a Normal P–P Plot, and the Kolmogorov–Smirnov test. The normality assumption requires that regression residuals are normally distributed to ensure the validity of statistical inference, particularly for hypothesis testing. Graphical analysis

using histograms and Normal P–P Plots is commonly employed to visually assess whether residuals approximate a normal distribution, where residuals are expected to follow a bell-shaped curve and align closely with the diagonal line.[17] In addition, the Kolmogorov–Smirnov test was applied as a formal statistical test of normality. The results indicate that the significance value exceeds 0.05, suggesting that the residuals do not deviate significantly from a normal distribution.[18] Therefore, it can be concluded that the normality assumption of the regression model is satisfied.

2. Multicollinearity Test

   The multicollinearity test aims to determine whether excessively high correlations exist among the independent variables in a regression model. High multicollinearity can lead to instability in regression coefficients, inflated standard errors, and difficulties in accurately interpreting the individual effects of each explanatory variable. In this study, multicollinearity was assessed by examining Tolerance values and the Variance Inflation Factor (VIF) as reported in the SPSS output. According to established statistical guidelines, these measures are widely used to diagnose multicollinearity in multiple regression analysis.[19]

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.186	2.150		-.086	.931		
	X1	.203	.128	.168	1.584	.117	.360	2.779
	X2	.364	.104	.322	3.501	<.001	.477	2.097
	X3	.106	.087	.118	1.217	.226	.433	2.312
	X4	.189	.077	.283	2.454	.016	.304	3.291

a. Dependent Variable: Y

Explanation**:**

a. Tolerance indicates the proportion of variance in an independent variable that is not explained by other independent variables in the regression model. A higher Tolerance value suggests that the variable shares less variance with other predictors. According to established statistical guidelines, a Tolerance value greater than 0.10 indicates that multicollinearity is not a serious concern.[20]

[17] Ghozali, *Aplikasi Analisis Multivariate Dengan Program IBM SPSS. 9th Ed.*

[18] Andy Field, *Discovering Statistics Using IBM SPSS Statistics, 5th Ed.*

[19] Ghozali, "*Aplikasi Analisis Multivariate Dengan Program IBM SPSS.*"

[20] Hair, Joseph F., William C. Black, Barry J. Babin, *Multivariate Data Analysis. 8th Ed. Boston: Cengage Learning*.

b. The Variance Inflation Factor (VIF) reflects the extent to which the variance of a regression coefficient is inflated due to correlations among independent variables. A higher VIF value indicates stronger multicollinearity. Commonly accepted criteria state that a VIF value below 10 suggests that excessive multicollinearity is not present and that the regression coefficients can be interpreted reliably.[21]

Multicollinearity was examined using Tolerance values and the Variance Inflation Factor (VIF). Multicollinearity occurs when independent variables are highly correlated, which may inflate standard errors and weaken the reliability of regression estimates. According to established statistical criteria, a regression model is considered free from multicollinearity when Tolerance values exceed 0.10 and VIF values are below 10.[22] Based on the results presented in the table above, all independent variables meet these criteria, indicating that multicollinearity is not present in the regression model. This finding suggests that each independent variable contributes independently to explaining the dependent variable (Y), thereby ensuring the stability and accuracy of the regression estimates.

3. Heteroskedasticity Test

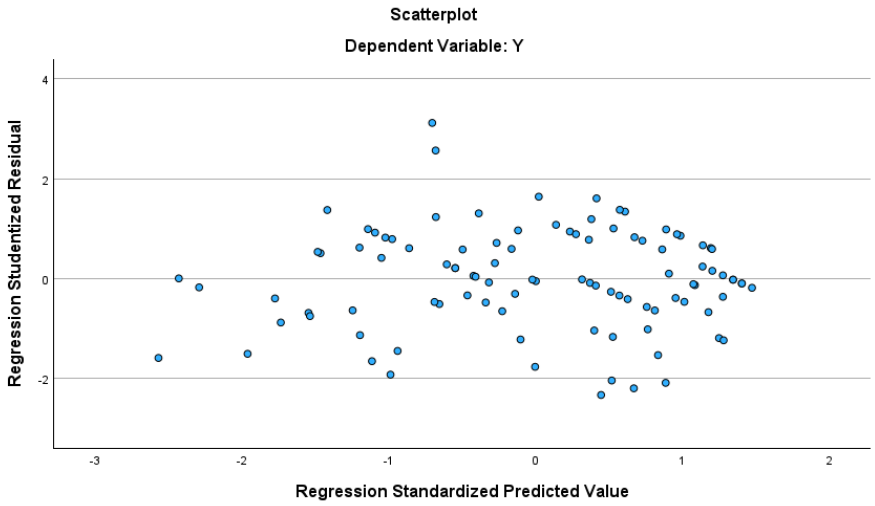

Figure 3. Scatterplot

The heteroskedasticity test aims to examine whether the variance of the residuals in a regression model remains constant across all levels of the independent variables. Heteroskedasticity arises when the variance of the error terms differs systematically, potentially leading to inefficient parameter estimates and biased standard errors, which in turn may distort statistical inference. In this study, heteroskedasticity was assessed using a scatterplot of standardized residuals against predicted values.

[21] Hair, Joseph F., William C. Black, Barry J. Babin.

[22] *Ghozali, "Aplikasi Analisis Multivariate Dengan Program IBM SPSS." Aplikasi Analisis Multivariate Dengan Program IBM SPSS."*

According to established econometric guidelines, the absence of heteroskedasticity is indicated when residuals are randomly dispersed around zero and do not form a clear or systematic pattern.[23] The scatterplot results show that the residual points are randomly distributed without any discernible pattern, suggesting that the regression model does not suffer from heteroskedasticity and therefore meets the assumption of homoscedasticity.

Interpretation**:**

a. The random dispersion of residuals indicates that the residual variance is homogeneous.
b. There is no indication of heteroskedasticity; therefore, the classical assumptions of linear regression are satisfied.

ANALYSIS OF SPSS OUTPUT FOR MULTIPLE LINEAR REGRESSION
Coefficient of Determination (R^2) Output

The coefficient of determination is used to measure the extent to which variations in the dependent variable (Y) can be explained by the independent variables (X_1, X_2, X_3 and X_4) in the multiple linear regression model. The value of R^2 ranges from 0 to 1, with values closer to 1 indicating that the regression model explains a greater proportion of the variance in Y. Based on the SPSS output, the following results were obtained:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785[a]	.616	.600	2.363

a. Predictors: (Constant), X4, X2, X3, X1

Interpretation**:**

a. R = 0.785**,** indicating a strong relationship between the independent variables simultaneously and the dependent variable.
b. R^2 = 0.616, meaning that 61.6% of the variation in Y can be explained by the independent variables (X_1, X_2, X_3 and X_4), while the remaining 38.4% of the variation in Y is explained by other factors outside the research model.
c. Adjusted R^2 = 0.600, which adjusts for the number of independent variables in the model and still indicates that the regression model is sufficiently good in explaining the dependent variable.

The analysis results show an R^2 value of 0.616 and an Adjusted R^2 value of 0.600. This implies that 61.6% of the variation in the dependent variable can be

[23] *Ghozali, "Aplikasi Analisis Multivariate Dengan Program IBM SPSS." Aplikasi Analisis Multivariate Dengan Program IBM SPSS."*

explained by the independent variables included in the model, while the remaining variation is influenced by factors outside the model.

F-Test (Simultaneous)

The F-test is used to determine whether the independent variables (X_1, X_2, X_3 and X_4) jointly (simultaneously) have a significant effect on the dependent variable (Y). This test is important to ensure that the multiple linear regression model is appropriate for predicting the dependent variable. Based on the SPSS output, the following F-test results were obtained:

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	850.458	4	212.615	38.071	<.001[b]
	Residual	530.542	95	5.585		
	Total	1381.000	99			
a. Dependent Variable: Y						
b. Predictors: (Constant), X4, X2, X3, X1						

Interpretation**:**

a. F-statistic = 38.071 with p < 0.001. The significant F-statistic indicates that the independent variables X_1, X_2, X_3 and X_4 simultaneously have a significant effect on the dependent variable Y.
b. These results confirm that the multiple linear regression model employed is statistically valid and appropriate for predicting the dependent variable Y based on the four independent variables.

The F-test results show a significant F-statistic (p < 0.001), indicating that the independent variables jointly have a significant effect on the dependent variable. Therefore, the regression model is suitable for use.

t-Test (Hypothesis Testing)

The t-test was conducted to examine the partial effect of each independent variable (X) on the dependent variable (Y), assuming that the other variables remain constant. This test helps identify which variables individually contribute significantly to changes in Y. Based on the SPSS output, the obtained t-statistics and significance values (*p*-values) are as follows:

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.186	2.150		-.086	.931
	X1 (efficiency)	.203	.128	.168	1.584	.117
	X2	.364	.104	.322	3.501	<.001

	(Convenience)					
	X3 (Risk)	.106	.087	.118	1.217	.226
	X4 (Trust)	.189	.077	.283	2.454	.016
a. Dependent Variable: Y						

Interpretation**:**

a. X_2 (B = 0.364, p < 0.001) has a significant effect on Y. This means that for every one-unit increase in X_2, Y increases by 0.364 units, assuming other variables remain constant. X_2 is the variable that provides the largest partial contribution.
b. X_4 (B = 0.189, p = 0.016) also has a significant effect on Y. Each one-unit increase in X4 increases Y by 0.189 units, holding other variables constant.
c. X_1 (B = 0.203, p = 0.117) and X_3 (B = 0.106, p = 0.226) do not have a statistically significant partial effect on Y. This indicates that the influence of these two variables on Y is not sufficiently strong when analyzed individually. Nevertheless, these variables are retained in the regression model because their simultaneous contribution may still affect Y.

The *t*-test results indicate that variables X_2 and X_4 have a significant effect on the *dependent* variable (p < 0.05), whereas X_1 and X_3 do not have a significant partial effect. However, all variables are retained in the model because they contribute simultaneously.

DISCUSSION

This study aims to analyze the influence of efficiency, convenience, risk, and trust on the decision to use cardless cash withdrawal services among customers of Bank Syariah Indonesia and Bank Aceh Syariah in Aceh. The results of multiple linear regression analysis indicate that partially, the variables that have a significant influence on the decision to use are convenience and trust, with a coefficient of determination of 61.6%. This indicates that customers' decisions to use cardless cash withdrawal services are influenced by a combination of functional and psychological factors. Partially, convenience has a positive and significant effect on the usage decision. This finding indicates that ease of application use, flexibility in terms of time and location, and the absence of a need to carry a physical card are key considerations for customers. This result is consistent with the Technology Acceptance Model (TAM), which emphasizes that perceived ease of use is a crucial determinant of technology adoption. According to Mukhtiar, perceived ease of use, which reflects the level of comfort and convenience when using digital services such as mobile banking, influences customer interest in using those services. This study confirms that the higher the perceived ease (comfort)

experienced by users, the greater their intention to use mobile banking applications continuously.[24] which found that convenience significantly influences the use of Islamic digital banking services.

The trust variable also has a positive and significant effect on the decision to use cardless cash withdrawal services. This confirms that customers' confidence in security, system reliability, and the integrity of Islamic banking services plays an important role in encouraging digital service adoption. In the context of Islamic banking, trust is not only related to technical aspects but also reflects banks' compliance with Sharia principles. The results of research show that trust is one of the variables that significantly influences the intention and decision to use digital Islamic banking services, indicating that trust in security, system reliability, and compliance with Islamic principles are important factors in the adoption of digital banking service technology.[25] which state that trust is a key factor in the use of Sharia-based digital banking services. Meanwhile, efficiency does not have a significant partial effect on the usage decision. This finding suggests that service efficiency has been perceived as a standard feature by customers and therefore no longer serves as a distinguishing factor in decision-making. This condition is in line with the study, which states that in mature technologies, the effect of efficiency tends to weaken.[26] The risk variable also does not have a significant partial effect on the decision to use cardless cash withdrawal services. This indicates that perceived risk is not strong enough to hinder customers' usage decisions. One possible explanation is the high level of customer trust in banks, which minimizes perceived risk. This finding is consistent with, who argue that trust can reduce the negative impact of risk on the use of digital banking services.[27]

These findings emphasize that in Islamic banking, trust has a broader meaning than in conventional banking, as it encompasses Sharia compliance, *amanah* (trustworthiness), and the bank's responsibility to safeguard customers' funds and data. Overall, the results of this study confirm that the decision to use cardless cash withdrawal services in Islamic banking in Aceh is more strongly influenced by convenience and trust, while efficiency and risk function as supporting factors within the usage decision model.

[24] Mukhtisar, M., Tarigan, I. R. R., & Evriyenni, *"The Influence of Efficiency, Security and Convenience on Customer Interest in Transacting Using Mobile Banking (Study on Bank Syariah Mandiri Ulee Kareng Banda Aceh Customers)."*

[25] Mulazid, *"Determinants for Acceptance and Use of Sharīʿah Banking Digital Services in Indonesia."*

[26] Gabriella Antoni, *"Kemudahan Penggunaan, Manfaat, Dan Risiko Terhadap Penggunaan Mobile Banking Gabriella."*

[27] Suhartanto, D., Ali, M. H., Tan, K. H., & Sjahroeddin, *"The Effect Of Perceived Risk On Customer Trust And Loyalty In Mobile Banking: The Moderating Role Of Religiosity."*

CONCLUSION

This study concludes that convenience and trust exert a significant positive influence on customers' decisions to use cardless cash withdrawal services among users of Bank Syariah Indonesia and Bank Aceh Syariah in Aceh. The research model demonstrates an explanatory power of 61.6%, indicating that the variables included in the model account for a substantial proportion of the variation in usage decisions, while the remaining variance is influenced by factors beyond the scope of this study. Empirical findings reveal that convenience—reflected in the ease of application use, transaction flexibility, and the ability to withdraw cash without relying on physical cards—plays a critical role in encouraging the adoption of digital banking services. Trust also emerges as a decisive determinant, as customers' confidence in the security, reliability, and institutional integrity of Islamic banking significantly strengthens their willingness to use the service. In the context of Islamic banking, trust carries additional importance because it reflects not only technical reliability but also the ethical value of amānah (trustworthiness) and adherence to Sharīʿah principles. In contrast, efficiency and perceived risk do not exhibit a statistically significant partial effect on the decision to use cardless cash withdrawal services. This finding suggests that efficiency has become a standard expectation in digital banking services and therefore no longer functions as a distinguishing factor in customers' decision-making. Similarly, perceived risk appears to be mitigated by the relatively high level of customer trust in Islamic banking institutions, reducing its role as a barrier to service adoption.

Overall, the results indicate that customers' decisions to adopt cardless cash withdrawal services in Islamic banking in Aceh are more strongly influenced by convenience and trust than by efficiency and perceived risk. These findings support the relevance of the Technology Acceptance Model (TAM) when expanded to incorporate trust and risk variables within the context of Islamic digital banking. Practically, the results suggest that Islamic banks should prioritize service convenience and strengthen institutional trust in order to promote the wider adoption of digital banking innovations. Nevertheless, this study has several limitations that open opportunities for future research. Subsequent studies may incorporate additional factors that potentially influence digital banking adoption, such as digital literacy, e-service quality, perceived *Sharīʿah* compliance, religiosity, and user experience, in order to enhance the explanatory capacity of the research model. Future research may also employ mixed-method approaches combining quantitative surveys with qualitative interviews to obtain a deeper understanding of customers' attitudes and behavioral motivations toward Islamic digital banking. Expanding the geographical scope beyond Aceh Province and including a broader range of Islamic financial institutions would further improve the generalizability of the findings. In addition, longitudinal research

designs could provide valuable insights into how customer perceptions and adoption behaviors evolve as digital technology continues to develop and public digital competence increases. Collectively, these directions are expected to strengthen future research on Islamic digital banking adoption and contribute more substantively to both theoretical development and the practical advancement of Islamic banking in Indonesia.

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