

**THE EFFECT OF KNOWLEDGE, SECURITY, AND  
CONVENIENCE ON THE FREQUENCY OF DIGITAL  
PAYMENT USE FROM PHYSICAL CARDS TO BSI QRIS  
MOBILE BANKING IN GENERATION Z  
(A Study on Students of the Faculty of Islamic Economics and  
Business, UIN Alauddin Makassar)**

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**Abstract:**

The development of digital technology has encouraged changes in payment systems from physical card usage to QRIS-based digital payments. This study aims to analyze the influence of knowledge, security, and convenience on the frequency of digital payment usage from physical cards to QRIS Mobile Banking BSI among Generation Z, specifically students of the Faculty of Islamic Economics and Business at UIN Alauddin Makassar. This research used a quantitative method with an associative causal approach. The sampling technique used purposive sampling with 97 active students who use QRIS Mobile Banking BSI as respondents. Data analysis was conducted using multiple linear regression with SPSS software. The results showed that knowledge had a negative and significant effect on the frequency of QRIS usage, security had no significant partial effect, while convenience had a positive and significant effect and became the most dominant variable influencing the frequency of digital payment usage. Simultaneously, knowledge, security, and convenience significantly influenced the frequency of digital payment usage from physical cards to QRIS Mobile Banking BSI among Generation Z. This study implies that improving convenience and digital service quality is the main factor in encouraging sustainable QRIS usage among students.

**Keywords: Knowledge, Security, Convenience, Frequency of Use, QRIS, Mobile Banking, Generation Z.**

**Abstrak :**

Perkembangan teknologi digital telah mendorong perubahan sistem pembayaran masyarakat dari penggunaan kartu fisik menuju pembayaran digital berbasis Quick Response Code Indonesian Standard (QRIS). Penelitian ini bertujuan untuk menganalisis pengaruh pengetahuan, keamanan, dan kenyamanan terhadap frekuensi penggunaan pembayaran digital dari kartu fisik ke QRIS Mobile Banking BSI pada Generasi Z, khususnya mahasiswa Fakultas Ekonomi dan Bisnis Islam UIN Alauddin Makassar. Penelitian ini menggunakan metode kuantitatif dengan pendekatan kausal asosiatif. Teknik pengambilan sampel menggunakan purposive sampling dengan jumlah responden sebanyak 97 mahasiswa aktif pengguna QRIS Mobile Banking BSI. Teknik analisis data menggunakan regresi linear berganda dengan bantuan SPSS. Hasil penelitian menunjukkan bahwa pengetahuan berpengaruh negatif dan signifikan terhadap frekuensi penggunaan QRIS, keamanan tidak berpengaruh signifikan secara parsial, sedangkan kenyamanan berpengaruh positif dan signifikan serta menjadi variabel paling dominan terhadap frekuensi penggunaan pembayaran digital. Secara simultan, pengetahuan, keamanan, dan kenyamanan berpengaruh signifikan terhadap frekuensi penggunaan pembayaran digital dari kartu fisik ke QRIS Mobile Banking BSI pada Generasi Z. Penelitian ini memberikan implikasi bahwa peningkatan kenyamanan dan kualitas layanan digital menjadi faktor utama dalam mendorong penggunaan QRIS secara berkelanjutan di kalangan mahasiswa.

**Kata Kunci: Pengetahuan, Keamanan, Kenyamanan, Frekuensi Penggunaan, QRIS, Mobile Banking, Generasi Z.**

## 1. Introduction

The development of the digital economy is currently increasing along with the development of information and communication technology. One form of this development can be seen through the non-cash payment system that is increasingly used by people in their daily activities. Financial technology (fintech) innovation has driven changes in people's transaction behavior towards a cashless society. In recent years, digital payments based on the Quick Response Code Indonesian Standard (QRIS) have experienced a significant increase in Indonesia, including in BSI Mobile Banking services. The use of QRIS offers various conveniences such as fast, practical, and efficient transactions compared to using physical cards. However, despite the continued increase in QRIS use, some people still maintain the use of physical cards due to certain factors such as level of knowledge, perceived security, and convenience in using digital services. Generation Z, as a generation close to technology, is a potential group in the development of QRIS-based digital transactions. Technology Acceptance Model 3 (TAM3) explains that technology acceptance is influenced by the perception of ease and perceived usefulness felt by users. In the context of digital payments, knowledge, security, and convenience are important factors that can influence the frequency of QRIS use on an ongoing basis. Previous studies have discussed the intention to use QRIS, but there are still few studies that focus on the frequency of actual use from physical cards to QRIS Mobile Banking BSI, especially among Generation Z students. Therefore, this study aims to analyze the influence of knowledge, security, and convenience on the frequency of digital payment use from physical cards to QRIS Mobile Banking BSI among students of the Faculty of Islamic Economics and Business, UIN Alauddin Makassar.

## 2. Literature Review

This study adopts the Technology Acceptance Model 3 (TAM3) as its theoretical framework, which explains that technology acceptance and usage are influenced by perceived ease of use and perceived usefulness. In the context of digital payments, knowledge refers to users' understanding of the functions, benefits, usage procedures, and features of QRIS Mobile Banking BSI, which can encourage more effective utilization of the technology. Security is defined as users' perceptions of the system's ability to protect personal data and transactions from risks such as fraud and data misuse, thereby increasing trust in conducting digital transactions. Meanwhile, convenience relates to the ease of access, speed, and efficiency experienced by users when making transactions through QRIS Mobile Banking BSI. These three factors are expected to influence the frequency of use, which refers to the intensity with which users conduct digital payment transactions within a certain period. Previous studies have shown that knowledge, security, and ease of use play important roles in increasing the adoption of digital payment services. Therefore, this study examines the influence of knowledge, security, and convenience on the frequency of digital payment usage from physical cards to QRIS Mobile Banking BSI among Generation Z students of the Faculty of Islamic Economics and Business, UIN Alauddin Makassar.

## 3. Research Methods

### 3.1. Object, time and Place

The object in this study is the influence of knowledge, security, and convenience on the frequency of digital payment usage from physical cards to QRIS Mobile Banking BSI in Generation Z. The subjects of this study were students of the Faculty of Islamic Economics and Business, Alauddin State Islamic University Makassar who actively used the QRIS Mobile Banking BSI service. This study was conducted in 2026 at the Faculty of Islamic Economics and Business, UIN Alauddin Makassar, located in Makassar City, South Sulawesi. The selection of the research location was based on the high use of digital payment systems among students, especially QRIS-based transactions.

### 3.2. Data Collection Techniques

The data collection technique in this study used primary data obtained directly through questionnaires distributed to respondents. The questionnaire was administered to students using BSI's QRIS Mobile Banking using a Likert scale to measure respondents' perceptions regarding knowledge, security, convenience, and frequency of digital payment use. Furthermore, this study also utilized secondary data obtained through literature review in the form of books, journals, previous research, and scientific articles relevant to the research topic. The research instruments were first tested for validity and reliability to ensure the data obtained was accurate, consistent, and in accordance with the research objectives.

### 3.3. Data Analysis Techniques

The data analysis technique used in this study is quantitative analysis with the multiple linear regression method. Before conducting the regression analysis, the data were first tested using the classical assumption test which includes validity test, reliability test, normality test, multicollinearity test, and

heteroscedasticity test. Next, the hypothesis was tested using the t-test to determine the partial effect of each independent variable on the dependent variable, while the F-test was used to determine the simultaneous effect of all independent variables on the dependent variable. In addition, the coefficient of determination ( $R^2$ ) was used to measure the ability of the independent variables to explain the dependent variable. The entire data analysis process was carried out using the EVIEWS 12 application to ensure more valid and accountable research results.

#### 4. Results and Discussion

##### 4.1. Research Results

This study was conducted to determine the influence of knowledge, security, and convenience on the frequency of digital payment usage from physical cards to BSI QRIS Mobile Banking among Generation Z students of the Faculty of Islamic Economics and Business, Alauddin State Islamic University, Makassar. The research data were obtained by distributing questionnaires to 97 respondents who actively use BSI QRIS Mobile Banking.

| Variable | Coefficient | Std. Error | t-Statistic | Prob.  |
|----------|-------------|------------|-------------|--------|
| C        | 0.449673    | 3.007454   | 0.149520    | 0.8815 |
| X1       | -0.229593   | 0.097019   | -2.366486   | 0.0200 |
| X2       | 0.130787    | 0.130130   | 1.005050    | 0.3175 |
| X3       | 1.182608    | 0.190060   | 6.222277    | 0.0000 |

**Figure 1. Multiple Linear Regression Test Results**

Sources: Primary data processed using EVIEWS 12, 2026.

Based on the table above, it is known that the knowledge variable has a negative and significant effect on the frequency of digital payment use with a significance value of  $0.034 < 0.05$ . The security variable has a positive but insignificant effect with a significance value of  $0.310 > 0.05$ . Meanwhile, the convenience variable has a positive and significant effect on the frequency of digital payment use with a significance value of  $0.000 < 0.05$ . This shows that convenience is the most dominant factor in increasing the use of BSI QRIS Mobile Banking among Generation Z students.

|                    |           |                       |          |
|--------------------|-----------|-----------------------|----------|
| R-squared          | 0.404943  | Mean dependent var    | 16.65979 |
| Adjusted R-squared | 0.385747  | S.D. dependent var    | 4.382462 |
| S.E. of regression | 3.434723  | Akaike info criterion | 5.346112 |
| Sum squared resid  | 1097.151  | Schwarz criterion     | 5.452286 |
| Log likelihood     | -255.2864 | Hannan-Quinn criter.  | 5.389044 |
| F-statistic        | 21.09582  | Durbin-Watson stat    | 1.867369 |
| Prob(F-statistic)  | 0.000000  |                       |          |

**Figure 2. Simultaneous Test Results (F Test)**

Sources: Primary data processed using EVIEWS 12, 2026.

Based on the simultaneous test results in the figure above, a significance value of  $0.000 < 0.05$  was obtained. This indicates that the variables of knowledge, security, and convenience together have a significant effect on the frequency of digital payment use from physical cards to BSI QRIS Mobile Banking among Generation Z students of the Faculty of Economics and Business, UIN Alauddin Makassar.

**Table 1. Results of the Coefficient of Determination ( $R^2$ ) Test**

| Model                  | R Square | Adjusted R Square |
|------------------------|----------|-------------------|
| Regresi Linier Brganda | 0,439    | 0,421             |

Sources: Primary data processed using EVIEWS 12, 2026.

Based on the simultaneous test results in the figure above, a significance value of  $0.000 < 0.05$  was obtained. This indicates that the variables of knowledge, security, and convenience together have a significant effect on the frequency of digital payment use from physical cards to BSI QRIS Mobile Banking among Generation Z students of the Faculty of Economics and Business, UIN Alauddin Makassar.

#### 4.2. Discussion

The results of the study indicate that the knowledge variable has a negative and significant effect on the frequency of digital payment use. This finding indicates that the higher the level of respondents' knowledge of the risks and mechanisms of digital transactions, the more cautious users tend to be in intensive use of QRIS. This result differs from several previous studies that stated that knowledge has a positive effect on QRIS use. However, in this study, students were more selective in conducting digital transactions because they understood the potential risks that might occur.

The security variable showed a positive but insignificant effect on the frequency of digital payment use. This indicates that most respondents have considered security as a service standard that must be available in mobile banking applications, so that security factors are no longer a primary consideration in increasing the frequency of QRIS use. The results of this study are in line with the development of digital technology that increasingly improves transaction protection systems in Islamic banking services.

Meanwhile, the convenience variable has a positive and significant effect on the frequency of digital payment use. Generation Z students are more interested in using QRIS because it is considered practical, fast, easily accessible, and efficient compared to using physical cards. This finding supports the Technology Acceptance Model 3 (TAM3) theory, which explains that perceived ease of use is a major factor in the acceptance and continued use of technology.

Simultaneously, knowledge, security, and convenience significantly influence the frequency of digital payment use. This indicates that BSI QRIS Mobile Banking usage is influenced by a combination of user understanding, perceived security, and perceived convenience in using digital services.

#### 4.3. Relevance to Research Objectives

The results of this study are relevant to the previously formulated research objectives, namely to determine the effect of knowledge, security, and convenience on the frequency of digital payment usage from physical cards to QRIS Mobile Banking BSI among Generation Z students of FEBI UIN Alauddin Makassar. The research findings successfully answered the research problem formulation by showing that convenience is the most dominant factor in increasing the frequency of QRIS usage, while security does not have a significant effect partially. This study also successfully filled the gap in previous research that focused more on the intention to use QRIS, while this study emphasizes the frequency of actual use of digital payments. Thus, the results of this study can be a reference for the development of Islamic banking digital services in improving service quality, ease of transactions, and user experience so that QRIS usage can continue to increase sustainably.

### 5. Conclusion

The results of this study indicate that knowledge has a negative and significant effect on the frequency of digital payment usage. This finding suggests that the higher the level of public knowledge regarding digital transaction risks, such as online fraud, data breaches, phishing attacks, and account misuse, the more cautious users become in utilizing QRIS, which may reduce the frequency of its use. One negative impact is that some individuals may become hesitant to fully adopt digital payment services and may prefer to return to conventional payment methods due to concerns about potential risks. Therefore, educational programs should not only emphasize the risks associated with QRIS usage but also provide users with practical knowledge on risk mitigation strategies, available security features, and methods for protecting personal data. In addition, banks and government institutions should enhance digital literacy campaigns, strengthen consumer protection systems, and provide continuous guidance on secure digital transactions. These efforts can help build public trust and confidence, enabling users to benefit from QRIS as a practical, efficient, and secure digital payment method. Furthermore, simultaneously, all three variables significantly influenced the frequency of digital payment usage from physical cards to BSI's QRIS Mobile Banking. Convenience was the most dominant variable influencing the frequency of QRIS usage. Therefore, improving the quality of easy, fast, and practical digital services is a crucial strategy for Bank Syariah Indonesia to sustainably increase QRIS usage.

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