



The Influence of QRIS Digital Payments on Impulsive Buying among Generation Z Students at Brawijaya University

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ABSTRACT

This study aims to examine how the use of QRIS (Quick Response Code Indonesian Standard) affects impulsive purchasing behavior among Generation Z students at Brawijaya University. This study highlights two aspects Ease of Use and Accessibility. This study employs a quantitative approach with a cause and effect design and utilizes a survey method. Data were collected from 193 Generation Z students at Brawijaya University via an online questionnaire and a purposive sampling technique. The data were analyzed using the Structural Equation Modeling Partial Least Squares (SEM-PLS) method with the assistance of SmartPLS 4.0 software. The study shows that ease of use of QRIS has a positive and significant impact on impulsive purchasing. Additionally, the accessibility of QRIS also has a positive and significant effect on impulsive purchasing. Ease of use is proven to be more influential than accessibility in encouraging people to make impulsive purchases. These findings underscore the importance of the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB) in understanding consumer behavior in the digital world. The implications of this study suggest that it is important to improve financial literacy and shopping awareness among students as active users of digital payment systems.

Keywords: Digital Payment, QRIS, Ease of Use, Accessibility, Impulsive Buying, Generation Z

1. INTRODUCTION & RESEARCH DESIGN

The development of digital transformation has led many people to shift from cash-based transactions to cashless payments. The popularity of cashless payments continues to grow, as reflected in digital payment transactions that reached IDR 60.204 trillion over the past five years (Bank Indonesia, 2024). Digital payments are expected to provide greater convenience by allowing people to make transactions anytime and anywhere. Their use has become increasingly widespread and is now considered an integral part of everyday life (Alamsyah et al., 2025). However, the instant and convenient nature of digital payments may also contribute to impulsive buying, as easy access to payment methods can reduce awareness of spending and encourage spontaneous purchasing decisions (Li & Deng, 2026). Digital payments can also encourage consumers to make immediate purchases in response to current trends (Zhao et al., 2022). This is supported by global data indicating that approximately 40% of consumer spending is associated with impulsive buying (Saleh, 2025).

Therefore, this study addresses the following research questions: Does the use of QRIS digital payments influence impulsive buying among Generation Z students at Brawijaya University? To what extent do the ease of use and accessibility of QRIS contribute to impulsive buying among Generation Z students at Brawijaya University?

The phenomenon of digital payments has become increasingly familiar among university students. Generation Z represents the largest generational group in Indonesia, accounting for 27.98% of the population, or approximately 74.93 million people (Badan Pusat Statistik, 2025). As digital natives, Generation Z has readily adopted cashless payment practices in their daily transactions (Deepika & Massand, 2025). QRIS was initially developed by Bank Indonesia in collaboration with the Indonesian Payment System Association (Gunawan et al., 2023). According to Bank Indonesia (2025), QRIS transactions reached 6.05 billion transactions in 2025. The availability of QRIS simplifies transactions by eliminating the need to carry cash, which may in turn encourage impulsive buying behavior (Usman et al., 2025).

A hedonistic lifestyle may also contribute to impulsive buying behavior (Ramayanti et al., 2025). This phenomenon is further supported by the rapid growth in QRIS adoption, with the number of users reaching 58 million (Yonatan, 2025). Since QRIS is a payment system specifically developed and implemented in Indonesia, this context provides an interesting setting for further investigation.

Previous studies have extensively examined the relationship between digital payments and impulsive buying (Akhil & Tajamul, 2022; Djamhari et al., 2024; Faraz & Anjum, 2025; Karmaker et al., 2025; Li & Deng, 2026). Previous findings indicate that digital payments can encourage excessive spending behavior (Akhil & Tajamul, 2022; Karmaker et al., 2025), reduce psychological resistance to spending (Faraz & Anjum, 2025), and influence impulsive buying through consumers' emotional and psychological states (Li & Deng, 2026). Other research has also found that impulsive buying is relatively common among Generation Z (Djamhari et al., 2024). However, several research gaps remain. Karmaker et al. (2025) identified limitations related to sample size, representativeness, potential sampling bias, cross-sectional research designs, and limited research coverage, suggesting the need for more representative samples in future studies. Akhil and Tajamul (2022) focused on digital wallets in India using a general-age population, leaving limited evidence regarding the relationship between digital payments and impulsive buying specifically among Generation Z university students. Similarly, Faraz and Anjum (2025) examined digital payments in the Chinese context using a general population sample rather than focusing specifically on Generation Z students. Djamhari et al. (2024) also noted limitations in terms of contextual variation and suggested examining the moderating role of demographic characteristics, such as age, gender, education, and income, in the relationship between payment methods, promotional activities, and impulsive buying. Meanwhile, Li and Deng (2026) highlighted limitations concerning sample representation and potential data bias and recommended expanding samples to improve the generalizability of findings to other populations. Although previous studies have provided valuable insights into digital payments and impulsive buying, research specifically examining the influence of QRIS digital payments on impulsive buying among Generation Z university students remains limited.

This study employs a quantitative research approach, referring to the methodology used by Usman et al. (2025). The sample consists of Generation Z students at Brawijaya University selected using purposive sampling. Data were collected through a questionnaire distributed via Google Forms to Generation Z students at Brawijaya University. The survey was designed to examine impulsive buying behavior among Generation Z students in relation to their use of QRIS digital payments. Respondents rated each statement using a five-point Likert scale. The collected data were analyzed using SmartPLS 4.0 with the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Institutional Background

Digital transformation in payment methods has fundamentally changed the way financial transactions are conducted worldwide, including in Indonesia. Digital payment refers to a system that uses smartphone technology to facilitate electronic money transfers without the need for physical cash (Pathak & Kaushik, 2024). Advances in technology have made financial technology (fintech) increasingly accessible to consumers, with various payment methods available, including mobile banking, QRIS, and other digital payment platforms.

The emergence of QRIS has significantly simplified access to digital payments for Indonesian consumers. QRIS is Indonesia's standardized QR-based payment system that facilitates electronic transactions. It represents a technological advancement designed to support transactions that are effective, efficient, and secure, particularly for everyday purchases and small businesses (Gunawan et al., 2023). Improvements in digital infrastructure have made electronic payment applications an increasingly important part of modern life, particularly among younger generations who tend to adapt rapidly to technological developments.

Generation Z is one of the most active users of electronic payment methods. Having grown up alongside the rapid development of smartphones and digital technology, Generation Z can be characterized as a digital-native generation whose daily activities are closely connected to technology. Generation Z generally refers to individuals born between 1997 and 2012 (Sahin et al., 2026). This generation may be particularly susceptible to impulsive buying because they are easily influenced by peer recommendations and promotional offers and can make spontaneous purchases through convenient, one-touch payment methods.

Impulsive buying refers to an unplanned purchasing behavior characterized by sudden and spontaneous decisions, often triggered by strong emotions without extensive rational evaluation. Consumers who engage in impulsive buying typically experience an immediate urge to purchase after encountering certain stimuli, such as promotional offers or attractive product displays (Chen et al., 2021). The relationship between digital payments and impulsive buying can be explained through the concept of the pain of paying (Broekhoff & Cruijsen, 2024). Cash payments tend to create a psychological discomfort associated with physically parting with money, whereas digital payments through QRIS may reduce this psychological discomfort because transactions can be completed simply by scanning a QR code without physically handing over cash. As a result, consumers may be more likely to make impulsive purchases because the immediate psychological consequences of spending are less salient.

The Technology Acceptance Model (TAM) developed by Davis (1989) is used in this study to explain perceived ease of

use. The adoption of digital payment methods among young people is also influenced by accessibility, which can be related to the Theory of Planned Behavior (TPB) proposed by Ajzen (1991). From the TPB perspective, perceived behavioral control influences an individual's intention and ability to perform a particular behavior. The broad and convenient accessibility of QRIS may increase perceived behavioral control among Generation Z students, encouraging more frequent use of the payment system and potentially contributing to impulsive buying behavior.

2.2 Hypothesis Development

2.2.1 Relationship Between Ease of Use and Impulsive Buying

The Technology Acceptance Model (TAM), introduced by Davis (1989), provides a theoretical basis for understanding the relationship between ease of use and consumer behavior. TAM defines perceived ease of use as the extent to which an individual believes that using a particular technological system requires minimal physical or mental effort. In the context of digital payments, Gunawan et al. (2023) found that ease of use can influence consumers' decisions to adopt and use mobile payment technologies. As a digital payment method, QRIS applies this principle through its QR-scanning mechanism, which simplifies the payment process and substantially reduces technical and cognitive barriers during transactions.

The reduction in cognitive barriers resulting from the ease of using QRIS may have a direct psychological effect on impulsive buying behavior. This phenomenon can be explained through the pain of paying theory proposed by Broekhoff and Crujisen (2024), in which the discomfort associated with spending physical cash serves as a natural restraint on consumer spending. Previous research by Ahn and Nam (2022) found that digital payments substantially reduce this pain-of-paying mechanism because consumers do not experience the physical transfer of money directly. When QRIS is perceived as highly convenient and easy to use, the payment process becomes seamless, potentially leaving consumers with less time to consciously evaluate their purchasing decisions. This mechanism may ultimately encourage unplanned purchases and help explain the relationship between ease of use and impulsive buying behavior.

Theoretical syntheses by Aslam et al. (2023) and Belmonte et al. (2024) consistently indicate that ease of use in digital payment systems has a positive effect on users' intention to adopt such technologies, which may subsequently increase the likelihood of impulsive purchases. Ease of use can encourage excessive spending by lowering the psychological threshold for making a purchase. Intuitive and user-friendly digital payment features may further reinforce consumers' purchasing behavior (Akhil & Tajamul, 2022; Lu & Pauwels, 2024). Usman et al. (2025) also found that ease of use is a significant predictor of digital payment usage, which may contribute to a higher frequency of impulsive purchases among university students.

These findings suggest that the greater the perceived ease of using QRIS among Generation Z students, the lower the

psychological and cognitive barriers they may experience during transactions, thereby increasing their tendency to make spontaneous purchases. Therefore, the first hypothesis is formulated as follows:

H1: Ease of Use (X1) has a positive effect on Impulsive Buying (Y).

2.2.2. Relationship Between Accessibility Impulsive Buying

Accessibility in digital payment systems is a distinct but complementary dimension to ease of use. Within the Theory of Planned Behavior (TPB) proposed by Ajzen (1991), accessibility can be associated with perceived behavioral control, which refers to an individual's perception of how easy or difficult it is to perform a particular behavior. The more accessible a payment system is, the greater the perceived control users may have over conducting transactions. Reduced situational barriers may consequently increase the likelihood of impulsive purchases.

QRIS, as an implementation of digital payment accessibility in Indonesia, offers substantial advantages. As a national payment standard established by Bank Indonesia, QRIS enables interoperability across payment platforms, allowing a single QR code to be accepted by different digital payment applications (Gunawan et al., 2023). This broad accessibility means that consumers can potentially make purchases across a wide range of locations and at different times. From a stimulus-response perspective, the widespread availability of QRIS can function as an environmental stimulus that continuously provides opportunities to make purchases, potentially encouraging spontaneous purchasing decisions. Li and Deng (2026) found that the accessibility provided by digital payments can directly influence impulsive buying by removing logistical barriers that previously limited unplanned purchases.

High accessibility is also associated with psychological factors that may influence impulsive buying behavior. Broekhoff and Crujisen (2024) found that convenient access to digital payment methods can increase consumer spending by reducing psychological barriers that would otherwise slow down purchasing decisions. Faraz and Anjum (2025), in their study conducted in China, found that digital payments reduce psychological resistance to spending, which is positively associated with an increase in impulsive buying frequency. These findings are further supported by Ahn and Nam (2022), Fitriani et al. (2026), and Usman et al. (2025), who empirically demonstrate that accessibility to digital payment systems contributes positively to consumer spending behavior, particularly among Generation Z. High accessibility may increase excessive spending because users are more likely to conduct transactions when they encounter fewer barriers to payment.

These findings indicate that the greater the perceived accessibility of QRIS among Generation Z students, the fewer situational barriers they may face when making purchases, thereby increasing the likelihood of unplanned purchasing behavior. Therefore, the second hypothesis is formulated as follows:

H2: Accessibility (X2) has a positive effect on Impulsive Buying (Y).

3. METHOD and RESULTS

3.1 Methodology Design

This study uses a quantitative survey-based research design. It adopts a causal-associative design because the analysis aims to explain the cause-and-effect relationship between the independent variable, Digital Payment QRIS, which is divided into two constructs, namely Ease of Use (X1) and Accessibility (X2), and the dependent variable, Impulsive Buying (Y). A cross-sectional design was employed because data were collected within a specific period (Maier et al., 2023). Data collection was conducted during a single period, from April 7 to April 30, 2026. The study population consisted of Generation Z students at Brawijaya University, with purposive sampling used to determine respondents based on the birth-year criterion of 1997–2012. Based on this sampling technique, a total of 193 respondents were obtained, representing 17 faculties at Brawijaya University. The data collection instrument was an online questionnaire distributed through Google Forms via WhatsApp, Telegram, X, and Instagram. The questionnaire consisted of 13 statements measured using a 1–5 Likert scale. This study evaluates the effect of the independent variables on the dependent variable using structural equation modeling.

This study was designed to address the research problem concerning the influence of Digital Payment QRIS, which is categorized into two constructs, namely Ease of Use (X1) and Accessibility (X2), on Impulsive Buying (Y). The study employed 13 questionnaire measurement items. The Ease of Use (X1) variable was measured using the dimensions of Overall Ease of Use, Interaction Clarity, Ease of Learning, and Comparative Ease. The Accessibility (X2) variable was measured using the dimensions of Ease of Access Without Significant Effort, Device Compatibility, Merchant Reach, and Perceived Behavioral Control. The Impulsive Buying (Y) variable was measured using the dimensions of Sudden Purchasing, Spontaneous Purchasing, Purchasing Without In-Depth Consideration, Unplanned Purchasing, and Situational Purchasing.

The data were analyzed using the SEM-PLS method with SmartPLS 4.0. The analysis followed several stages based on Hair et al. (2021). First, the outer model was evaluated through validity testing using outer loadings, followed by an assessment of construct validity and reliability using Cronbach’s alpha, composite reliability, and AVE. Discriminant validity was then assessed using HTMT, the Fornell–Larcker criterion, and cross-loadings. Second, the inner model was evaluated using path coefficients, R², F², and Q², followed by the Goodness-of-Fit assessment. Finally, hypothesis testing was conducted using bootstrapping based on P-values and T-statistics.

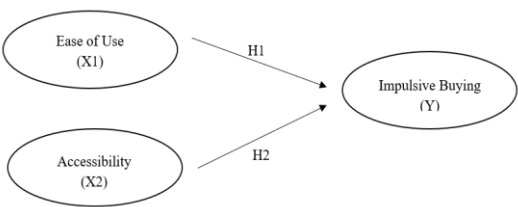


Figure 1. Research Model

3.2 Sample

A quantitative survey analysis was conducted in this study to determine whether digital payment through QRIS influences impulsive buying among Generation Z students at Brawijaya University. In addition, this study aims to examine the extent to which the ease of use and accessibility of QRIS contribute to impulsive buying among these students. The analysis used a sample of Generation Z students at Brawijaya University. The sample was selected using purposive sampling because the questionnaire was specifically targeted at Generation Z students at Brawijaya University. Purposive sampling refers to a sampling technique in which respondents are selected based on specific criteria determined by the researcher (Xu et al., 2025). A total of 193 samples were used in the analysis, representing students from 17 faculties at Brawijaya University

3.3 Procedure

The research questionnaire was distributed through WhatsApp groups, Telegram, X, and Instagram. Data were collected using Google Forms. Respondents completed the questionnaire using a 1–5 Likert scale, where 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), and 5 = Strongly Agree (SA). Data collection was conducted from April 7 to April 30, 2026. A total of 193 respondents participated in the study. According to Hair et al. (2018), SEM-PLS analysis generally requires approximately 100–200 respondents. Therefore, the sample of 193 respondents meets the 10-times rule and is considered sufficient for the 13 questionnaire measurement items. Thus, the study provides an adequate dataset for obtaining meaningful analytical results.

Table 1. Respondent Profile

No.	Variable	Demographic Characteristics	Frequency	Percentage
1	Age	14–16 years	1	0.50%
		17–21 years	143	74.10%
		22–26 years	49	25.40%
		27–29 years	0	0%
		Total	193	100%
2	Gender	Male	47	24.40%
		Female	146	75.60%
		Total	193	100%
3	Faculty	FV	43	22.30%
		FH	6	3.10%
		FEB	22	11.40%
		FIA	26	13.50%
		FP	8	4.10%

FPIK: Faculty of Fisheries and Marine Sciences
 FMIPA: Faculty of Mathematics and Natural Sciences
 FTP: Faculty of Agricultural Technology
 FISIP: Faculty of Social and Political Sciences
 FIB: Faculty of Cultural Studies
 FKH: Faculty of Veterinary Medicine
 FILKOM: Faculty of Computer Science
 FKG: Faculty of Dentistry
 FIKES: Faculty of Health Sciences

3.4 Measurement

The measurement items used in this study were adopted from Kartawinata and Akbar (2025). Digital payment through QRIS was measured using the indicators Ease of Use (X1) and Accessibility (X2), while Impulsive Buying was used as the dependent variable (Y).

Table 2. Measurement

Variable	Operational Definition	Dimension	Indicator	Scale	Source
Ease of Use (X1)	Ease of use can be defined as an individual's belief that a technology, particularly mobile payment, will not require significant effort (Hsieh, 2021).	Overall Ease of Use	EoU1: I use QRIS because it is simple and convenient to use.	Likert	Aslam et al. (2023); Belmonte et al. (2024); Ly & Ly (2024)
			EoU2: I find the QRIS interface and instructions in banking applications or digital wallets very clear and easy to follow.		
			EoU3: I find it very easy to understand how to scan and make payments using QRIS.		
			EoU4: I find QRIS much easier to use than		
		Interaction Clarity			
		Ease of Learning			
		Comparative Ease			

Variable	Operational Definition	Dimension	Indicator	Scale	Source
Accessibility (X2)	Accessibility can be defined as a digital payment system that is easy and practical to access without significant barriers (Zhang et al., 2024).	Ease of Access Without Significant Effort	paying with cash or a debit card.	Likert	Fitriani et al. (2026); Gunawan et al. (2023); Usman et al. (2025)
			A1: I find QRIS payments easy to access.		
		Device Compatibility	A2: I find that QRIS payments can be accessed on all devices/mobile phones.		
		Merchant Reach	A3: I can easily find places that accept QRIS payments around me.		
Impulsive Buying (Y)	Impulsive buying can be defined as an action that occurs suddenly and without careful preparation, in which buyers purchase an item without having a prior intention to do so (Li & Deng, 2026).	Sudden Purchasing	A4: I use QRIS payments because they can be accessed anywhere and anytime.	Likert	Febrilia & Warokka (2021); Juita et al. (2024); Ngo et al. (2025)
			IB1: I often make impulsive purchases.		

Variable	Operational Definition	Dimension	Indicator	Scale	Source
		Spontaneous Purchasing	IB2: I often make spontaneous purchases simply because the item looks attractive.		
			IB3: I tend to make payments immediately by scanning QRIS when shopping without thinking too much.		
		Purchasing Without In-Depth Consideration	IB4: I often buy items without having planned to purchase them beforehand.		
		Unplanned Purchasing	IB5: I often buy items because they are on sale.		

Source: Google Forms Data Results

3.5 Variables

3.5.1 Independent Variable

Digital Payment QRIS is the main independent variable in this study. QRIS (Quick Response Code Indonesian Standard) is divided into two constructs, namely Ease of Use (X1) and Accessibility (X2). Ease of Use (X1) refers to an individual's perception that using QRIS does not require significant physical or mental effort. The use of digital payments can shorten shopping time and thereby increase transaction frequency

(Lu & Pauwels, 2024). Accessibility (X2) refers to the practicality of accessing payments through QRIS digital payment. The availability of digital payments that facilitate consumer transactions can increase consumer spending (Broekhoff & Crujsen, 2024).

3.5.2 Dependent Variable

Impulsive Buying is the dependent variable in this study. Impulsive buying refers to spontaneous purchases driven by momentary emotional factors. The use of digital payments may lead to excessive spending because purchases can occur spontaneously (Ahn & Nam, 2022).

3.5.3 Control Variable

Generation Z students at Brawijaya University are treated as the control variable in this study because Generation Z tends to exhibit more impulsive behavior due to greater familiarity with digitalization. This variable was selected to identify students' routine spending patterns, which may influence their ability to engage in impulsive buying (Ngo et al., 2025).

3.6 Data Analysis Technique

This study uses SmartPLS 4.0 software to process the data using the SEM-PLS method, following the stages proposed by Hair et al. (2021). The initial stage of the analysis involves evaluating the outer model, which aims to assess the measurement instruments to ensure that they meet validity and reliability criteria. The process begins with an evaluation of convergent validity through the analysis of outer loading values for each variable and AVE to assess whether the latent variables adequately explain the variance of their indicators. Subsequently, reliability testing is conducted using Cronbach's Alpha and Composite Reliability to measure the internal consistency of all items. The measurement model assessment concludes with discriminant validity testing using HTMT, the Fornell–Larcker criterion, and cross-loading analysis to ensure that each research variable is empirically distinct.

The inner model is then evaluated to assess the predictive strength and relationships between latent variables. Path coefficients are analyzed to determine the effects of Ease of Use (X1) and Accessibility (X2) on Impulsive Buying (Y). The structural model is assessed using R-square to evaluate the influence of the independent variables on the dependent variable and F-square to evaluate the relative effect size of the constructs. In addition, Q-square is calculated to assess the predictive relevance of the model, while the Goodness-of-Fit test is conducted to determine the extent to which the structural model fits the empirical data obtained from the respondents.

Finally, hypothesis testing is conducted using the bootstrapping procedure in SmartPLS 4.0. This method involves repeated random resampling to generate consistent statistical estimates, with T-statistics and P-values used to determine statistical significance. Through these inferential tests, the study provides scientific conclusions regarding the effects of the ease of use and accessibility of QRIS digital payments on impulsive

buying behavior among Generation Z students at Brawijaya University.

3.7 Results

3.7.1 Model Specification

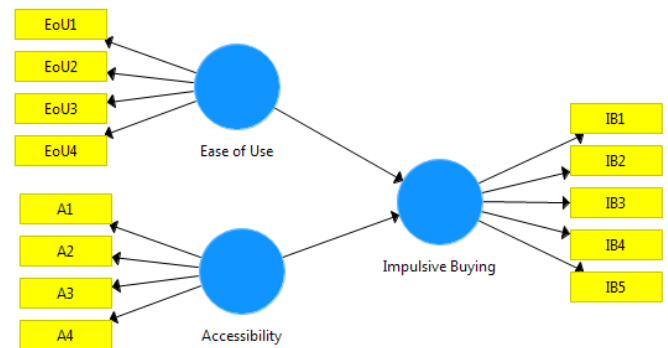


Figure 2. Model Specification

Based on the research model presented, the researchers developed a conceptual framework to examine the impact of digital transformation through QRIS on students' purchasing behavior. This model is specifically designed to examine the direct effect of the X1 Ease of Use variable on the Y Impulsive Buying variable, with the aim of analyzing whether convenience and clarity in digital transactions can trigger unplanned purchasing decisions. In addition, the study examines the direct effect of the X2 Accessibility variable on the Y Impulsive Buying variable to determine the extent to which convenient access and a variety of available merchants contribute to spontaneous purchasing behavior among Generation Z students at Brawijaya University

. Through this approach, the study is expected to identify how technological convenience factors can reduce psychological barriers to spending and significantly increase the frequency of situational impulsive purchases.

3.7.2 Outer Model Analysis Results

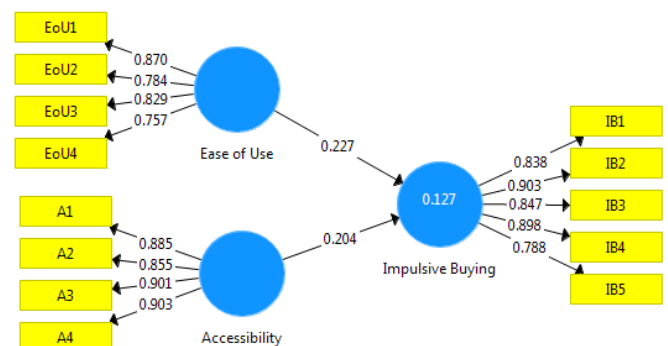


Figure 3. Outer Model

a. Outer Loading

Table 3. Outer Loading Test Results

Variable	Indicator	Question	Outer Loading	Conclusion
Ease of Use (X1)	EoU1	I use QRIS because it is simple and convenient to use.	0.870	Valid
	EoU2	I find the QRIS interface and instructions in banking applications or digital wallets very clear and easy to follow.	0.784	Valid
	EoU3	I find it very easy to understand how to scan and make payments using QRIS.	0.829	Valid
	EoU4	I find QRIS much easier to use than paying with cash or a debit card.	0.757	Valid
Accessibility (X2)	A1	I find QRIS payments easy to access.	0.885	Valid
	A2	I find that QRIS payments can be accessed on all devices/mobile phones.	0.855	Valid
	A3	I can easily find places that accept QRIS payments around me.	0.901	Valid
	A4	I use QRIS payments because they can be accessed anywhere and anytime.	0.903	Valid
Impulsive Buying (Y)	IB1	I often make impulsive purchases.	0.838	Valid
	IB2	I often make spontaneous purchases simply because the item looks attractive.	0.903	Valid
	IB3	I tend to make payments immediately by scanning QRIS when shopping without thinking too much.	0.847	Valid
	IB4	I often buy items without having planned to purchase them beforehand.	0.898	Valid
	IB5	I often buy items because they are on sale.	0.788	Valid

Source: SmartPLS 4.0 Data Processing Results

The outer loading assessment was conducted through convergent validity testing to ensure that each indicator appropriately measures its respective latent variable (Susetyo & Lie, 2025). The results show that the indicators for Ease of Use (X1) have outer loading values ranging from 0.757 to 0.870,

with the highest contribution coming from indicator EoU1, which relates to the convenience and simplicity of using QRIS. For Accessibility (X2), the outer loading values were relatively strong, ranging from 0.855 to 0.903, with the ability to access QRIS anytime and anywhere (A4) being the most dominant element. Meanwhile, Impulsive Buying (Y) showed outer loading values ranging from 0.788 to 0.903, with spontaneous purchases because an item looks attractive (IB2) serving as the most important indicator reflecting students' impulsive buying behavior. Based on the criterion established by Hair et al. (2021), which sets a minimum threshold of 0.70, all 13 indicators are empirically valid and demonstrate strong correlations in representing their respective variables.

b. Convergent Validity

Table 4. Convergent Validity Test Results

Indicator	Accessibility	Ease of Use	Impulsive Buying
A1	0.885		
A2	0.855		
A3	0.901		
A4	0.903		
EoU1		0.870	
EoU2		0.784	
EoU3		0.829	
EoU4		0.757	
IB1			0.838
IB2			0.903
IB3			0.847
IB4			0.898
IB5			0.788

Source: SmartPLS 4.0 Data Processing Result

The evaluation of this study began with convergent validity testing to ensure that each indicator appropriately reflects the corresponding latent variable (Hermanto et al., 2024). According to the criterion proposed by J. Hair and Alamer (2022), a statement or indicator is considered valid if its outer loading value exceeds the minimum threshold of 0.70. Based on the data analysis using SmartPLS presented in the table, all 13 indicators have values above 0.70. The Ease of Use (X1) variable has values ranging from 0.757 to 0.870, the Accessibility (X2) variable ranges from 0.855 to 0.903, while the Impulsive Buying (Y) variable ranges from 0.788 to 0.903. Therefore, all measurement items are empirically valid and demonstrate strong relationships in measuring impulsive buying behavior among students.

c. Discriminant Validity

Table 5. Fornell Larcker Discriminant Validity Test Results

Variable	Accessibility	Ease of Use	Impulsive Buying
Accessibility	0.886		
Ease of Use	0.362	0.811	

Variable	Accessibility	Ease of Use	Impulsive Buying
Impulsive Buying	0.286	0.301	0.856

Source: SmartPLS 4.0 Data Processing Results

Discriminant validity was evaluated using the Fornell–Larcker criterion, which assesses the square root of the AVE shown on the diagonal of the table in comparison with the correlation values between constructs (Fatima et al., 2026). Based on the test results, Accessibility has a value of 0.886, Ease of Use has a value of 0.811, and Impulsive Buying has a value of 0.856. These diagonal

values are higher than all inter-construct correlation values, including the correlation between Accessibility and Ease of Use at 0.362, Accessibility and Impulsive Buying at 0.286, and Ease of Use and Impulsive Buying at 0.301. According to Hair et al. (2021), the higher diagonal values for each construct compared with the correlations between constructs indicate satisfactory discriminant validity. Therefore, the measurement instrument empirically meets the criteria for discriminant validity.

Table 6. HTMT Discriminant Validity Test Results

Variable	Accessibility	Ease of Use
Ease of Use	0.416	
Impulsive Buying	0.297	0.320

Source: SmartPLS 4.0 Data Processing Results

Discriminant validity in this study was evaluated using the Heterotrait–Monotrait Ratio (HTMT) to ensure that each construct demonstrates a clear empirical distinction (Sukhov et al., 2023). Hair et al. (2021) stated that discriminant validity is considered established when the HTMT value is below the threshold of 0.90. The HTMT value for the relationship between Ease of Use and Accessibility is 0.416, while the relationship between Impulsive Buying and Accessibility is 0.297, and the relationship between Impulsive Buying and Ease of Use is 0.320. Since all construct relationship values are well below the 0.90 threshold, discriminant validity in this study is fully established.

Table 7. Cross-Loading Discriminant Validity Test Results

Indicator	Accessibility	Ease of Use	Impulsive Buying
A1	0.885	0.357	0.269
A2	0.855	0.283	0.204
A3	0.901	0.342	0.313
A4	0.903	0.279	0.190
EoU1	0.266	0.870	0.261
EoU2	0.310	0.784	0.142
EoU3	0.376	0.829	0.216
EoU4	0.249	0.757	0.297
IB1	0.243	0.227	0.838
IB2	0.200	0.232	0.903

Indicator	Accessibility	Ease of Use	Impulsive Buying
IB3	0.297	0.306	0.847
IB4	0.236	0.255	0.898
IB5	0.230	0.249	0.788

Source: SmartPLS 4.0 Data Processing Results

Discriminant validity was evaluated to ensure that each latent variable is empirically distinct from the others (Gudergan et al., 2025). In accordance with the guidelines established by Hair et al. (2021), the analysis was conducted by comparing the Fornell–Larcker criterion and examining the cross-loading values across indicators. Under the cross-loading method, an indicator meets the criteria for discriminant validity when its correlation with its original construct is higher than its correlations with other constructs (Mahmud et al., 2024). The results show that all statement items for Ease of Use (EoU1–EoU4), Accessibility (A1–A4), and Impulsive Buying (IB1–IB5) have the highest loading values on their respective constructs. This consistency indicates that the indicators appropriately measure their respective constructs without significant overlap with other constructs (Salah et al., 2025). Therefore, the requirements for discriminant validity in this study have been fully met.

d. Reliability

Table 8. Reliability Test Results

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Accessibility	0.910	0.943	0.936	0.786
Ease of Use	0.832	0.852	0.885	0.658
Impulsive Buying	0.908	0.916	0.932	0.732

Source: SmartPLS 4.0 Data Processing Results

Based on the statistical analysis of the study, all analyzed constructs meet the criteria for high reliability. According to the standards established by Hair et al. (2021), research indicators are considered reliable when the Cronbach's Alpha value is greater than 0.60 and the Composite Reliability value is greater than 0.70. The Accessibility variable has a Cronbach's Alpha value of 0.910 and a Composite Reliability value of 0.936, while the Ease of Use variable has values of 0.832 and 0.885, respectively. In addition, the Impulsive Buying variable also shows strong results, with a Cronbach's Alpha value of 0.908 and a Composite Reliability value of 0.932. Since all values for each variable substantially exceed the established minimum thresholds, all measurement instruments in this analysis demonstrate very good internal consistency and can be considered reliable.

3.7.3 Inner Model Analysis Results

a. Coefficient of Determination (R^2)

Table 9. Coefficient of Determination Test Results

Variable	R Square	R Square Adjusted
Impulsive Buying	0.127	0.118

Source: SmartPLS 4.0 Data Processing Results

R^2 indicates the extent to which exogenous latent variables can explain the variation occurring in endogenous latent variables (Ledón et al., 2026). According to Hair et al. (2021), there are three thresholds for interpreting R^2 values: 0.75 indicates a high level, 0.50 indicates a moderate level, and 0.25 indicates a low level. Based on the coefficient of determination (R^2) analysis, the Impulsive Buying variable has an R^2 value of 0.127. This indicates that the exogenous latent variables, namely Ease of Use and Accessibility of QRIS digital payments, can explain 12.7% of the variation or changes in the endogenous latent variable, Impulsive Buying.

b. Cross Validated Redundancy (Q^2)

Table 10. Cross-Validated Redundancy Test Results

Variable	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Impulsive Buying	965	883.862	0.084

Source: SmartPLS 4.0 Data Processing Results

The Cross-Validated Redundancy (Q^2) test results show that the endogenous variable, Impulsive Buying, has a Q^2 value of 0.084. This Q^2 value is used as an indicator to validate the model by showing the extent to which the endogenous variable can be predicted. According to the structural model assessment criteria, the Q^2 value must be greater than zero for the model to be considered to have predictive relevance (Hair et al., 2021). Since the value of 0.084 exceeds zero, it can be concluded that the model demonstrates predictive relevance. This finding indicates that the independent variables examined, namely the ease of use and accessibility of QRIS digital payments, are able to predict Impulsive Buying behavior among Generation Z students at Brawijaya University.

c. Effect Size (F^2)

Table 11. Effect Size Test Results

Variable	Impulsive Buying
Accessibility	0.041
Ease of Use	0.051

Source: SmartPLS 4.0 Data Processing Results

The Effect Size (F^2) analysis presented in the table assesses the contribution of each exogenous construct to changes in the R^2 value of the endogenous variable, Impulsive Buying. Hair et al.

(2021) indicate that F^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large effect sizes, respectively. Accessibility has an F^2 value of 0.041, while Ease of Use has an F^2 value of 0.051. Both values fall within the range of 0.02 to 0.15, indicating that Accessibility and Ease of Use of QRIS provide small effects on Impulsive Buying.

d. Path Coefficients (Uji Hipotesis)

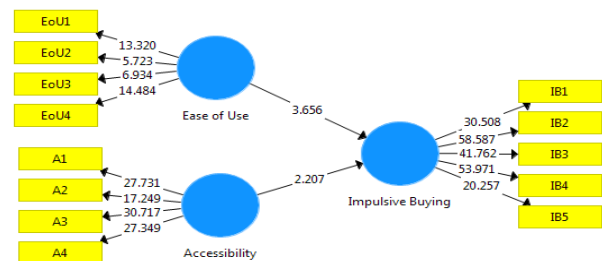


Figure 4. Hypothesis Testing

In path coefficient analysis, the coefficient values range from -1 to $+1$. A path coefficient approaching $+1$ indicates a strong positive relationship, whereas a coefficient approaching -1 indicates a strong negative relationship (Hair et al., 2021). Hypothesis testing was conducted to examine the relationships between the variables in the study by evaluating the P-values. A P-value below 0.05 indicates that the relationship is statistically significant (Kang & Ahn, 2021).

Table 12. Hypothesis Testing Results

Hipotesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Conclusion
H1 Ease of Use $\rightarrow$ Impulsive Buying	0.227	0.242	0.062	3.656	0	Accepted
H2 Accessibility $\rightarrow$ Impulsive Buying	0.204	0.212	0.093	2.207	0.028	Accepted

Source: SmartPLS 4.0 Data Processing Results

The results of the hypothesis testing indicate that Ease of Use in QRIS payments has a positive and significant effect on impulsive buying behavior. The Ease of Use variable has a path coefficient of 0.227 with a significance value of 0.000. The first hypothesis is therefore accepted, indicating that the greater the perceived ease of using QRIS digital payments during transactions, the greater the likelihood of consumers making unplanned purchases.

Accessibility also has a positive and significant effect on impulsive buying, as demonstrated by a path coefficient of 0.204 and a significance value of 0.028. The second hypothesis is therefore accepted. This finding indicates that easy access to the QRIS digital payment system can encourage consumers to make spontaneous and unplanned purchasing decisions. Overall, the findings demonstrate the important role of technological functionality and accessibility in encouraging impulsive buying behavior, particularly among Generation Z students at Brawijaya University.

A comparison of the two variables shows that Ease of Use has a greater effect on Impulsive Buying, with a coefficient of 0.227, compared with Accessibility, which has a coefficient of 0.204. This finding suggests that a convenient and seamless transaction experience is a stronger factor associated with impulsive buying among Generation Z students at Brawijaya University. This behavior is further supported by the widespread availability of QRIS as a digital payment method across various shopping locations. These findings demonstrate that although digital payment through QRIS provides considerable convenience for consumers, its ease and accessibility may also contribute to increased consumption-oriented and impulsive purchasing behavior.

e. Goodness of Fit

Table 13. Goodness-of-Fit Test Results

	Saturated Model	Estimated Model
SRMR	0.068	0.068
d_ULS	0.423	0.423
d_G	0.173	0.173
Chi-Square	201.095	201.095
NFI	0.877	0.877

Source: SmartPLS 4.0 Data Processing Results

The purpose of the goodness-of-fit test is to evaluate whether the data collected are consistent with and adequately represent the proposed model. Therefore, a model fit assessment was conducted (Dash & Paul, 2021). Based on the Goodness-of-Fit analysis, the model used in this study demonstrates an adequate fit with the empirical data collected. This is particularly indicated by the SRMR value of 0.068, suggesting that the model has an acceptable fit. In addition, the NFI value of 0.877 indicates a model fit of 87.7%. Overall, these findings show that the structural model developed in this study can adequately describe the influence of QRIS digital payment usage on impulsive buying among Generation Z students at Brawijaya University.

3.7.4 Measurement Model

The analysis began with validity and reliability testing. The convergent validity test presented in Table 4 shows that all variables exceeded the established threshold. Discriminant validity was assessed through three stages. First, the Fornell–Larcker analysis presented in Table 5 met the required criteria. Second, the HTMT analysis presented in Table 6 also fulfilled the established criteria. Finally, the cross-loading analysis presented in Table 7 met the requirements and revealed no significant issues.

Reliability analysis was conducted through three assessments. The Cronbach’s Alpha results presented in Table 8 exceeded the established threshold. The Composite Reliability values also exceeded the required threshold, while the AVE results met the established criteria. Therefore, the measurement instruments were considered reliable

The analysis then proceeded with the Coefficient of Determination (R^2), as presented in Table 9, which showed no significant issues. The Cross-Validated Redundancy (Q^2) analysis presented in Table 10 indicated predictive relevance, while the Effect Size (F^2) analysis presented in Table 11 demonstrated an effect of the examined constructs.

The hypothesis analysis presented in Table 12 shows that H1, which states that Ease of Use (X1) has a positive effect on Impulsive Buying (Y), was accepted. Likewise, H2, which states that Accessibility (X2) has a positive effect on Impulsive Buying (Y), was accepted. The Goodness-of-Fit analysis presented in Table 13 further indicates that the model used in this study demonstrates an adequate level of fit.

3.7.5 Structural Model

Table 14. Structural Model

Hypothesis	Relationship	P-Value	Conclusion	Interpretation
H1	Ease of Use → Impulsive Buying	0.000	Accepted	Ease of Use (X1) has a positive effect on Impulsive Buying (Y).
H2	Accessibility → Impulsive Buying	0.028	Accepted	Accessibility (X2) has a positive effect on Impulsive Buying (Y).

Source: SmartPLS 4.0 Data Processing Results

3.7.6 Discussion

The results of the hypothesis testing indicate that H1 (*Ease of Use* has a positive effect on *Impulsive Buying*) and H2 (*Accessibility* has a positive effect on *Impulsive Buying*) are statistically supported. These findings provide empirical evidence that QRIS digital payments significantly contribute to impulsive buying behavior among Generation Z students at Brawijaya University.

First, *Ease of Use* was found to have a positive effect on *Impulsive Buying*, with a path coefficient of 0.227 and a significance value of $p = 0.000$. The *Technology Acceptance Model* (TAM) proposed by Davis and Davis (1989) emphasizes that the ease of using technology is a key factor influencing technology adoption behavior. When QRIS is perceived as highly easy to use, the psychological and cognitive barriers associated with transactions are significantly reduced, making consumers more likely to make unplanned purchases. This finding is consistent with the study by Akhil and Tajamul (2022), which found that the ease of using digital wallets encourages excessive shopping behavior, as well as the study by Karmaker *et al.* (2025), which explains that digital payments can contribute to a more consumptive lifestyle. The mechanism underlying this relationship can be explained through the theory of the pain of

paying (Broekhoff & Cruijsen, 2024), whereby QRIS transactions that require only a single QR code scan reduce the psychological discomfort associated with spending money, potentially weakening consumers' control over their expenditures.

Second, *Accessibility* also showed a positive effect on *Impulsive Buying*, with a path coefficient of 0.204 and a significance value of $p = 0.028$. This finding supports the argument that the broad availability of QRIS merchants, compatibility with various devices, and ease of access create conditions that facilitate impulsive purchases. Research by Faraz

and Anjum (2025) and Li and Deng (2026) emphasizes that instant access to digital payment methods can influence impulsive buying by reducing awareness of spending and triggering spontaneous purchasing decisions.

When compared, *Ease of Use* demonstrated a slightly greater effect on *Impulsive Buying* (0.227) than *Accessibility* (0.204). This indicates that, among Generation Z students at Brawijaya University, a simple and convenient transaction experience is a more influential factor in encouraging impulsive buying than mere availability of access

4. CONCLUSION, LIMITATION, AND FUTURE RESEARCH

4.1 Conclusion

The use of QRIS digital payments has a positive impact on the impulsive buying behavior of Generation Z students at Brawijaya University. This influence operates through two constructs, namely *Ease of Use* and *Accessibility*, both of which independently contribute to increasing students' tendency to make unplanned purchases. Thus, the presence of QRIS as a digital payment method within the university environment contributes to higher consumption patterns among students.

The *Ease of Use* and *Accessibility* of QRIS digital payments both make positive contributions to triggering students' impulsive buying behavior. The ease of using QRIS has a greater effect than its level of accessibility, indicating that the simplicity of the QRIS transaction process, which reduces cognitive and psychological barriers, is a primary factor encouraging impulsive purchases. This reinforces the notion that the easier a digital payment system is to use, the more difficult it may be for consumers to exercise self-control over their purchasing impulses. *Accessibility* also plays an important role by eliminating situational barriers, making virtually any time and place a potential opportunity for students to make purchases.

These findings highlight the importance of understanding consumer behavior in the era of digital payments. The digitalization of transactions through QRIS, which offers greater convenience and accessibility, not only improves transaction efficiency but may also indirectly encourage excessive consumption among Generation Z students at Brawijaya University. These findings have practical implications for various stakeholders, including payment system providers, educational institutions, and students, who need to respond more thoughtfully to the convenience offered by digital payment technologies.

4.2 Limitation

This study has several limitations that should be acknowledged. First, the cross-sectional research design limits the ability to observe changes in students' impulsive buying behavior over time. Since the data were collected at a single point in time, this study could not capture changes in consumer behavior that may occur as students gain more experience using QRIS.

Second, the use of purposive sampling, with a focus on Generation Z students at Brawijaya University, limits the generalizability of the findings. A sample drawn from a single university may not adequately represent the broader student population, either at the regional or national level.

Third, the research model only considered two aspects of QRIS digital payment use, namely *Ease of Use* and *Accessibility*. Therefore, other dimensions of QRIS usage that may influence impulsive buying behavior were not examined in this study.

4.3 Future Research

Future research is recommended to employ a longitudinal design to track changes in impulsive buying behavior over time, particularly as the adoption and use of QRIS continue to increase in society. This approach would provide more detailed insights into how digital payment habits influence long-term consumption patterns among students.

Future studies are also encouraged to involve a larger number of students from various universities across different cities or provinces in Indonesia. This broader scope would improve the generalizability of the findings and provide a more accurate representation of the Generation Z student population.

Further research could also incorporate additional relevant variables, such as hedonic motivation, financial literacy, the influence of promotions and discounts, consumers' emotional conditions when shopping, and peer influence. Including moderating variables such as gender, income level, and experience with digital payments could further enhance the understanding of the factors influencing impulsive buying.

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