

Research Article

Cashless Payment Usage Among Generation Z: The Roles of Multidimensional Digital Financial Literacy, Trust, and the Moderating Effect of Gender

Marghita Setyo Utami, Maulida Nurul Innayah*

Faculty of Economics and Business, Universitas Muhammadiyah Purwokerto, Banyumas, Jawa Tengah, Indonesia, 53182

*Corresponding Author: maulidanurul@ump.ac.id | Phone: +62 821-3799-4794

ABSTRACT

Cashless payment usage has become an important part of the digital economy, particularly among Generation Z, who are recognized as the most active users of digital financial services. This study examines the effects of multidimensional digital financial literacy and trust on cashless payment usage among Generation Z in Banyumas Regency, Indonesia. This study employed a quantitative approach by collecting questionnaire data from 153 respondents, which were analyzed using PLS-SEM 4. The findings reveal that multidimensional digital financial literacy and trust have positive and significant effects on cashless payment usage, whereas gender does not have a significant direct effect. The results of the moderating analysis further reveal that gender weakens the positive relationship between multidimensional digital financial literacy and cashless payment usage, while gender does not moderate the relationship between trust and cashless payment usage. These findings suggest that cashless payment usage among Generation Z is driven primarily by digital financial literacy and trust, while gender does not significantly influence the direct relationship or moderate the relationship between trust and cashless payment usage. By integrating the Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology (UTAUT), conceptualizing digital financial literacy as a multidimensional construct, and incorporating trust into the proposed research model, this study provides a more comprehensive understanding of cashless payment usage among Generation Z. The findings also provide practical implications for policymakers, financial institutions, and educational institutions in designing digital financial literacy programs that support the sustainable adoption of cashless payment services among young consumers.

Keywords: Digital Financial Literacy; Trust; Gender; Cashless Payment Usage; Generation Z

1. INTRODUCTION

Technological advancements have brought transformative changes to many aspects of daily life, changing the way people communicate, work, and manage their finances (Usman et al., 2025). Due to technological advancements, people's payment behavior has also changed (Bemby & Qomariyah, 2023). These payment methods allow users to make transactions without carrying physical cash, instead using electronic cards, digital wallets, or QR code-based applications (Bemby & Qomariyah, 2023). As a result, cashless payment systems have become an essential component of the digital economy, offering greater efficiency, convenience, and accessibility in financial transactions (Fahimah & Harsono, 2023).

Based on Bank Indonesia's payment system statistics, the number of digital payment instruments in Indonesia showed a significant increase during the 2020-2024 period (see Figure 1). This situation demonstrates the accelerated transformation of the mobile and electronic digital payment ecosystem in Indonesia. This demonstrates that the use of digital wallets, the QRIS system, and app-based banking services are driving rapid growth in digital payment adoption (Efriyanto et al., 2025).

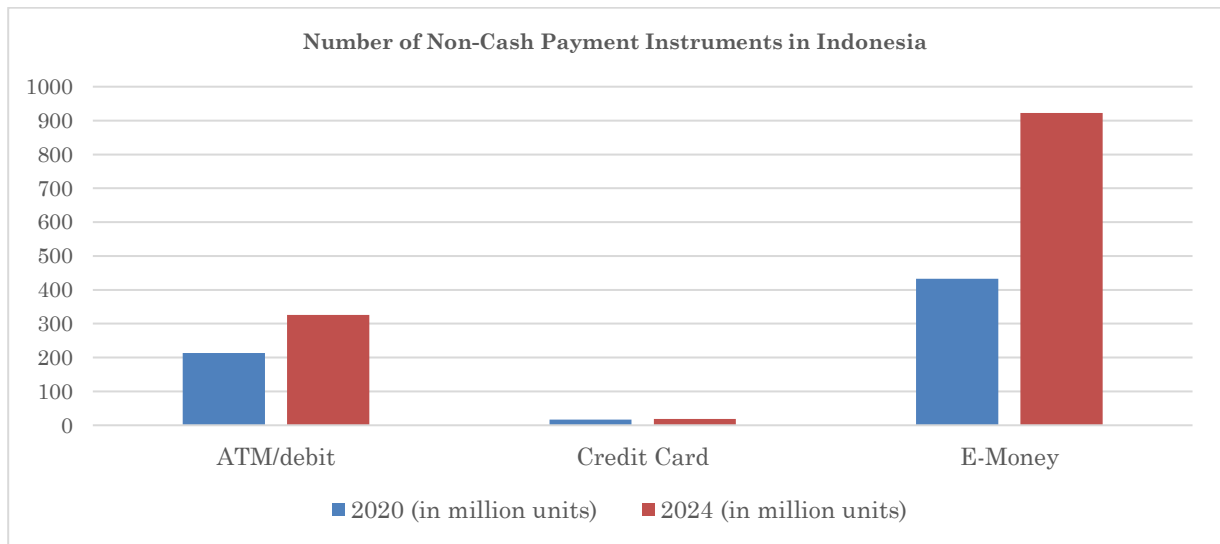


Figure 1. Number of Digital Payment Instruments in Indonesia
Source: (Bank Indonesia, 2026)

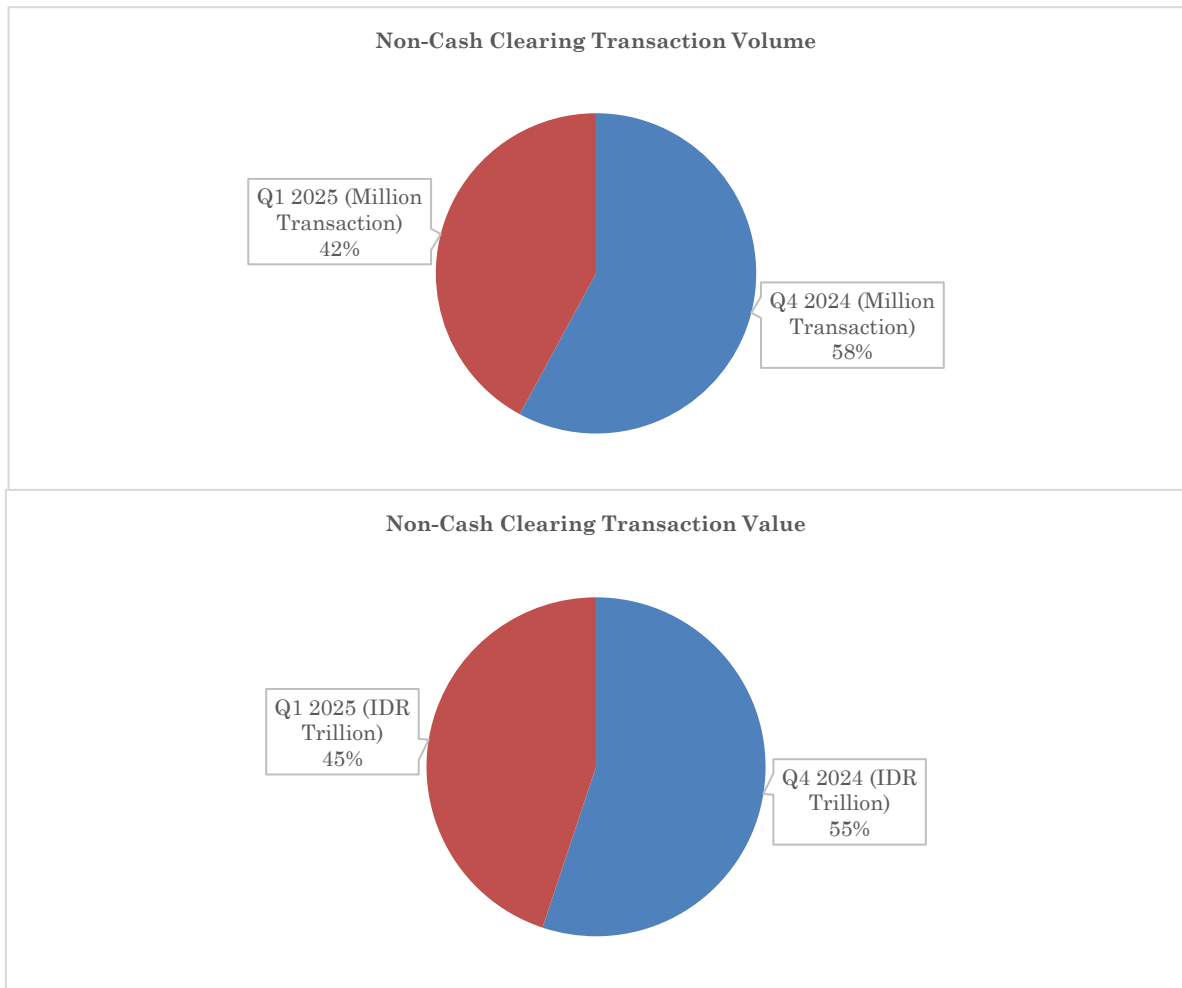


Figure 2. Non-Cash Clearing Transactions in Central Java, Q4 2024–Q1 2025
Source: (Bank Indonesia, 2025)

The development of digital payment systems at the national level has also been accompanied by significant growth in Central Java Province. Based on the Central Java Economic Report published by Bank Indonesia, the volume of non-cash clearing transactions reached 696 million transactions with a total value of IDR 29.60 trillion in the fourth quarter of 2024, while in the first quarter of 2025 it recorded 506 million transactions with a total value of IDR 24.11 trillion.

Furthermore, the acceleration of payment digitalization is reflected in the increasing number of QRIS merchants in Central Java, which grew by 17.12% year-on-year to 3.62 million merchants in the fourth quarter of 2024 and further increased to 3.85 million merchants in the first quarter of 2025. The increase in non-cash transaction activity and the expansion of QRIS merchant acceptance indicate that the digital payment transformation has progressed rapidly in Central Java, thereby providing a relevant foundation for further examining the phenomenon of non-cash payment usage at a more specific regional level, namely Greater Banyumas.

A similar trend can also be observed in the Greater Banyumas region, where both the transaction volume and transaction value of QRIS increased substantially during the 2023–2025 period (Figure 3), indicating that cashless payment has become increasingly embedded in regional economic activities.

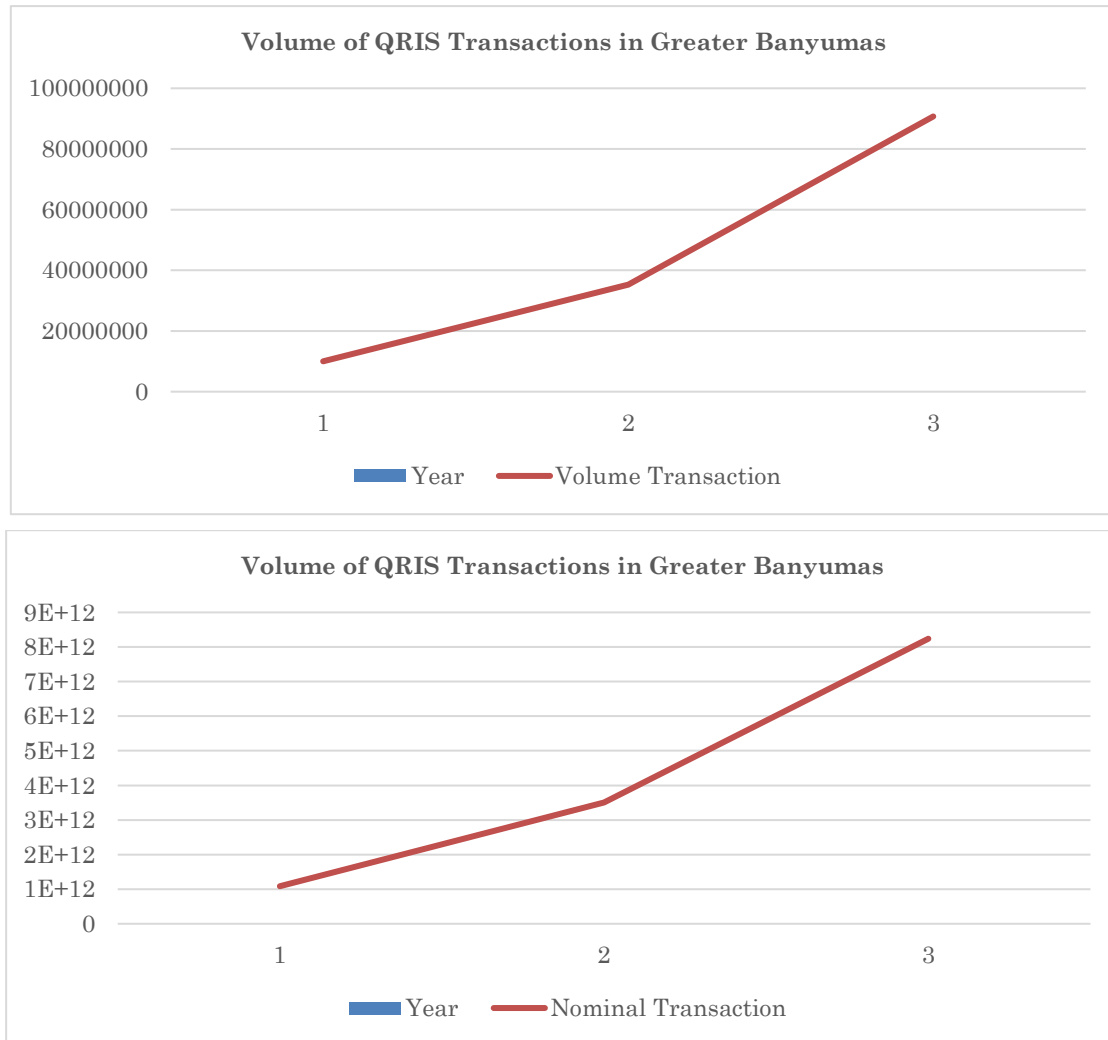


Figure 3. Volume and Nominal Value of QRIS Transactions in Greater Banyumas
Source: (Joyosemito, 2025)

Despite this rapid growth, increasing transaction volume does not necessarily indicate that individuals possess sufficient knowledge and capability to utilize digital financial services effectively. The widespread adoption of cashless payment systems may simply reflect technological availability and convenience (Pangestika et al., 2025), rather than informed financial decision-making. Therefore, identifying the factors that influence cashless payment usage remains an important research issue.

This issue is particularly relevant for Generation Z, as the availability of cashless financial transaction services has significantly influenced this generation (Ahziza et al., 2024). Generation Z is a group born in the period 1997–2012 (Slepian et al., 2024) who were born and grew up in an environment closely related to the development of digital technology, including financial services (Anatasya & Innayah, 2025). Currently, the use of non-cash transactions in Indonesia is dominated by Generation Z, who are accustomed to conducting shopping and transaction activities without using money (Indriyani & Sartika, 2022; Permana & Apriani, 2025). Based on Bank Indonesia data, Generation Z is recorded as the largest user age group, reaching 27.94% of total users at the national level (Tempo.co, 2025).

Despite their high level of digital technology adoption, Generation Z remains vulnerable to various financial challenges. In Banyumas Regency, Generation Z is considered vulnerable to instant financial transactions due to limited financial management capabilities (Sejati, 2025). This condition, accompanied by an increased risk of financial fraud and misuse of personal data, demonstrates the importance of strengthening financial literacy to improve the productive generation's ability to deal with financial crimes amidst the development of digital transactions (Sejati, 2025).

Digital financial literacy extends beyond basic financial knowledge and includes the ability to understand, evaluate, and effectively utilize digital financial technologies (Alfiana et al., 2024). Individuals with higher levels of digital financial literacy are expected to make more informed decisions when using digital financial services. Nevertheless, previous studies have reported inconsistent findings, partly because digital financial literacy has often been measured using simplified indicators that fail to capture the complexity of financial behaviour in the digital era (Syari et al., 2024). Therefore, this study adopts the multidimensional digital financial literacy framework proposed by Shehadeh et al. (2025), which comprises digital financial legal framework, digital financial awareness, digital financial experience, digital financial skills, and digital subjective financial knowledge.

Another factor influencing the use of cashless payments is trust. In the fintech context, trust reflects users' confidence in the level of security, reliability, and ability of the service to safeguard their data and funds from the risk of misuse (Susilowati et al., 2025). If users believe that the service provider is capable of optimally protecting their data and guaranteeing the security of every transaction, their loyalty to fintech services tends to increase (Efrianto et al., 2021; Susilowati et al., 2025). Previous research has shown that trust influences the use of digital payment services and fintech (Bemby & Qomariyah, 2023; Hoque et al., 2024; Mei & Atan, 2021). However, evidence remains inconclusive across different contexts, indicating that the role of trust in explaining cashless payment usage requires further investigation (Jain & Jain, 2024).

The inconsistent findings regarding the effects of digital financial literacy and trust suggest that these relationships may vary across different groups of users. One potential explanation is gender (Hair et al., 2022). According to UTAUT, men and women differ in their technology adoption behaviour because they may evaluate the usefulness, ease of use, and potential risks of technology differently (Hair et al., 2022). Consequently, gender may strengthen or weaken the effects of digital financial literacy and trust on cashless payment usage, providing a possible explanation for the inconsistent findings reported in previous studies.

Despite the growing literature on digital payment adoption, several research gaps remain (Kaur et al., 2025; Leang et al., 2023). First, many previous studies measure financial literacy using simplified indicators that may not fully capture the complexity of financial behavior in the digital era (Kaur et al., 2025; Muat et al., 2025; Panjaitan et al., 2026). Second, studies that simultaneously integrate multidimensional digital financial literacy and trust to explain cashless payment adoption are still limited (Khairunnisa et al., 2025; Singh et al., 2024). Third, although previous studies have reported inconsistent findings regarding the effects of digital financial literacy and trust on cashless payment usage, most studies have primarily focused on examining the direct relationships between these variables without incorporating gender as a moderating factor (Gunawan et al., 2023; Mei & Atan, 2021; Syari et al., 2024; Tikno et al., 2024). Consequently, limited empirical evidence has examined whether gender moderates the relationships between multidimensional digital financial literacy, trust, and cashless payment usage.

Moreover, previous studies on cashless payment usage among Generation Z have primarily been conducted in different national and regional contexts, including Jordan (Shehadeh et al., 2025), Malaysia (Mei & Atan, 2021), Bangladesh (Hoque et al., 2024) and several metropolitan areas in Bemby & Qomariyah (2023) and Fahira et al. (2023). While these studies provide valuable insights into digital payment adoption, their findings may not be directly generalized to regional areas such as Banyumas Regency, where digital financial inclusion, economic characteristics, and technology adoption may differ. Consequently, empirical evidence examining the determinants of cashless payment usage among Generation Z in regional contexts such as Banyumas remains limited. Therefore, this study extends the work of Shehadeh et al. (2025) by incorporating trust into the research model and examining gender as a moderating variable to provide a more comprehensive understanding of the factors influencing cashless payment usage.

Drawing on the Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology (UTAUT), this study develops an integrated framework to explain cashless payment usage. TPB explains how digital financial literacy influences financial behaviour through attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991). Shehadeh et al. (2025) demonstrated that digital financial awareness, experience, and skills significantly encourage cashless payment usage within the TPB framework. Meanwhile, UTAUT provides the theoretical basis for incorporating trust and gender, as it explains that technology adoption is influenced not only by users' perceptions of technology but also by individual characteristics, including gender differences (Venkatesh et al., 2003; Widyanto et al., 2022).

Based on the above explanation, this study aims to examine the effects of multidimensional digital financial literacy and trust on cashless payment usage among Generation Z in Banyumas Regency and to evaluate whether gender moderates these relationships. By conceptualizing digital financial literacy as a multidimensional construct, integrating

TPB and UTAUT, incorporating trust into the research model, and examining gender as a moderating variable, this study provides a more comprehensive understanding of cashless payment usage among Generation Z.

2. LITERATURE REVIEW

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), developed by Ajzen (1991), explains that an individual's behavior is primarily determined by behavioral intention, which is shaped by three key constructs: attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). TPB has been widely applied in studies of financial and technology-related behaviors because it explains how individual beliefs and perceptions influence behavioral decisions, including the adoption of digital financial services and cashless payment systems (Agus Simatupang et al., 2022; Arwin et al., 2022; Irimia-Diéguez et al., 2023).

In the context of this study, TPB provides the theoretical foundation for explaining the relationship between digital financial literacy and cashless payment usage. Digital financial literacy can be regarded as a background factor that enhances individuals' knowledge, skills, and experience in using digital financial services, thereby strengthening their perceived behavioral control over cashless payment systems. According to TPB, greater perceived behavioral control increases the likelihood that individuals will perform a particular behavior, including the use of cashless payment services (Ajzen, 2020). Therefore, TPB supports the proposition that individuals with higher levels of digital financial literacy are more likely to use cashless payment systems.

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003), explains that technology use behavior is determined by four core constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions, while gender moderates the effects of these constructs on technology adoption. In the context of this study, UTAUT provides the theoretical foundation for explaining the roles of trust and gender in cashless payment usage. Although trust is not an original UTAUT construct, it has been widely incorporated as an external variable because users' confidence in the security, reliability, and privacy of digital payment services enhances perceived benefits and reduces perceived risks, thereby encouraging technology adoption (Arianita et al., 2023). Furthermore, UTAUT suggests that men and women evaluate and respond to technology differently, indicating that gender may moderate the relationship between trust and cashless payment usage (Namahoot & Jantasri, 2023). Therefore, UTAUT provides the theoretical basis for examining trust as an antecedent of cashless payment usage and gender as a moderating variable in the proposed research model.

Digital Financial Literacy and Cashless Payment Usage

Digital financial literacy refers to an individual's ability to access, understand, evaluate, and effectively use digital financial products and services while managing the risks associated with digital transactions (Shehadeh et al., 2025). According to the Theory of Planned Behavior (TPB), digital financial literacy serves as a background factor that strengthens individuals' perceived behavioral control, enabling them to make informed financial decisions and increasing their confidence in using cashless payment systems (Ajzen, 2020). Individuals with higher levels of digital financial literacy are better able to evaluate the benefits, efficiency, and security of digital payment services, making them more likely to adopt and continuously use cashless payment systems (Fahira et al., 2023; Mulyati & Caroline, 2026).

Empirical evidence consistently supports this positive relationship. Shehadeh et al. (2025) found that digital financial awareness, digital financial experience, and digital financial skills significantly enhance cashless payment usage. Similar findings were reported by Fahira et al. (2023), Mulyati & Caroline (2026), and Siswanti (2023), who demonstrated that digital financial literacy positively influences the adoption and continued use of digital payment services across different contexts. Based on the theoretical arguments and empirical evidence presented above, the following hypothesis is proposed:

H1: Digital financial literacy has a positive influence on cashless payment usage.

Trust and Cashless Payment Usage

Trust refers to an individual's confidence in the security, reliability, privacy, and integrity of digital payment systems when conducting financial transactions (Lakadjo & Rahmawati, 2026). Drawing on the Unified Theory of Acceptance and Use of Technology (UTAUT), trust functions as an external factor that encourages technology adoption by enhancing users' confidence in digital payment services and reducing perceived risks associated with financial transactions (Bemby & Qomariyah, 2023; Mei & Atan, 2021). Individuals who trust that digital payment providers can protect their personal

information and process transactions securely are more likely to adopt and continuously use cashless payment systems (Lakadjo & Rahmawati, 2026).

Previous studies consistently support this relationship. Mei & Atan (2021) demonstrated that trust positively influences cashless payment adoption among Malaysian consumers, while Lakadjo & Rahmawati (2026) identified trust as one of the strongest predictors of digital wallet adoption in Indonesia. Similarly, Bemby & Qomariyah (2023) highlighted the importance of trust in encouraging technology acceptance within digital financial services. Based on the theoretical arguments and empirical evidence presented above, the following hypothesis is proposed:

H2: Trust has a positive influence on cashless payment usage.

Gender and Cashless Payment Usage

Gender is an important demographic characteristic that influences individuals' financial decision-making and technology adoption behavior. According to the Unified Theory of Acceptance and Use of Technology (UTAUT), differences between men and women may lead to different technology usage behaviors because they evaluate the benefits, ease of use, and risks associated with technology differently (Venkatesh et al., 2003). Men generally exhibit greater confidence in adopting new technologies, whereas women tend to be more cautious and place greater emphasis on security and perceived risks when using digital financial services (Juita et al., 2023). Consequently, these differences may lead to variations in cashless payment usage.

Empirical evidence supports this argument. Sumi et al. (2025) found that gender significantly influences the intention to use mobile financial services, while Rasheduzzaman et al. (2025) reported that gender differences remain important in explaining Mobile payment usage. Similarly, Yong et al. (2023) demonstrated that gender influences users' attitudes, intentions, and actual use of e-wallet services. Based on the theoretical arguments and empirical evidence presented above, the following hypothesis is proposed:

H3: Gender has a significant influence on cashless payment usage.

Gender as a Moderator between Digital Financial Literacy and Cashless Payment Usage

According to the Unified Theory of Acceptance and Use of Technology (UTAUT), gender moderates the relationships between technology adoption determinants and technology use behavior (Venkatesh et al., 2003). In the context of digital financial literacy, differences in technology acceptance, risk perception, and financial decision-making between men and women may influence how financial knowledge is translated into cashless payment usage. Individuals with higher levels of digital financial literacy are generally more capable of understanding the benefits and risks of digital financial services; however, the strength of this relationship may differ across gender groups. Previous studies suggest that female users tend to be more attentive to financial information, security, and transaction accuracy, enabling them to translate digital financial literacy into actual cashless payment usage more effectively than male users (Long et al., 2023; Zeeshan et al., 2025).

Empirical evidence also supports this argument. Nurkholik & Saputra (2024) found that gender significantly moderates the relationship between digital financial literacy and financial behavior. More specifically, Shehadeh et al. (2025) demonstrated that gender strengthens the positive relationship between multidimensional digital financial literacy and cashless payment usage. Based on the theoretical arguments and empirical evidence presented above, the following hypothesis is proposed:

H4: Gender strengthens the positive relationship between digital financial literacy and cashless payment usage.

Gender as a Moderator between Trust and Cashless Payment Usage

According to the Unified Theory of Acceptance and Use of Technology (UTAUT), gender moderates the relationships between technology adoption determinants and technology use behavior (Venkatesh et al., 2003). In the context of cashless payment usage, the influence of trust may differ between men and women because they evaluate the security, reliability, and risks associated with digital payment services differently. Individuals with higher levels of trust are generally more willing to adopt cashless payment systems; however, this positive relationship may become stronger among women, who tend to place greater emphasis on transaction security, privacy, and risk reduction when making financial decisions (Joshi & Chawla, 2024; Venkatesh et al., 2003).

Empirical evidence supports this argument. Joshi & Chawla (2024) found that gender significantly strengthens the positive effect of trust on mobile wallet usage intention. Similarly, Alshurideh et al. (2021) demonstrated that gender moderates the relationship between trust and electronic payment adoption, while Joshi & Chawla (2024) reported that

the positive influence of trust on mobile wallet usage is stronger across gender groups. Based on the theoretical arguments and empirical evidence presented above, the following hypothesis is proposed:

H5: Gender strengthens the positive relationship between trust and cashless payment usage.

Based on the literature review above, the conceptual framework proposed in this study is as follows:

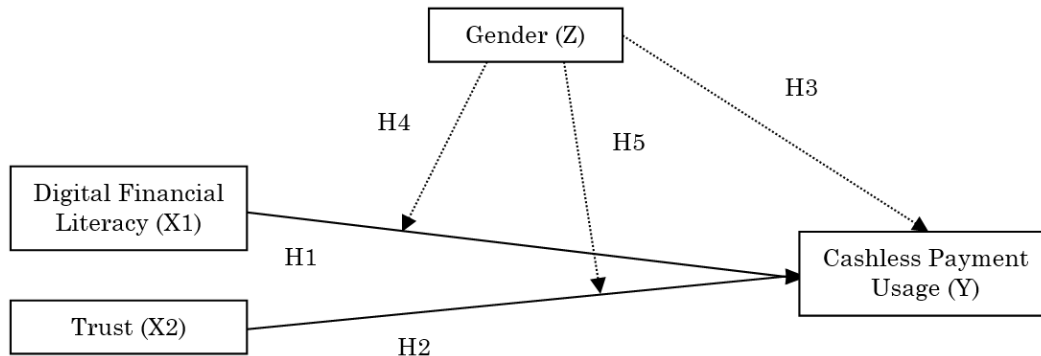


Figure 4. Conceptual Framework

3. RESEARCH METHOD

Research Design

This study used a cross-sectional approach, allowing researchers to collect data at a specific point in time to efficiently test relationships between variables (Hair et al., 2022). The study population consisted of individuals belonging to Generation Z in the Banyumas region. Given the lack of a clear sampling framework regarding individual financial behavior, this study employed a purposive sampling method (Hair et al., 2022). Respondents were selected based on three main criteria: being aged between 17 and 28, residing in Banyumas Regency, and having used non-cash payments at least once. Data were collected through an online questionnaire.

The sample size was determined using Partial Least Squares Structural Equation Modeling (PLS-SEM), which emphasizes model complexity and predictive ability over population size (Hair et al., 2022). Based on the 10-times rule, the minimum sample size is ten times the number of structural paths leading to the endogenous construct or the largest number of indicators in a construct (Hair et al., 2022). In this study, the Cashless Payment Usage variable received five structural paths: Digital Financial Literacy, Trust, Gender, and two interaction variables (Digital Financial Literacy × Gender and Trust × Gender), so the minimum sample size based on this rule was 50 respondents.

This study also uses a priori statistical power analysis through G*Power software to obtain a more accurate sample size. The analysis was conducted using a multiple linear regression model with five predictors, namely Digital Financial Literacy, Trust, Gender, and two interaction variables (Digital Financial Literacy × Gender and Trust × Gender). Assuming a moderate effect size ($f^2 = 0.15$), a significance level (α) of 0.05, and a statistical power of 0.80, the analysis results indicate that the minimum sample size required is approximately 92 respondents (Cohen, 2013). Therefore, the sample size used in this study is considered to have met statistical requirements and is sufficient to test the proposed structural model using PLS-SEM (Hair et al., 2022).

All variables were measured using scales adapted from previous research. Digital Financial Literacy was measured using a scale from Shehadeh et al. (2025). Trust was measured using indicators from Yang et al. (2021). Gender was included as a dummy variable, coded as 1 for female and 0 for male. All questionnaire items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 1. Variable Measurement

Variables	Dimensions	Instrument	Item/Indicator
Digital Financial Literacy (DFL) Adapted from (Shehadeh et al., 2025)	Digital Financial Legal Framework (DFL)	DFF1	Understanding the rules of non-cash payments
		DFF2	Understanding consumer protection rules
		DFF3	Understanding the rules about data privacy
		DFF4	Understanding the rules regarding electronic transactions
		DFF5	Understanding the rules regarding cybersecurity (computer and information systems)
	Digital Financial Awareness (DFA)	DFA1	Know the features and benefits of non-cash payment services
		DFA2	Recognize security and privacy issues
		DFA3	Know the transaction fees and other fees charged on non-cash payment services.
		DFA4	Recognize the impact of non-cash payment services on personal finances

Digital Subjective Financial Knowledge (DFK)	DFK1	Get to know non-cash payment products and services
	DFK2	Recognize the risks in using non-cash payments
	DFK3	Get to know the terms used in non-cash payments
	DFK4	Following the trend of non-cash payments
Digital Financial Experience (DFE)	DFE1	Experience using non-cash payment methods
	DFE2	Using financial institution services
	DFE3	Join a community that discusses non-cash payments
	DFE4	Have you ever tried various non-cash payment tools or features?
	DFE5	Have access to various sources of financial education
	DFE6	Regularly use non-cash payment methods
Digital Financial Skills (DFS)	DFS1	Understanding how to use payment methods
	DFS2	Understand how to create and manage a budget, monitor spending, and set financial goals.
	DFS3	Understanding how to protect yourself from security threats
	DFS4	Understanding how to manage finances effectively
	DFS5	Understanding basic financial concepts
Trust (TR) (Yang et al., 2021)	TR1	Trust that the transactions carried out are safe and private
	TR2	Trust that payments made will be processed safely
	TR3	Trust that personal information is kept confidential
	TR4	Trust that the payment service provider will provide a solution if a problem occurs.
	TR5	Trust that non-cash payment service providers comply with consumer protection rules
Cashless Payment Usage (CPU) (Shehadeh et al., 2025)	CPU1	Pay bills on time
	CPU2	Personal financial management has become better since using non-cash payment methods.
	CPU3	Becoming more saver
	CPU4	Increasing use of non-cash payment methods
	CPU5	Becoming less reliant on cash
	CPU6	Feel safe and secure from the risk of money theft
Gender (Alshurideh et al., 2021; Shehadeh et al., 2025)	Gender	Respondent's gender (Female = 1; Male = 0)

Data Analysis Techniques

This study used Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software (Hair et al., 2022). The analysis procedure was conducted in two main stages. The first stage was the evaluation of the measurement model by ensuring the validity and reliability of the research constructs (Hair et al., 2019). This included indicator reliability testing using outer loading values, Cronbach's alpha and composite reliability, Average Variance Extracted (AVE) values, and discriminant validity using the Fornell-Larcker criteria and the Heterotrait-Monotrait Ratio (HTMT). The second stage was the evaluation of the structural model, which aims to examine the relationships between latent variables in the research model (Hair et al., 2019). This testing is conducted by analyzing the path coefficients and the coefficient of determination (R^2). The significance of the relationships between variables is tested using bootstrapping techniques to obtain t-statistics and p-values used in hypothesis testing.

4. RESULTS AND DISCUSSION

4.1 Result

4.1.1 Respondent's Profile

The Results and Discussion section presents the findings obtained during the research process. The results of the research are submitted in advance, followed by the discussion. The discussions are presented systematically from general to specific. The data can be presented with tables or figures. Results and discussions must also interconnect with the theory that is used. Avoid excessive use of citations and discussion of published literature.

Table 2 shows the demographics of respondents. Based on the respondent characteristics table, the majority of respondents were female (56%) and were in the age range of 21–24 years (55%). Most respondents had a bachelor's degree (S1) at 90% and were unemployed or still students (82%). The majority of respondents had a monthly income or pocket money of IDR 1,000,000–IDR 2,000,000 (41%). The most widely used non-cash payment methods by respondents were QRIS and Mobile Banking, each at 77%, followed by E-Wallet at 67%. Meanwhile, the use of Debit Cards and Credit Cards was still relatively low, at 22% and 3%, respectively. In addition, most respondents used non-cash payments every day (63%), indicating that digital transactions had become part of the respondents' daily financial activities.

Table 2. Respondent Demographics

Respondents' Characteristic	Frequency	%
Gender		
Male	67	44
Female	86	56
Age		
17-20 Years	59	39
21-24 Years	84	55
25-28 Years	10	7
Current Education		
Senior High School or Equivalent	10	7
Diploma (associate degree / D3–D4)	4	3
Bachelor's Degree (S1)	138	90
Master's Degree (S2)	1	1
Current Status		
Unemployed (Student)	126	82
Full-time Employee	13	8
Part-time Employee	14	9
Income		
< Rp. 1,000,000	53	35
> Rp. 1,000,000 - Rp. 2,000,000	63	41
> Rp. 2,000,000 - Rp. 3,000,000	21	14
> Rp. 3,000,000 - Rp. 4,000,000	9	6
> Rp. 4,000,000	7	5

Source: Primary data processed (2026)

4.1.2 Assessments of Measurement Model

The measurement model was evaluated by examining convergent validity, discriminant validity, and construct reliability. Convergent validity was assessed using outer loadings and Average Variance Extracted (AVE), discriminant validity was evaluated using the Fornell–Larcker criterion, while construct reliability was assessed using Cronbach's Alpha and Composite Reliability.

Table 3. Outer Loading, Validity and Reliability Test

Variables	Instrument	Outer Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Cashless Payment Usage (CPU)	CPU1	0.784	0.806	0.865	0.561
	CPU2	0.725			
	CPU4	0.793			
	CPU5	0.715			
	CPU6	0.725			
Digital Financial Literacy (DFL)	DFA1	0.841	0.965	0.968	0.589
	DFA2	0.730			
	DFA3	0.768			
	DFA4	0.799			
	DFE1	0.772			
	DFE2	0.693			
	DFE4	0.765			
	DFF1	0.773			
	DFF2	0.777			
	DFF3	0.761			
	DFF4	0.717			
	DFF5	0.788			
	DFK1	0.769			
	DFK2	0.840			
	DFK3	0.833			
	DFK4	0.747			
	DFS1	0.773			
	DFS2	0.695			
	DFS3	0.817			
	DFS4	0.702			
	DFS5	0.732			
Trust (TR)	TR1	0.903	0.911	0.934	0.738
	TR2	0.885			
	TR3	0.868			
	TR4	0.792			
	TR5	0.842			

Source: Results of researcher data processing using SmartPLS 4 (2026).

Convergent Validity

Convergent validity is used to assess the extent to which the indicators adequately represent the construct being measured. As presented in Table 3, the majority of the indicators exhibit outer loading values above 0.70. Two indicators have outer loading values slightly below 0.70, namely DFE2 (0.693) and DFS2 (0.695). According to (Hair et al. 2017), indicators with outer loading values ranging from 0.50 to 0.70 may be retained provided that the construct's Average Variance Extracted (AVE) exceeds 0.50, indicating that convergent validity has been established (Saputra & Utomo, 2025). These two indicators were retained because their outer loading values remain above the acceptable minimum threshold and are supported by satisfactory Average Variance Extracted (AVE) and Composite Reliability (CR) values for their respective constructs. In the Digital Financial Literacy construct, three indicators from the Digital Financial Experience (DFE) dimension, namely DFE3, DFE5, and DFE6, were found to be invalid. Similarly, one indicator of the Cashless Payment Usage construct, CPU3, was also found to be invalid. Therefore, these indicators were removed from the measurement model to improve the quality of the measurement instrument and to ensure that the constructs included in the analysis demonstrated adequate validity.

Discriminant Validity

Discriminant validity is assessed to ensure that each construct is empirically distinct from the other constructs in the model. In PLS-SEM, discriminant validity can be assessed using the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT). The Fornell–Larcker criterion involves comparing the square root of the Average Variance Extracted (AVE) of each construct with its correlations with the other constructs. Discriminant validity is established when the square root of the AVE for a construct is greater than its correlations with all other constructs in the model (Fornell & Larcker, 1981; Hair et al., 2022). In addition, HTMT is considered a more sensitive approach for detecting discriminant validity issues in reflective measurement models. (Henseler et al., 2015) recommend an HTMT threshold of < 0.90 when the constructs being compared are conceptually similar, whereas a more conservative threshold of < 0.85 may be applied when the constructs are conceptually distinct. Thus, HTMT values below the specified threshold indicate that discriminant validity between the constructs has been established (Henseler et al., 2015).

Based on Table 4, all constructs exhibit square root of Average Variance Extracted (AVE) values that are higher than their correlations with other constructs. These findings indicate that all constructs demonstrate adequate discriminant validity, confirming that the measurement model satisfies the Fornell–Larcker criterion (Fornell & Larcker, 1981).

Table 4. Fornell Lacker Criterion

	CPU	DFL	GEN	TR
CPU	0.749			
DFL	0.643	0.767		
GEN	-0.122	-0.106	1.000	
TR	0.577	0.760	0.002	0.859

Source: Results of researcher data processing using SmartPLS 4 (2026)

Based on **Table 5**, the results of the Heterotrait–Monotrait Ratio (HTMT) assessment indicate that all HTMT values between the constructs are below the threshold of 0.90, suggesting that there are no discriminant validity concerns in the measurement model. The highest HTMT value is observed between Digital Financial Literacy (X1) and Trust (X2) at 0.810, followed by the relationship between Gender (Z) × Trust (X2) and Trust (X2) at 0.761, and between Cashless Payment Usage (Y) and Digital Financial Literacy (X1) at 0.710. Meanwhile, the lowest HTMT value is observed between Gender (Z) × Trust (X2) and Gender (Z) at 0.001. Since all HTMT values are below the threshold of 0.90, the constructs in this study demonstrate adequate empirical distinctiveness, indicating that discriminant validity has been established.

Table 5. Heterotrait Monotrait Ratio

	Cashless Payment Usage (Y)	Digital Financial Literacy (X1)	Gender (Z)	Trust (X2)	Gender (Z) x Digital Financial Literacy (X1)	Gender (Z) x Trust (X2)
Cashless Payment Usage (Y)						
Digital Financial Literacy (X1)	0.710					
Gender (Z)	0.141	0.110				
Trust (X2)	0.665	0.810	0.029			

Gender (Z) x Digital Financial Literacy (X1)	0.251	0.124	0.026	0.125	
Gender (Z) x Trust (X2)	0.217	0.124	0.001	0.249	0.761

Source: Results of researcher data processing using SmartPLS 4 (2026)

Indicator Reliability

The reliability of the measurement model was assessed using Cronbach's Alpha and Composite Reliability (CR). According to Hair et al. (2022), Cronbach's Alpha values above 0.70 indicate satisfactory internal consistency, while Composite Reliability values between 0.70 and 0.95 demonstrate adequate construct reliability. As shown in Table 3, all constructs exceeded the recommended thresholds. These results confirm that all constructs exhibit high internal consistency and excellent construct reliability.

4.1.3 Assessment of Structural Model

Coefficient of Determination

Based on the adjusted R-square test results, the Cashless Payment Usage variable has an adjusted R-square value of 0.439. This value indicates that the variables used in the model are able to explain 43.9% of the variation in Cashless Payment Usage. In comparison, the remaining 56.1% is explained by other factors outside the research model. According to Hair et al. (2022), the adjusted R-square value of 0.439 indicates that the research model has moderate predictive ability in explaining the use of non-cash payments.

Table 6. R-Square

	R-square	R-square adjusted
CPU	0.457	0.439

Source: Results of researcher data processing using SmartPLS 4 (2026)

Effect Size

The effect size (f^2) was assessed to determine the magnitude of the contribution of each exogenous variable to the endogenous variable in the structural model. According to Hair et al. (2022), f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effect sizes, respectively.

Table 7. Effect Size Assessment

Relationship	f^2	Effect Size
DFL → CPU	0.145	Small
TR → CPU	0.036	Small
Gender → CPU	0.009	No effect
Gender*DFL → CPU	0.023	Small
Gender*TR → CPU	0.001	No effect

Source: Results of researcher data processing using SmartPLS 4 (2026)

Model Fit

The model fit was evaluated using the Standardized Root Mean Square Residual (SRMR). According to Hair et al. (2022), an SRMR value below 0.08 indicates a good model fit. As presented in Table 8, the SRMR values for both the Saturated Model and the Estimated Model are 0.070. Since these values are below the recommended threshold, the structural model demonstrates a good fit.

Table 8. Model Fit Assessment

	Saturated model	Estimated model
SRMR	0.070	0.070

Source: Results of researcher data processing using SmartPLS 4 (2026)

Hypothesis Testing Result

The hypothesis testing results in this study were obtained through bootstrapping analysis using SmartPLS 4. The hypotheses were evaluated based on the original sample estimates, t-statistics, p-values, and confidence intervals. The results of the hypothesis testing are presented in **Table 9**.

Table 9. Hypothesis Testing Results

Hypothesis	Original Sample	T Value	P Values	Decision
H1: DFL → CPU	0.447	4.298	0.000	Supported
H2: TR → CPU	0.226	1.932	0.027	Supported
H3: Gender → CPU	-0.070	1.136	0.128	Not supported
H4: Gender*DFL → CPU	-0.175	2.060	0.020	Not Supported
H5: Gender*TR → CPU	0.045	0.463	0.322	Not supported

Source: Results of researcher data processing using SmartPLS 4 (2026)

Based on these criteria, the first hypothesis (H1), which proposes that Digital Financial Literacy (DFL) positively influences Cashless Payment Usage (CPU), yielded a path coefficient of 0.447, a t-statistic of 4.298, and a p-value of 0.000. Therefore, H1 is supported. The second hypothesis (H2), which examines the effect of Trust (TR) on Cashless Payment Usage (CPU), produced a path coefficient of 0.226, a t-statistic of 1.932, and a p-value of 0.027. Therefore, H2 is supported. The third hypothesis (H3), which proposes that Gender influences Cashless Payment Usage (CPU), yielded a path coefficient of -0.070, a t-statistic of 1.136, and a p-value of 0.128. Therefore, H3 is not supported. Furthermore, the fourth hypothesis (H4), the moderating effect of Gender on the relationship between Digital Financial Literacy and Cashless Payment Usage, was statistically significant ($\beta = -0.175$, $t = 2.060$, $p = 0.020$). However, the negative path coefficient indicates that Gender weakens, rather than strengthens, the positive relationship between Digital Financial Literacy and Cashless Payment Usage. Therefore, H4 is not supported. Finally, the fifth hypothesis (H5), which examines the moderating effect of Gender on the relationship between Trust and Cashless Payment Usage, produced a path coefficient of 0.045, a t-statistic of 0.463, and a p-value of 0.322. Accordingly, H5 is not supported (Hair et al., 2022).

4.2 Discussion

Digital Financial Literacy and Cashless Payment Usage

The finding suggests that higher levels of digital financial literacy encourage greater use of cashless payment methods among Generation Z. Individuals who possess a better understanding of digital financial products, are capable of managing transaction risks, and have the skills to utilize digital financial services are more confident in using QRIS, e-wallets, and mobile banking (Long et al., 2023; Yang et al., 2021). This finding supports the Theory of Planned Behavior (TPB), which posits that knowledge shapes positive attitudes and enhances perceived behavioral control, thereby encouraging individuals to perform a particular behavior (Ajzen, 2020). The result is consistent with previous studies by Bemby & Qomariyah (2023), Kaur et al. (2025), and Long et al. (2023), which found that digital financial literacy is a key determinant of digital payment adoption. In Indonesia, the rapid expansion of QRIS and other digital payment services has further emphasized the importance of digital financial literacy in promoting cashless payment usage (Bank Indonesia, 2025). Therefore, this finding reinforces the literature by confirming that multidimensional digital financial literacy is a primary determinant of cashless payment usage among Generation Z.

Trust and Cashless Payment Usage

The hypothesis testing results indicate that greater trust in the security, reliability, and data protection of digital payment services increases Generation Z's willingness to adopt cashless payment methods. According to the Unified Theory of Acceptance and Use of Technology (UTAUT), trust reduces perceived risk and enhances individuals' acceptance of technology (Venkatesh et al., 2003). This finding is consistent with the studies of Widyanto et al. (2022), Namahoot & Jantasri (2023), and Khairunnisa et al. (2025), which identified trust as a significant determinant of digital payment adoption. Furthermore, continuous improvements in the security of QRIS, e-wallets, and mobile banking services in Indonesia have strengthened public confidence in digital transactions. Therefore, enhancing security features and service transparency remains an important strategy for promoting cashless payment usage.

Gender and Cashless Payment Usage

The finding suggests that cashless payment behavior among Generation Z is relatively unaffected by gender differences. From the perspective of UTAUT, the influence of gender on technology adoption tends to diminish as technology becomes more widely used across different segments of society (Venkatesh et al., 2003). This finding is consistent with (Hoque et

al. 2024) and Rasheduzzaman et al. (2025), who reported that the gender gap in fintech adoption has gradually narrowed. The widespread availability of QRIS, e-wallets, and mobile banking has provided both men and women with equal opportunities to utilize digital payment services (Hoque et al., 2024; Rasheduzzaman et al., 2025). This finding indicates that the characteristics of Generation Z as digital natives reduce gender differences in cashless payment behavior.

Gender as a Moderator between Digital Financial Literacy and Cashless Payment Usage

The finding suggests that gender weakens the positive relationship between digital financial literacy and cashless payment usage. According to UTAUT, gender represents an individual characteristic that influences how knowledge and capabilities are translated into technology usage behavior (Venkatesh et al., 2003). This finding is consistent with Fahira et al. (2023) and Shehadeh et al. (2025), who found that gender moderates the relationship between digital financial literacy and digital payment adoption. However, the negative moderating effect observed in this study indicates that improvements in digital financial literacy do not translate into equally strong increases in cashless payment usage across different gender groups. The simple slope analysis (Figure 5) further illustrates this interaction by showing that all three slopes remain positive, indicating that higher levels of Digital Financial Literacy are consistently associated with greater Cashless Payment Usage regardless of gender. However, the progressively flatter slopes across gender levels indicate that the positive effect of Digital Financial Literacy becomes weaker as the moderating effect of Gender increases. This suggests that although improving Digital Financial Literacy encourages the adoption of cashless payment systems for both men and women, the magnitude of this effect is not equally strong across gender groups. One possible explanation is that Generation Z, as digital natives, generally possesses relatively similar exposure to digital technologies, thereby reducing gender differences in translating financial literacy into actual payment behavior. Therefore, digital financial literacy programs should consider gender-specific characteristics to maximize their effectiveness.

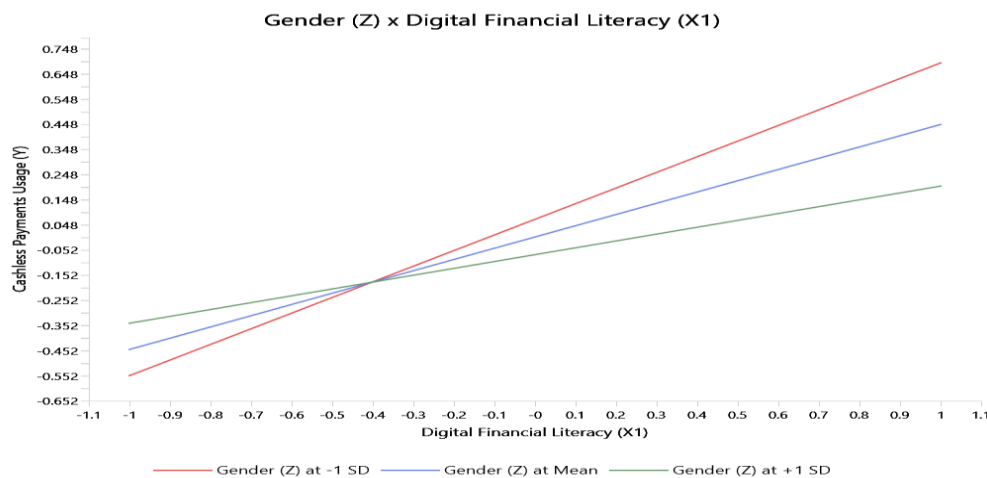


Figure 5. Moderation Slope of Gender and Digital Financial Literacy on Cashless Payment Usage

Gender as a Moderator between Trust and Cashless Payment Usage

The finding suggests that the influence of trust on cashless payment usage is relatively similar for both men and women. Within the UTAUT framework, although gender may influence technology acceptance, trust in the security and reliability of digital payment systems represents a universal concern shared by all users. This finding differs from those reported by Alshurideh et al. (2021) and Joshi & Chawla (2024). Still, it supports the view that Generation Z has relatively similar levels of digital experience and technology exposure. This result is further supported by Widyanto et al. (2022), who found that trust positively influences mobile payment usage, as well as Hoque et al. (2024) and Rasheduzzaman et al. (2025), who reported that the gender gap in fintech adoption has continued to decline. Therefore, efforts to strengthen users' trust in digital payment services can be implemented uniformly across all user groups without the need for gender-specific strategies.

5. CONCLUSION

This study aimed to examine the effects of Digital Financial Literacy (DFL) and Trust on Cashless Payment Usage (CPU) among Generation Z, while also investigating the moderating role of Gender in these relationships. The findings reveal that Digital Financial Literacy and Trust have positive and significant effects on cashless payment usage. In contrast, Gender does not have a direct effect on cashless payment usage but significantly moderates the relationship between Digital Financial Literacy and Cashless Payment Usage. In contrast, its moderating effect on the relationship between

Trust and Cashless Payment Usage is not supported. These findings indicate that cashless payment behavior among Generation Z is primarily driven by individuals' capabilities in understanding and utilizing digital financial services, as well as their trust in digital payment systems, rather than by gender differences.

From a theoretical perspective, this study contributes to the literature by integrating the Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology (UTAUT) to explain cashless payment usage. Furthermore, it extends the literature by conceptualizing Digital Financial Literacy as a multidimensional construct comprising digital financial awareness, digital financial legal framework, digital subjective financial knowledge, digital financial experience, and digital financial skills. This multidimensional approach provides a more comprehensive understanding of the factors influencing cashless payment usage than conventional measures that primarily focus on financial knowledge. From a practical perspective, the findings offer important implications for Bank Indonesia, financial institutions, fintech providers, and higher education institutions to strengthen digital financial literacy programs, enhance the security of digital payment systems, and foster public trust in order to support the development of an inclusive and sustainable digital payment ecosystem.

This study has several limitations that should be acknowledged. First, the respondents were limited to Generation Z residing in Banyumas Regency, which may restrict the generalizability of the findings to broader populations. Second, the study only examined the effects of Multidimensional Digital Financial Literacy, Trust, and Gender. At the same time, other factors that may influence cashless payment usage, such as performance expectancy, social influence, perceived security, habit, and financial inclusion, were not included in the research model. Therefore, future studies are encouraged to expand the geographical scope, include more diverse respondent characteristics, and incorporate additional explanatory variables to develop a more comprehensive understanding of digital payment adoption behavior in Indonesia.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to all individuals and institutions who supported the completion of this research. Special appreciation is extended to the Generation Z respondents in Banyumas Regency for their willingness to participate and provide valuable data for this study. The authors also sincerely thank the supervisors and the Faculty of Economics and Business, Universitas Muhammadiyah Purwokerto, for their invaluable guidance and support throughout the research process. Finally, the authors are deeply grateful to their families and colleagues for their continuous encouragement, prayers, and moral support. The authors hope that the findings of this study will contribute to the advancement of digital financial literacy and the wider adoption of cashless payments among Generation Z. Furthermore, it is expected that this study will serve as a valuable reference for policymakers, financial institutions, educational institutions, and future researchers in developing more effective strategies to support sustainable digital financial transformation.

REFERENCES

- Agus Simatupang, R., Sabarofek, S., & Bajari, M. (2022). A Study on Behavioral Intentions: An Theory Planned Behavior Perspectives. <https://doi.org/10.4108/EAI.10-8-2022.2320837>
- Ahziza, N., Goso, & Rahmawati. (2024). Exploring The Role Of Financial Literacy In Promoting E-Wallet Use Among Gen-Z. *Proceedings Series on Proceedings of Multidisciplinary Sciences*, 1(1), 1789–1797.
- Ajzen, I. (1991). The Theory Of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2020). The Theory Of Planned Behavior: Frequently Asked Questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Alfiana, A., Mulastih, L. S., Sasongko, R. W., Ristati, R., & Amri, A. (2024). The Influence Of Financial Literacy And Digital Literacy On Non-Cash Transaction Preferences. *Jurnal Ilmiah Edunomika*, 8(1), 2023. <https://doi.org/10.29040/JIE.V8I1.11024>
- Alshurideh, M. T., Al Kurdi, B., Masa'deh, R., & Salloum, S. A. (2021). The Moderation Effect Of Gender On Accepting Electronic Payment Technology: A Study On United Arab Emirates Consumers. *Review of International Business and Strategy*, 31(3), 375–396. <https://doi.org/10.1108/RIBS-08-2020-0102>
- Anatasya, P. S., & Innayah, M. N. (2025). Understanding Young Generation's Saving Behavior: The Role of Multidimensional Financial Literacy, Materialism and Financial Inclusion. *Paradoks : Jurnal Ilmu Ekonomi*, 8(4), 187–205. <https://doi.org/10.57178/paradoks.v8i4.1721>
- Arianita, A., Alfansi, I., & Anggarawati, S. (2023). Analysis Factor Affecting The Use Of Digital Payment With The Extended Utaut Model. *The Manager Review*, 5(1), 91–108. <https://doi.org/10.33369/TMR.V5I1.29733>
- Arwin, A., Yuliana, Y., Wenry, W., Lo, C., Kuan, J., Perusahaan, M., Cendana, P., Utara, S., & oleh Politeknik Piksi Ganesha Indonesia, D. (2022). Analisis Niat Konsumen dalam menggunakan QRIS Dengan Pendekatan Theory of Planned Behavior (TPB). *Jurnal E-Bis*, 6(2), 680–690. <https://doi.org/10.37339/E-BIS.V6I2.1032>

- Bank Indonesia. (2025, May). Laporan Perekonomian Provinsi Jawa Tengah Mei 2025. <https://www.bi.go.id/id/publikasi/laporan/lpp/Pages/Laporan-Perekonomian-Provinsi-Jawa-Tengah-Mei-2025.aspx>
- Bank Indonesia. (2026). Statistik Sistem Pembayaran dan Infrastruktur Pasar Keuangan (SPIP) April 2026. <https://www.bi.go.id/id/statistik/ekonomi-keuangan/spip/Pages/SPIP-April-2026.aspx>
- Bemby, F. A. W., & Qomariyah, A. (2023). Does Financial Literacy Matter in Cashless Payment Usage? *Jurnal Akuntansi Dan Keuangan*, 25(2), 117–128. <https://doi.org/10.9744/jak.25.2.117-128>
- Cohen, J. (2013). Statistical Power Analysis for the Behavioral Sciences. *Statistical Power Analysis for the Behavioral Sciences*, 1–567. <https://doi.org/10.4324/9780203771587>
- Efrianto, G., Tresnawaty, N., & Ak, M. (2021). Pengaruh Privasi, Keamanan, Kepercayaan Dan Pengalaman Terhadap Penggunaan Fintech Di Kalangan Masyarakat Kabupaten Tangerang Banten. *Jurnal Liabilitas*, 6(1), 53–72. <https://doi.org/10.54964/Liabilitas.V6i1.71>
- Efriyanto, E., Rozza, S., & Anggun, L. (2025). The Influence of Financial Literacy and Cashless Payment on Consumptive Behavior of Generation Z in Jakarta. *International Journal of Current Science Research and Review*, 08(07). <https://doi.org/10.47191/ijcsrr/V8-i7-48>
- Fahimah, H. M., & Harsono, M. (2023). Literature Review of The Evolution of Payment System Paradigms: From Cash to Cashless with Digital Payment. *Social, Humanities, and Educational Studies (SHES): Conference Series*, 6(3), 11–18. <https://jurnal.uns.ac.id/SHES/article/view/81553>
- Fahira, F., Suarni, A., & Khaedar Sahib, M. (2023). The Influence of Digital Financial Literacy on the Use of Non-Cash Payments in Makassar City: Gender as a Moderating Variable. (23), 1038–1054. <https://doi.org/https://doi.org/10.65246/53kbh208>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Gunawan, A., Fatikasari, A. F., & Putri, S. A. (2023). The Effect of Using Cashless (QRIS) on Daily Payment Transactions Using the Technology Acceptance Model. *Procedia Computer Science*, 227, 548–556. <https://doi.org/10.1016/J.PROCS.2023.10.557>
- Hair, G. T. M. Hult, C. M. Ringle, & J. Joseph and M. Sarstedt. (2022). A primer on partial least squares structural equation modeling (PLS-SEM). *International Journal of Research & Method in Education*, 38(2), 220–221. https://www.researchgate.net/publication/354331182_A_Primer_on_Partial_Least_Squares_Structural_Equation_Modeling_PLS-SEM
- Hair, J. F. ., Hult, G. T. M. ., Ringle, C. M. ., & Sarstedt, Marko. (2017). A primer on partial least squares structural equation modeling (PLS-SEM). Sage.
- Hair, Joseph F, Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis Eighth Edition*. www.cengage.com/highered
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science* 2014 43:1, 43(1), 115–135. <https://doi.org/10.1007/S11747-014-0403-8>
- Hoque, M. Z., Chowdhury, N. J., Hossain, A. A., & Tabassum, T. (2024). Social and facilitating influences in fintech user intention and the fintech gender gap. *Heliyon*, 10(1), e23457. <https://doi.org/10.1016/j.heliyon.2023.e23457>
- Indriyani, D., & Sartika, S. H. (2022). Persepsi Generasi Z pada Penggunaan E-wallet selama Pandemi Covid-19. *Widya Cipta: Jurnal Sekretari Dan Manajemen*, 6(1), 68–74. <https://doi.org/10.31294/Widyacipta.V6I1.12200>
- Irimia-Diéguez, A., Velicia-Martín, F., & Aguayo-Camacho, M. (2023). Predicting Fintech Innovation Adoption: the Mediator Role of Social Norms and Attitudes. *Financial Innovation* 2023 9:1, 9(1), 36-. <https://doi.org/10.1186/S40854-022-00434-6>
- Jain, V., & Jain, N. (2024). From Cash to Clicks: A Systematic Review of Digital Payment Adoption Using the ADO Framework. *NMIMS Management Review*, 32(4), 277–291. <https://doi.org/10.1177/09711023241312523>
- Joshi, H., & Chawla, D. (2024). Impact Of Security On Wallet Adoption: Multiple And Serial Mediating Roles Of Trust And Attitude And Gender As A Moderator. *International Journal of Bank Marketing*, 42(5), 870–896. <https://doi.org/10.1108/IJBM-02-2023-0118>
- Joyosemito, A. (2025). Tren Penggunaan QRIS Meningkatkan Tajam di Banyumas Raya, Ini Buktinya. <https://purwokerto.inews.id/read/661130/tren-penggunaan-qris-meningkat-tajam-di-banyumas-raya-ini-buktinya/all>
- Juita, V., Pujani, V., Rahim, R., & Rahayu, R. (2023). Gender Differences in Financial Technology (FINTECH) Adoption in Indonesia: An Analysis of Risk Perceptions and Benefits. *Riset Akuntansi Dan Keuangan Indonesia*, 8(2), 145–158. <https://doi.org/10.23917/REAKSI.V8I2.2308>
- Kaur, D., Khan, M. M., & Sujood. (2025). Consumer Intentions And Digital Financial Literacy: A New Perspective On Fintech Payment Product Adoption. *International Journal of Management Practice*, 18(6), 631–654. <https://doi.org/10.1504/IJMP.2025.149568>
- Khairunnisa, F., Ramadhani, E., Wulandari, S. A. P., & Ningtyas, F. A. (2025). Exploring the Mediating Role of Digital Literacy and Moderating Role of Security Perception in Fintech Trust and Digital Payment Adoption. *Talent: Journal of Economics and Business*, 3(03), 176–186. <https://doi.org/10.59422/JEB.V3I03.977>
- Lakadjo, F. N., & Rahmawati, I. D. (2026). Digital Financial Literacy and Trust in Digital Payment Systems in Shaping

- Public Decisions to Use Digital Wallets for Daily Transactions. *Inkubis : Jurnal Ekonomi Dan Bisnis*, 8(1), 166–178. <https://doi.org/10.59261/Inkubis.V8I1.143>
- Leang, P., Ramsamy, S. S., Phaphuangwittayakul, A., & Loahavilai, P. (2023). Consumer Perceptions and Behaviors on Digital Payment Adoption Among Older Generation Z and Younger Millennials in Phnom Penh, Cambodia. *International Journal of Professional Business Review*, 8(8), e03647. <https://doi.org/10.26668/businessreview/2023.v8i8.3647>
- Long, T. Q., Morgan, P. J., & Yoshino, N. (2023). Financial Literacy, Behavioral Traits, And Epayment Adoption And Usage In Japan. *Financial Innovation*, 9(1). <https://doi.org/10.1186/s40854-023-00504-3>
- Mei, L. M., & Atan, S. A. (2021). Applying Technology Acceptance Model Towards Cashless Payment Usage Among Consumers in Kulai, Johor. *Research in Management of Technology and Business*, 2(1), 349–360. <https://doi.org/10.30880/rmtb.2021.02.01.025>
- Muat, S., Mahdzan, N. S., Sukor, M. E. A., Fachrurrozi, F., & Sari, N. (2025). The Role Of Financial Inclusion, Financial Literacy And Digital Payment Adoption In Indonesian Millennials' Financial Well-Being. *International Journal of Bank Marketing*, 43(9), 1938–1968. <https://doi.org/10.1108/IJBM-01-2024-0022>
- Mulyati, S. D., & Caroline, N. (2026). The Impact of Digital Financial Literacy and Information Security on Non-Cash Payment Adoption among Students in Jakarta: The Moderating Role of Gender. *Jurnal Riset Multidisiplin Edukasi*, 3(2), 23–43. <https://doi.org/10.71282/JURMIE.V3I2.1650>
- Namahoot, K. S., & Jantasri, V. (2023). Integration of UTAUT Model In Thailand Cashless Payment System Adoption: The Mediating Role Of Perceived Risk And Trust. *Journal of Science and Technology Policy Management*, 14(4), 634–658. <https://doi.org/10.1108/JSTPM-07-2020-0102>
- Nurkholik, A., & Saputra, M. G. (2024). An Uncommon Approach Using R: Moderating Gender on Digital Financial Literacy and Behavior. *International Journal of Advanced Technology and Social Sciences (IJATSS)*, 2(6), 733. <https://doi.org/10.59890/ijatss.v2i6.1947>
- Pangestika, Z. N., Putri, D. K., Angelica, S. F., Nuryana, I., & Nihayah, D. M. (2025). Systematic Literature Review: Persepsi Penggunaan QRIS Sebagai Peningkatan Efektivitas Alat Pembayaran dan Sistem Keuangan Digital. *Jurnal Pendidikan Ekonomi (JUPE)*, 13(2), 103–115. <https://doi.org/10.26740/jupe.v13n2.p103-115>
- Panjaitan, P., Azazi, A., Fitriana, A., Ristyawan, M. R., & Syahputri, A. (2026). Financial Literacy as a Moderator of the Effects of Fintech Payment, Income, and Hedonic Lifestyle on Impulse Buying among Generation Z. *Journal of Educational Management Research*, 5(2), 2225–2240–2225–2240. <https://doi.org/10.61987/JEMR.V5I2.2014>
- Permana, G. P. L., & Apriani, N. K. M. (2025). Mengukur Relevansi Cashless Society pada Generasi Z. *Jurnal Akuntansi, Keuangan, Dan Manajemen*, 6(3), 713–726. <https://doi.org/10.35912/jakman.v6i3.3758>
- Rasheduzzaman, M., Palash, M. S., Mostafizur, R. M., Samria, N. J., & Farid, M. S. (2025). Bridging The Gender Gap In Mobile Payment Services: Insights From Consumer Of Bangladesh. *Scientific Reports 2025 15:1*, 15(1), 33838-. <https://doi.org/10.1038/s41598-025-06176-6>
- Saputra, M. R. A., & Utomo, S. S. (2025). Analisis Strategi Konten Harian Berbagai Tema dalam Membangun Identitas Merek Graha Office pada Perspektif Digital Marketing. *RIGGS: Journal of Artificial Intelligence and Digital Business*, 4(4), 1206–1220. <https://doi.org/10.31004/riggs.v4i4.3503>
- Sejati, P. P. (2025). Fakta Literasi Keuangan Gen Z di Banyumas: Rentan Terjerat Paylater, Mulai Terjun di Investasi Saham - *Tribunbanyumas.com*. <https://banyumas.tribunnews.com/bisnis/85356/fakta-literasi-keuangan-gen-z-di-banyumas-rentan-terjerat-paylater-mulai-terjun-di-investasi-saham>
- Shehadeh, M., Dawood, H. M., & Hussainey, K. (2025). Digital Financial Literacy And Usage Of Cashless Payments In Jordan: The Moderating Role Of Gender. *International Journal of Accounting and Information Management*, 33(2), 354–382. <https://doi.org/10.1108/IJAIM-03-2024-0115>
- Singh, R., Rafat, A., & Srivastava, S. (2024). Payment Fintech Application Adoption In Low–Income Groups: How Financial Literacy Moderates Influencing Factors? *Journal of Science and Technology Policy Management*. <https://doi.org/10.1108/JSTPM-12-2023-0240/1258517>
- Siswanti, T. (2023). Pengaruh Literasi Keuangan Digital Dan Sosial Ekonomi Terhadap Pemanfaatan Digital Payment Dengan Budaya Sebagai Variabel Moderating. *Jurnal Bisnis Dan Akuntansi Unsuraya*, 8(1). <https://doi.org/https://doi.org/10.35968/jbau.v8i1.1017>
- Slepian, R. C., Vincent, A. C., Patterson, H., & Furman, H. (2024). “Social Media, Wearables, Telemedicine And Digital Health,”—A Gen Y And Z Perspective. *Comprehensive Precision Medicine, First Edition, Volume 1-2*, 1–2, 524–544. <https://doi.org/10.1016/B978-0-12-824010-6.00072-1>
- Sumi, R. S., Hoque, I., & Ahmed, M. (2025). User Acceptance Intention Of Mobile Financial Services: An Application Of Gender Moderating Effect. *Journal of Financial Services Marketing*, 30(1). <https://doi.org/10.1057/s41264-025-00300-3>
- Susilowati, N., Febriyanti, S. A., Avrielliandiny, A. D., Shabrina, P. T., & Revaldo, A. (2025). Literasi Keuangan Dan Kepercayaan Sebagai Determinan Adopsi Dompot Digital: Studi Pada Pengguna ShopeePay Di Kalangan Mahasiswa Pendidikan Ekonomi. *Journal of Accounting and Digital Finance*, 5(3), 345–357. <https://doi.org/10.53088/JADFI.V5I3.2326>

- Syari, A. P., Karyani, E., Pamungkas, P., & Fariz Achsanta, A. (2024). Digital Literacy and Cashless Payment: Evidence from Indonesia. *The Asian Journal of Technology Management*, 17(1), 51–58. <https://doi.org/10.12695/ajtm.2024.17.1.4>
- Tempo.co. (2025, July 12). BI Ungkap Gen Z dan Milenial Mendominasi Penggunaan QRIS. <https://www.tempo.co/ekonomi/bi-ungkap-gen-z-dan-milenial-mendominasi-penggunaan-qris--2048513>
- Tikno, Dharmawan, Y. S., & Ngatini. (2024). Investigating Consumer Acceptance of Mobile Payment Services in Indonesia. *Procedia Computer Science*, 234, 1095–1102. <https://doi.org/10.1016/J.PROCS.2024.03.104>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward A Unified View1. *Management Information Systems Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- Widyanto, H. A., Kusumawardani, K. A., & Yohanes, H. (2022). Safety First: Extending UTAUT To Better Predict Mobile Payment Adoption By Incorporating Perceived Security, Perceived Risk And Trust. *Journal of Science and Technology Policy Management*, 13(4), 952–973. <https://doi.org/10.1108/JSTPM-03-2020-0058>
- Yang, M., Al Mamun, A., Mohiuddin, M., Naw, N. C., & Zainol, N. R. (2021). Cashless transactions: A study on intention and adoption of e-wallets. *Sustainability (Switzerland)*, 13(2), 1–18. <https://doi.org/10.3390/su13020831>
- Yong, W. K., Wong, S. F., Mahmud, M. M., & Zhamgyrchiev, N. (2023). Unveiling Gender Dynamics: Examining Gender Moderation Effects on the Relationship of Subjective Norms, Attitude, and Intention Towards E-Wallet Adoption in Tajikistan. *Proceedings - 2023 International Conference on Advanced Enterprise Information System, AEIS 2023*, 136–140. <https://doi.org/10.1109/AEIS61544.2023.00029>
- Zeeshan, M., Malik, A., & Sohail, M. K. (2025). Mobile Banking Adoption: Integrating UTAUT, Task Technology Fit, and Initial Trust with Financial Literacy. *Journal of Innovative Research in Management Sciences*, 6(3), 80–107. <https://doi.org/10.62270/JIRMS.V6I3.124>