

Becoming a Cashless Society: The Role of QRIS from the Z-Generation Student's Perspective

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Abstract

Along with the development of QRIS in Indonesia and Bank Indonesia's efforts to expand the use of the Quick Response Code Indonesian Standard (QRIS) internationally, Z-generation students are faced with the dynamics of financial transaction options towards a cashless society. This study aims to prove the factors that influence the use of QRIS to become a cashless society from the perspective of Z-generation students. The analysis was carried out in-depth based on the UTAUT theory. This study uses primary data by distributing questionnaires to Z-generation students at two universities in Samarinda. A total of 273 data were processed with SmartPLS. Findings show that Z-generation students accept QRIS as a leader in changing the payment paradigm, with high usage intentions driven by effectiveness and efficiency in daily financial transactions. Social influence from peers and family has also been shown to play a key role in shaping attitudes and behavior in using QRIS. Nevertheless, interesting findings imply that supporting factors, such as facilitating conditions, do not always play a dominant role in influencing Z-generation students' decisions to switch to cashless. The implication is that even though QRIS has great potential to form a cashless society, a holistic approach that considers social and psychological factors is crucial. This study suggests that future research involves a broader and more diverse sample that may provide more holistic insights and generalization.

Keywords: *Cashless Society, QRIS, UTAUT, Z-generation students.*

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INTRODUCTION

The discourse of a cashless society was first researched in 1967 by Dale L. Reistad (1967) titled *The Coming Cashless Society*. In his writing, Reinstad revealed that innovations had been developed by the banking industry that could eliminate the use of cash, credit cards, checks, and current accounts, as well as expand banking services. He called it checkless banking. Along with the development of technology and the digital era, the cashless society described by Reinstad is becoming a reality today.

One of the technologies that supports the realization of a cashless society is the Quick Response Code Indonesian Standard (QRIS), which is a national QR code standard to facilitate QR code payments in Indonesia which was launched by Bank Indonesia and the Indonesian Payment System Association (ASPI) on 17 August 2019. QRIS makes it possible for users to make payments by scanning the QR code provided by the merchant or service provider, using electronic money applications, digital wallets, or mobile banking from various payment system service providers (PJSP). QRIS has advantages such as being easy, fast, safe, and cheap, and it can increase efficiency and transparency in the payment system.

QRIS is part of the Indonesian Payment System Blueprint (BSPI) 2025. In its development, QRIS has had various features that make it easier for users and traders, including QRIS Without Face to Face (TTM) (2020), QRIS Consumer Presented Mode (CPM) (2021), and QRIS Between Countries (2022). Strong synergy with all relevant stakeholders, such as the Government, industry players, and the community, is one of the main strategies for expanding QRIS acceptance (Bank Indonesia, 2023).

The convenience and variety of QRIS features support digital economic and financial inclusion as well as payment connectivity between countries. This benefits both users and traders, especially the MSME segment. Data as of June 2023 shows that QRIS has reached 26.7 million merchants, with 91.4% of that number being MSMEs. In line with this development, the number of QRIS transactions throughout 2022 was recorded at 1.03 billion transactions or grew by 86% (year on year). Bank Indonesia's efforts to realize a digital transformation that benefits society with QRIS have resulted in the Indonesia Recognition of Excellence 2023 award by OpenGov Asia in Jakarta (Bank Indonesia, 2023).

The realization of a cashless society in Indonesia is predicted to be achieved in 2030. The Consumer Payment Attitude Visa 2022 study found that Indonesian people are optimistic that they can become a cashless society by 2030, even sooner. (Azizah, 2023). Based on Figure 1, QRIS usage during 2022 accelerated rapidly with an increase reaching 94% from 14.9 million users at the beginning of 2022 to 28.8 million users at the end of 2022 (Ahdiat, 2023).

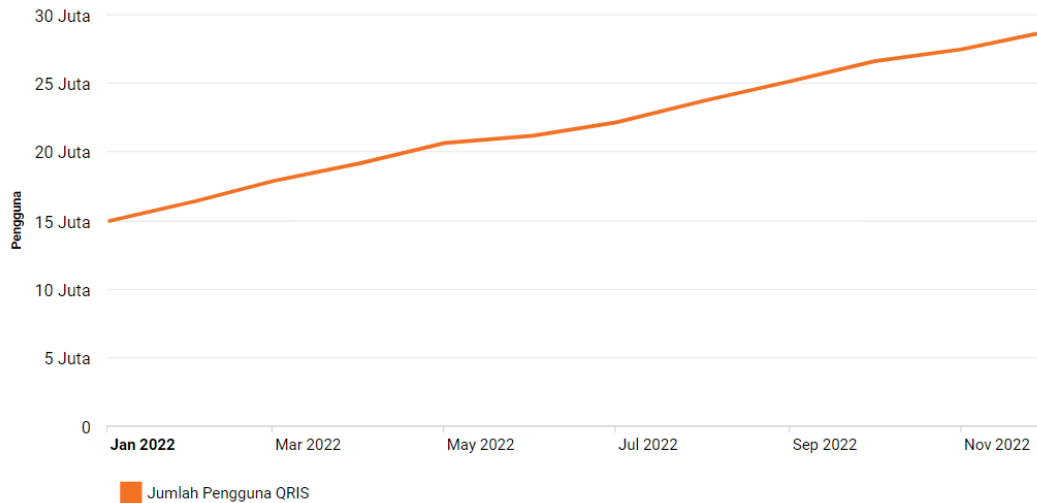
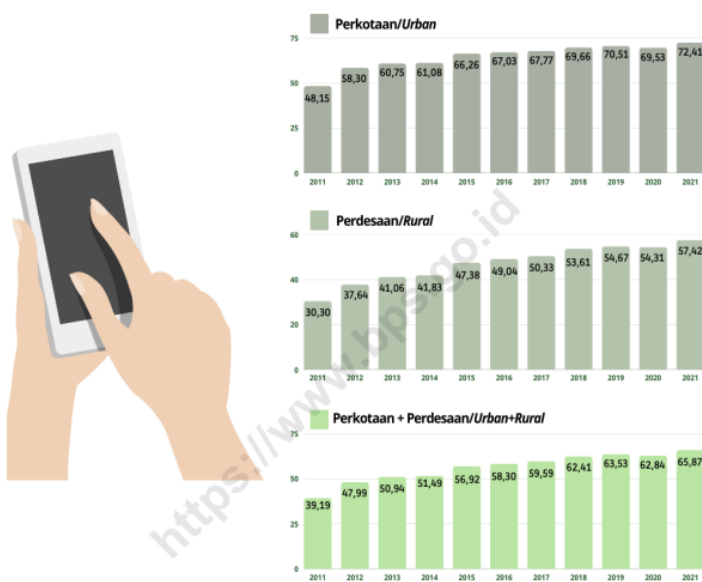


Figure 1. QRIS User Data Growth for 2022

Source: Jumlah Pengguna QRIS di Indonesia Januari-Desember 2022 / Number of QRIS Users in Indonesia January-December 2022 (Ahdiat, 2023).



Sumber/Source: BPS, Survei Sosial Ekonomi Nasional/BPS-Statistics Indonesia, National Socioeconomic Survey

Figure 2. Percentage of Population Owning/Using Cellular Phone by Area Classification, 2011—2021

Source: Statistik Telekomunikasi Indonesia 2021 / Indonesian Telecommunication Statistics 2021 (BPS, 2021)

Using QRIS requires internet and cell phone facilities. Figure 2 shows data on the development of cellular telephone use for 11 years, from 2011 to 2021 (BPS, 2021).

The increasing growth in QRIS use is accompanied by the development of cellular telephone use in urban and rural areas, with growth rates of 72.41% and 57.42%, respectively. This provides initial evidence that Indonesian society is increasingly aware of digital literacy. Based on Figure 3, the population that uses the Internet the most is among students, with an internet user penetration rate of 99.26% (APJII, 2022).

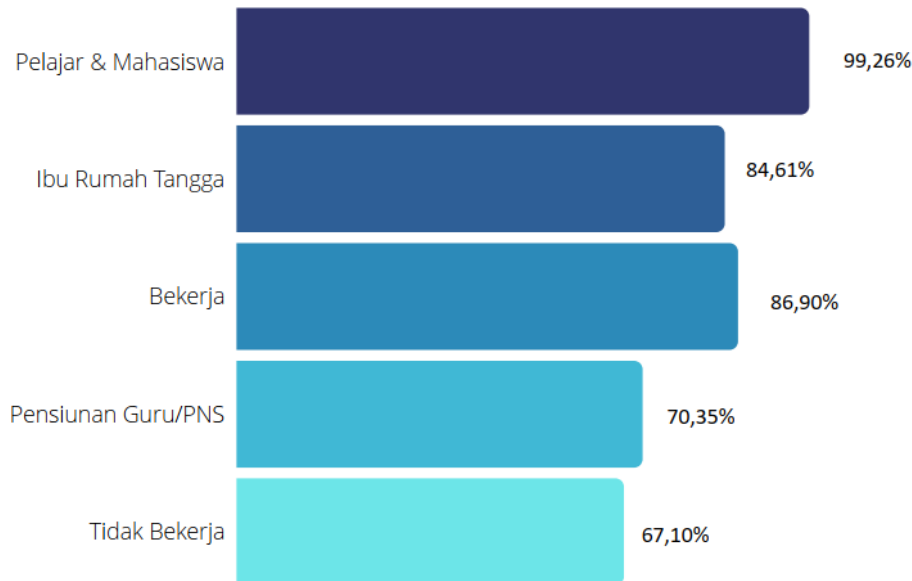


Figure 3. Internet User Penetration Rates by Occupation

Source: Profil Internet Indonesia 2022 / Indonesian Internet Profile 2022 (APJII, 2022).

In an increasingly digitalized society, the transition to a cashless society has become an inevitable reality. The cashless society phenomenon is not only the result of technological innovation, but also creates a new mindset, especially among Z-generation students who grew up in the digital era (see figure 3, the largest internet users are among students). Z-generation is a generation of modern humans born in 1995-2010. Z-generation is a generation that is used to technology, communication and privacy, and is more tolerant and independent. Z-generation is also a generation that cares about social, environmental and humanitarian issues, and has high aspirations and hopes for the future.

However, along with increasingly widespread acceptance, there is still a gap in the literature regarding the role of QRIS in the perspective of Z-generation students, who grew up amidst the turmoil of technology and information, witnessing significant developments in payment systems. Students are agents of change and potential future leaders. Students have a strategic role in

developing science, technology and innovation, as well as contributing to national development. Students are the group that has the most contact with technology. Because of this, they are also a group that can more easily and quickly follow technological advances. Students have special characteristics that differentiate them from other Z-generation groups, such as having high learning motivation, good academic skills, and openness to various sources of information. Z-generation students have great potential to become pioneers and drivers of a cashless society in Indonesia, because they have high technological access and literacy, as well as broad social awareness and participation.

Therefore, this study aims to contribute to the literature by exploring the role of QRIS in the perspective of Z-generation students through the lens of the Unified Theory of Acceptance and Use of Technology (UTAUT) theory. UTAUT theory is a relevant framework for understanding the acceptance and use of technology, including in the context of QRIS acceptance among Z-generation students. Although much research has been conducted regarding the acceptance of digital payment technology, there is a void in the literature that specifically links the Z-generation perspective with UTAUT theory in the context of QRIS.

UTAUT theory is a model that explains user intentions and behavior towards information technology, by considering four main constructs, namely performance expectancy, effort expectancy, social influence, and facilitating conditions (Dwivedi et al., 2011, 2019; Hastuti et al., 2014; Williams et al., 2015). This research is expected to provide an overview of the perceptions, attitudes and experiences of Z-generation students towards cashless society and QRIS, as well as the factors that influence the acceptance and use of QRIS by Z-generation students. This research is also expected to provide recommendations for related parties, such as Bank Indonesia, ASPI, PJSP, merchants and academics, to increase the adoption and implementation of QRIS in Indonesia, especially among Z-generation students.

Several research has been conducted on a cashless society, including research based on the TAM (Technology Acceptance Model) theory conducted by Albastaki (2023); Gunawan et al. (2023); Loh et al. (2022); Pujiastuti (2022); Suryaningrum (2012); and more. They studied towards a cashless society with benefitpay (Bahrain), QRIS (Indonesia), wearable payment (Malaysia), eMoney (Indonesia), respectively. Using TAM theory, they concluded that ease of use and usefulness positively influence intention to use cashless technology, that enable the development of cashless societies. However, to the best of the author's knowledge, no studies towards cashless society using UTAUT have been done in Indonesia, especially the use of QRIS from the Z-generation students' perspective.

UTAUT theory was first introduced by (Venkatesh et al., 2003) to make a unified theory related to the adoption of a new information systems. The UTAUT theory emerged as the model that was most frequently used. Due to its ability to explain 70% of the diversity in adoption of technology-based systems behavior (Venkatesh et al., 2003). The UTAUT theory gained widespread recognition in cashless society research (Abdullah et al., 2020; Chaveesuk et al., 2019; Namahoot & Jantasri, 2023). It is a complete model that can be used in many different contexts

and has proven to be an accurate tool for predicting adoption patterns in a variety of technology-based systems. UTAUT consists of two endogenous variables, BI to use technology and use behavior, and four exogenous groups: effort expectancy (EE), performance expectancy (PE), social influence (SI), and facilitating conditions (FCs) (Venkatesh et al., 2003).

The difficulties in using a QRIS system are reflected in effort expectations. Effort expectation is a system's technical feature-related usability. A system with easily understood technical characteristics and a low learning curve would be more likely to be adopted and implemented by potential users (Arianita et al., 2023; Huang, 2020). Moreover, Venkatesh et al. (2003) defined effort expectancy as the degree of convenience associated with utilizing new technology.

H1: effort expectancy affects becoming cashless society with QRIS

Performance expectancy is the degree to which a person expects that utilizing new technologies will enhance their ability to perform at work. It is hypothesised that age and gender moderate the link between behavioral intention and performance expectancy (Chaveesuk et al., 2019). As per Abdullah et al. (2020), an individual's overall perception of the convenience of a new technology might be influenced by its performance expectancy of use. Performance expectancy expresses how useful people think using electronic payments are (Huang, 2020). Performance expectations, in Huang's (2020) opinion, are a reflection of the value that is gained from using mobile payments. This especially pertains to the belief that using an electronic payment method will be simple (Namahoot & Jantasri, 2023). Users' satisfaction with a product's implementation and use is greatly influenced by their expectations for performance and confirmations from prior experience (Arianita et al., 2023). People are less worried about payment danger and misunderstanding if they have developed a sense of trust in making payments online. Empirical evidence was presented by (Rahadi et al., 2022; Thaker et al., 2023) indicating a considerable impact of performance expectancy on actual e-payment usage.

H2: performance expectancy affects becoming cashless society with QRIS

According to Venkatesh et al. (2003), social influence is the degree to which an individual believes that he or she should adopt new technology based on their perceptions of influential people. The term social influence refers to the perceptions of an activity from important others that affect a person's decision to take it or not (Chaveesuk et al., 2019). The extent to which an individual believes important people believe they should use a technology is a social impact (Namahoot & Jantasri, 2023). According to Namahoot & Jantasri (2023), social impact is deeply ingrained in user behavior models and technology adoption models. (Singh et al., 2020) found that a person may be more receptive to accepting and supporting new goods and services if they believe that important individuals (such as family and friends) approve of their use of them. This was shown in a study conducted among university students. According to Almarashdeh et al. (2021), the majority of people concur that social influence plays a big role.

H3: social influence affects becoming cashless society with QRIS

Facilitating conditions is an enable circumstances of the degree to which an individual believes that the necessary organizational and technological frameworks are in place for the new technology to be adopted successfully (Venkatesh et al., 2003). Venkatesh et al. (2003) implied that the sense of both internal and external boundaries on behavioral efficiency is referred to as an enabling condition. Furthermore, the degree to which a person believes that an organizational and technological framework exists to make a system easier to use is another way to define a facilitating state (Chaveesuk et al., 2019). A facilitating situation guarantees that people have the necessary resources and abilities to use the mobile Internet, as noted by Almarashdeh et al. (2021). According to Pramudito et al. (2023), when a new product is useful and simple to use for people who plan to use it, users must first approve its usage or trial before they will accept its use. Santosa et al. (2021) discovered through a review of previous research that users would also be more likely to use e-payment if they felt that it corresponded with a certain technology they currently used and had a certain level of service and competence.

H4: facilitating condition affects becoming cashless society with QRIS

RESEARCH METHOD

Type of research

The research method was designed to provide an in-depth understanding of the role of QRIS in pushing Z-generation students towards a cashless society. Qualitative and quantitative analyzes are expected to provide the holistic insights necessary to fully understand this phenomenon. Qualitative analysis was carried out by analyzing descriptive statistics for each variables' indicators. Quantitative analysis was carried out with SmartPLS to test the hypothesis.

This research uses primary data, which was obtained from collecting questionnaires. Questionnaire collection was carried out by distributing questionnaires to students in two Universities in Samarinda to answer questionnaires available on Google Forms. This research uses a questionnaire with Likert scale measurements of five points starting from 1 (strongly disagree) to 5 (strongly agree) for all variables.

Operationalization of Variables

The operationalization of variables in this study include: four independent variables (performance expectancy, effort expectancy, social influence, and facilitating conditions), and one variable of becoming cashless society with QRIS. The item of the questionnaires for each variable are shown in Table 1.

Table 1. Items of Questionnaires of Variables

| No | Variables | Questionnaires |
|----|---|--|
| 1 | Performance Expectancy (Marchewka & Kostiwa, 2014) | PE1: I find QRIS useful in my financial transactions. PE2: Using QRIS enables me to accomplish my transaction more quickly. PE3: Using QRIS increases my productivity in managing financial transactions PE4: If I use QRIS, I will increase my chances of getting a better financial performance. |
| 2 | Effort Expectancy (Marchewka & Kostiwa, 2014) | EE1: My interaction with QRIS is clear and understandable. EE2: It is easy for me to become skill full at using QRIS. EE3: I find QRIS easy to use. EE4: Learning to operate QRIS on my phone is easy for me. |
| 3 | Social Influence (Marchewka & Kostiwa, 2014) | SI1: People who influence my behavior think that I should use QRIS SI2: People who are important to me think that I should use QRIS SI3: The administration of the bank has been supportive of the use of QRIS SI4: In general, the bank has supported the use of QRIS SI5: My lecturers have been supportive in the use of QRIS |
| 4 | Facilitating Conditions (Marchewka & Kostiwa, 2014) | FC1: I have the resources necessary to use QRIS FC2: I have the knowledge necessary to use QRIS FC3: QRIS is compatible with other applications I use (such as Shopee pay, Dana, etc.) FC4: A specific person (or group) is available for assistance with difficulties I experience with QRIS |
| 5 | Cashless Society (Sanrach, 2021) | CS1: It is a modern payment method CS2: It makes daily life easier and more comfortable. CS3: You can order products and services without any restrictions on time and place. CS4: Public relations and regular updates in various media affect the decision to choose a cashless payment. CS5: Using smartphones in the modern era has opened up a cashless society. CS6: It helps to reduce the cost of traveling to banks or counter-service providers. CS7: The process for payment for goods and services is simple and not complicated. CS8: Cashless payment with QRIS for goods and services is a generally accepted form of payment. |

Source: as stated in the table

Data Analysis

The Smart-PLS method (Ringle et al., 2015) was used to perform data analysis procedures. The latent variables in the Smart-PLS approach can be monitored using a number of connected indicators, but they are not readily observable (variables manifest). Partial least squares (PLS) testing with bootstrapping 5000 subsample following the recommendations of Hair Jr. et al. (2021) was done to examine the connection between the independent and dependent variables. PLS evaluation is divided into two stages: outer model and inner model.

Respondents Demographics

There were as many questionnaires received 321, of which 273 respondents had used QRIS and the other 48 did not have ever used QRIS. Up to 273 data can be processed. This number meets

minimum sample guidelines for multivariate research (research which consists of many variables). According to Ferdinand (2014), who stated that the sample size is determined as many as 25 times the independent variables. This research has 4 independent variables, so the sample is minimum suggested by Ferdinand is $25 \times 4 = 100$ samples. The respondent's demographics is shown in Table 2.

Table 2. The Respondent's Demographics

| No | Z Generations Students | Total | Percentage |
|----|------------------------|-------|------------|
| 1 | Gender – Female | 217 | 67.6% |
| | Gender – Male | 104 | 32.4% |
| 2 | QRIS – have been using | 273 | 85% |
| | QRIS – never use | 48 | 15% |
| 3 | GPA: > 3.00 – 4.00 | 258 | 80.4% |
| | GPA: > 2.00 – 3.00 | 63 | 19.6% |
| | GPA: below 2.00 | 0 | 0% |

Source: Data collected

Table 2 shows that most of the respondents are female with 217 students or 67.6%, while 32.4% is male. Eighty five percent of the respondents have been using QRIS in their financial transactions. This percentage indicates that most Z generation students has known and use QRIS for their financial transaction. Therefore, the data processed is 273 respondents. As for the GPA, most of the Z generations students have a very good GPA (more than 3.00 and closed to 4.00) around 80.4% and none of them (0%) have a GPA below 2.00.

RESULTS AND DISCUSSION

Descriptive Statistics and Analysis

In the section of the questionnaire with a five-point rating scale based on the Likert Scale concept, arithmetic mean ($\bar{\chi}$) and standard deviation (S.D.) were utilized. As per Kaushik & Walsh (2019), the mean interpretation that was achieved was as follows (Sanrach, 2021):

- 1.00 – 1.49 : the least importance
- 1.50 – 2.49 : low importance
- 2.50 – 3.49 : moderate importance
- 3.50 – 4.49 : high importance
- 4.50 – 5.00 : the highest importance

A standard deviation that is smaller than the mean indicates that the data used in this variable has a small spread because the standard deviation is smaller than the mean value, so the data deviation in this variable can be said to be good.

Effort Expectancy (EE)

Effort Expectancy (EE) consists of 4 indicators. On Table 3, all these indicators have the high level in the perception of Z generation students. These indicate that students choose the use of QRIS because its easiness in completing financial transaction using QRIS.

Table 3. Effort Expectancy Level

| | Mean | Std. Deviation | Level |
|--|------|----------------|-------|
| My interaction with QRIS is clear and understandable | 4.10 | .657 | High |
| It is easy for me to become skill-full at using QRIS | 4.13 | .816 | High |
| I find QRIS easy to use | 4.03 | .675 | High |
| Learning to operate QRIS on my phone is easy for me | 4.08 | .784 | High |

Source: Data processed – 2023

Performance Expectancy (PE)

Performance Expectation (PE) consists of 4 indicators. Even though these four indicators, based on Table 4, have a high level, QRIS's ability to process financial transactions quickly has the highest mean of 4.48. This means that Z generation feels that the speed of the financial transaction process is their choice towards a cashless society.

Table 4. Performance Expectation Level

| | Mean | Std. Deviation | Level |
|---|------|----------------|-------|
| I find QRIS useful in my financial transactions | 4.30 | .672 | High |
| Using QRIS enables me to accomplish my transaction more quickly | 4.48 | .642 | High |
| Using QRIS increases my productivity in managing financial transactions | 4.19 | .718 | High |
| If I use QRIS, I will increase my chances of getting a better financial performance | 4.32 | .706 | High |

Source: Data processed – 2023

Social Influence (SI)

Social Influence (SI) consist of 5 indicators. On Table 5, all these indicators have the high level in the perception of Z generation students. These mean that Z generations perceived their behavior in using QRIS is influenced by people that have significant relationship with the students.

Table 5. Social influences level

| | Mean | Std. Deviation | Level |
|---|------|----------------|-------|
| People who influence my behavior think that I should use QRIS | 4.00 | .860 | High |
| People who are important to me think that I should use QRIS | 3.95 | .841 | High |
| The administration of the bank has been supportive of the use of QRIS | 4.04 | .844 | High |
| In general, the bank has supported the use of QRIS | 3.80 | 1.085 | High |
| My lecturers have been supportive in the use of QRIS | 3.75 | .889 | High |

Source: Data processed – 2023

Facilitating Conditions (FC)

Facilitating Conditions (FC) consist of 4 indicators. On Table 6, all these indicators have the high level in the perception of Z generation students. These mean that Z generations perceived they have the basic conditions to use QRIS in their financial transactions.

Table 6. Facilitating Conditions Level

| | Mean | Std. Deviation | Level |
|---|------|----------------|-------|
| I have the resources necessary to use QRIS | 3.91 | .815 | High |
| I have the knowledge necessary to use QRIS | 3.87 | .864 | High |
| QRIS is compatible with other applications I use (such as Shopee-pay, Dana, etc.) | 3.76 | .856 | High |
| A specific person (or group) is available for assistance with difficulties I experience with QRIS | 3.62 | .887 | High |

Source: Data processed – 2023

Cashless Society (CS)

Cashless Society (CS) consist of 8 indicators. On Table 7, all these indicators have the high level in the perception of Z generation students. These mean that Z generations perceived the cashless society is coming and it is increasing with the existence of QRIS.

SmartPLS Results

Outer Model

An indicator is considered reliable if has a correlation value above 0.7. However, at the research development stage a loading scale of 0.5 to 0.6 is still possible accepted (Ghozali & Latan, 2015). Table 8 shows the reliability results using loading factors and Cronbach's Alpha.

Based on table 8, it can be seen that all factor loadings value above 0.60 or 0.70. Cronbach's value alpha is also above 0.70 for all the latent variables. The composite reliability is at least 0.70 and the Average Variance Extracted (AVE) at least 0.50, so that it meets the criteria (Hair Jr. et al., 2021). Hence, this result provides the conclusion that the construct variables have good reliability

Table 7. Cashless Society Level

| | Mean | Std. Deviation | Level |
|--|------|----------------|-------|
| It is a modern payment method | 3.95 | .834 | High |
| It makes daily life easier and more comfortable | 3.79 | .807 | High |
| You can order products and services without any restrictions on time and place | 3.89 | .927 | High |
| Public relations and regular updates in various media affect the decision to choose a cashless payment | 3.81 | .856 | High |
| The use of smartphones in the modern era has opened up a cashless society | 3.56 | .953 | High |
| It helps to reduce the cost of traveling to banks or counter-service providers | 3.68 | .889 | High |
| The process for payment for goods and services is simple and not complicated | 3.85 | .879 | High |
| Cashless payment with QRIS for goods and services is a generally accepted form of payment | 3.99 | .868 | High |

Source: Data processed – 2023

Table 8. Reliability Test Results

| Item | Factor Loadings | Cronbach's Alpha | Item | Factor Loadings | Cronbach's Alpha |
|---------------------|-----------------|------------------|---------------------|-----------------|------------------|
| X1.1 < PE | 0.772 | 0.788 | X4.1 < FC | 0.809 | 0.805 |
| X1.2 < PE | 0.743 | | X4.2 < FC | 0.855 | |
| X1.3 < PE | 0.828 | | X4.3 < FC | 0.838 | |
| X1.4 < PE | 0.775 | | X4.4 < FC | 0.671 | |
| X2.1 < EE | 0.824 | 0.800 | Y1.1 < CS | 0.797 | 0.921 |
| X2.2 < EE | 0.835 | | Y1.2 < CS | 0.814 | |
| X2.3 < EE | 0.662 | | Y1.3 < CS | 0.777 | |
| X2.4 < EE | 0.828 | | Y1.4 < CS | 0.801 | |
| X3.1 < SI | 0.878 | 0.875 | Y1.5 < CS | 0.795 | |
| X3.2 < SI | 0.874 | | Y1.6 < CS | 0.822 | |
| X3.3 < SI | 0.905 | | Y1.7 < CS | 0.858 | |
| X3.4 < SI | 0.702 | | Y1.8 < CS | 0.759 | |
| X3.5 < SI | 0.715 | | | | |

Source: Data processed – 2023

Inner Model

Testing the inner model or Structural model is done by looking at the R-square value which is a goodness-fit test model. Table 9 shows the R-square and adjusted R-square value for the cashless Society is 0.405 and 0.396, respectively.

Table 9. Determinant Coefficient Result

| | R-square | Adjusted R-square |
|-----------------------|----------|-------------------|
| Cashless Society (CS) | 0.405 | 0.396 |

Source: Data processed – 2023

This result shows that 39.6% independent variable (performance expectancy, effort expectancy, social influence, and facilitating conditions) affect dependent variable of cashless society. The rest of 60.4% is influenced by other variables outside this research.

Hypotheses Test Results

The basis used in testing a hypothesis is a value that contained in the output path coefficients, shown in Table 10 and Figure 4.

Table 10. Hypotheses Test Results

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values | Conclusion |
|---------|---------------------|-----------------|----------------------------|--------------------------|----------|-------------|
| EE → CS | 0.286 | 0.285 | 0.080 | 3.560 | 0.000 | H1 accepted |
| FC → CS | 0.073 | 0.079 | 0.052 | 1.397 | 0.163 | H4 rejected |
| PE → CS | 0.149 | 0.146 | 0.070 | 2.126 | 0.034 | H2 accepted |
| SI → CS | 0.297 | 0.301 | 0.068 | 4.390 | 0.000 | H3 accepted |

Source: Data processed – 2023

Referring to Table 10 and Figure 4, taking into account 95% and 99% confidence levels, the results of hypothesis testing are described as following:

Effort Expectancy and Becoming Cashless Society with QRIS

The findings show that the influence of effort expectancy towards a cashless society (p-value = 0.000 < 0.05) is significant statistically and influence to become cashless society with QRIS. Therefore, hypotheses H1 is accepted. Where the better the effort expectancy of Z-generation students to financial transaction with QRIS, the higher the intention them to use QRIS to shape a cashless society. According to Chua et al. (2018), systems with lower effort expectancy feature user-friendly interfaces, pertinent material and graphical templates, practical functionalities, clear instructions, and error messages that are easy to understand. These characteristics imply that an individual will perceive a new mobile device as beneficial and continue to use it after they realize that minimal resources are needed to grasp it. Effort expectancy significantly influenced actual e-payment usage (Abdullah et al., 2020; Namahoot & Jantasri, 2023; Saputra, 2022). According to Ayaz & Yanartaş (2020), early adoption is usually associated with greater significance of effort expectancy, and effective and authorized technical infrastructure enhances productivity (Bayumi,

2023). Additionally, it was found by Bayumi (2023) that effort expectancy had a favorable effect on actual mobile banking usage. According to this relationship, users are more likely to continue using an e-payment device in the future if they think it will be simple to use.

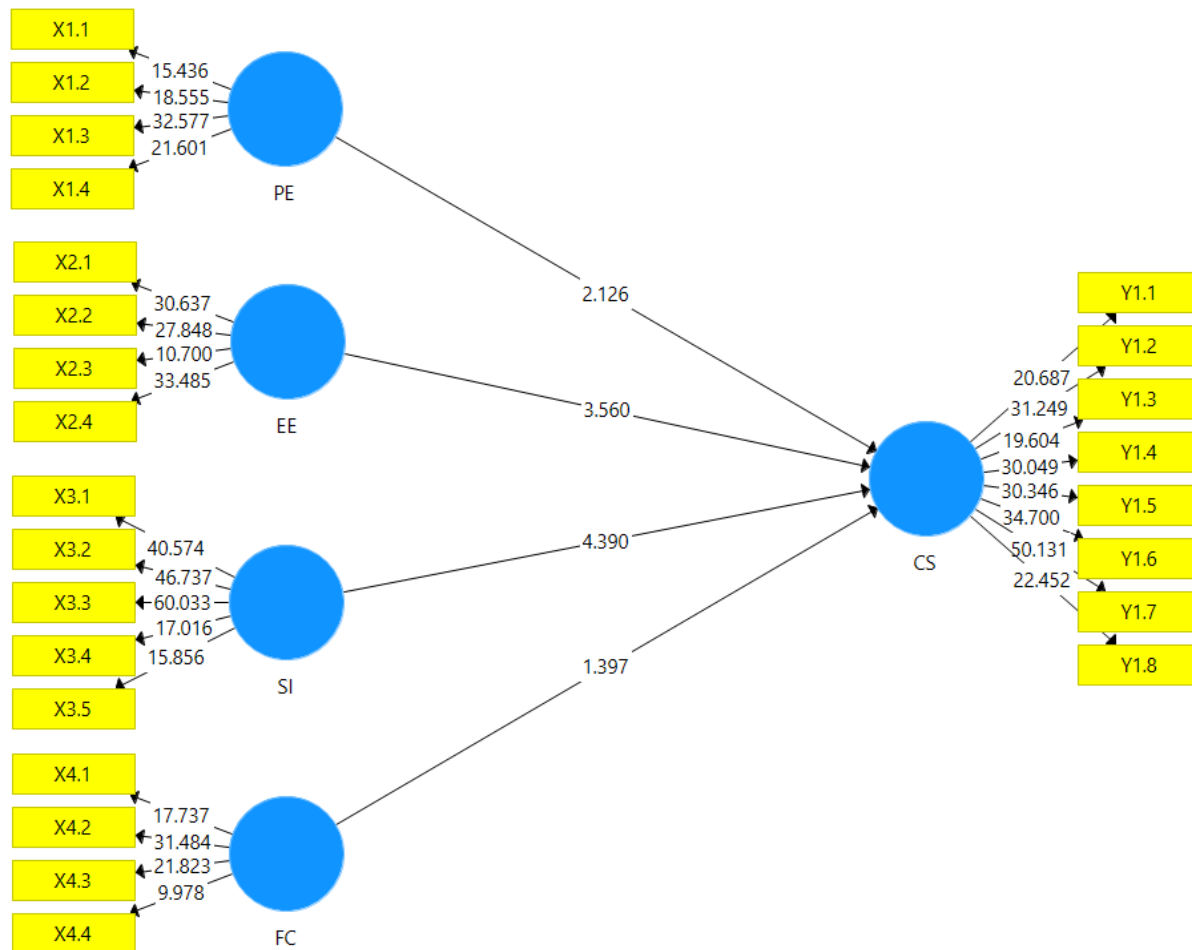


Figure 4. Results Model and Hypotheses Test Results
 Source: Data processed – 2023

Performance Expectancy and Becoming Cashless Society with QRIS

The findings show that the influence of performance expectancy towards a cashless society ($p\text{-value} = 0.034 < 0.05$) is significant statistically and influence to become cashless society with QRIS. Therefore, hypotheses H2 is accepted. Previous research also corroborates the idea that users are more dependable and amenable to system adoption once they perceive a high enough level of program effectiveness (Rahadi et al., 2022). Thus, the behavioral goal of implementing an e-payment is influenced by a user's perception that using an e-payment will aid to improve the performance of payment duties (Rahadi et al., 2022; Thaker et al., 2023). According to Chaveesuk

et al. (2019), adoption of e-payments was significantly predicted by performance expectancy. Thaker et al. (2023) have shown that performance expectancy has a favorable impact on actual e-wallet electronic payment systems in Malaysia (Rahman et al., 2020). The impact of performance expectancy on usage behavior related to e-payments has been theoretically validated by a number of studies (Chaveesuk et al., 2019; Namahoot & Jantasri, 2023; Rahadi et al., 2022). Even if they were dissatisfied with their prior usage, users may stick with an e-payment service if they find it helpful (Namahoot & Jantasri, 2023).

Social Influence and Becoming Cashless Society with QRIS

The findings show that the influence of social influence towards a cashless society (p-value = $0.000 < 0.05$) is significant statistically and influence to become cashless society with QRIS. Therefore, hypotheses H3 is accepted. Peer perception has a crucial role in the adoption of mobile wallet services, as evidenced by the high influence of social influence on intention (Namahoot & Jantasri, 2023). For instance, research conducted in 2019 by Ejiobih et al. (2019) demonstrated a positive correlation between social impact and actual Internet usage. Previous research has also demonstrated that social influence has a major impact on the actual use of electronic payments (Chaveesuk et al., 2019). According to Rahman et al. (2020), the results indicated that time and technological support were the biggest barriers to adopting and using technology, whereas initiative level and social impact were identified as important predictors.

Facilitating Conditions and Becoming Cashless Society with QRIS

The findings show that the influence of social influence towards a cashless society (p-value = $0.163 > 0.05$) is not significant statistically and not influence to become cashless society with QRIS. Therefore, hypotheses H3 is rejected. This result did not support UTAUT. According to UTAUT, acceptance of any new technology is strongly influenced by perceived facilitating conditions (Almarashdeh et al., 2021; Pramudito et al., 2023; Santosa et al., 2021). People will be more inclined to adopt technology if there are more supportive circumstances that promote technology use (Rahman et al., 2020; Santosa et al., 2021). If users lack the necessary information, resources, and abilities, they might not desire to adopt mobile technology (Pramudito et al., 2023). However, Ejiobih et al. (2019) also found that facilitating conditions did not directly affect the actual use of the cashless payment.

CONCLUSION

This study reveals the significant role of QRIS in changing the financial landscape of Z-generation students towards a cashless society. The research results prove that performance expectancy, effort expectancy, and social influence have a positive effect on a cashless society, while facilitating conditions have no effect. The implications of this research include a number of key findings that

can guide policy makers, financial service providers and higher education institutions in supporting a smooth transition to a more sophisticated digital payments ecosystem.

The study results imply that Z-generation students have a high intention to adopt QRIS, indicating a shift in the financial paradigm towards a preference for cashless payment methods. Governments and industry players need to respond by ensuring regulations and services exist that support this growth. Additionally, findings show that students tend to adopt technology that provides real benefits and improves their financial efficiency. This provides encouragement for industry players to continue to innovate in developing payment solutions that are more efficient and relevant for Z-generation. It is hoped that this article can provide a valuable contribution to the understanding and development of a cashless society among Z-generation students.

It should be acknowledged that this research has limitations, especially in terms of generalization of the findings. This research focused on Z-generation students in a specific university setting, so the findings may not fully reflect the diversity of the student population as a whole. Further research involving a broader and more diverse sample could provide more holistic insights. Therefore, so that the research results can be more generalized and holistic, further research can, first, compare the perspectives and behavior of using QRIS between Z-generation and previous generations. This can provide a deeper understanding of the evolution of payment preferences among different generational groups. Second, more in-depth research could consider the influence of economic conditions on QRIS adoption among students. Economic factors, such as income availability and inflation rates, may influence the extent to which students adopt cashless payment technology.

Abbreviation List

Asosiasi Sistem Pembayaran Indonesia (ASPI), Sistem Pembayaran Indonesia (BSPI), Tanpa Tatap Muka (TTM), Consumer Presented Mode (CPM), Quick Response Code Indonesian Standard (QRIS), Unified Theory of Acceptance and Use of Technology (UTAUT), effort expectancy (EE), performance expectancy (PE), social influence (SI), and facilitating conditions (FCs).

Author's Contribution

EAL conceptualized and drafted the manuscript. UK data curation and analyzed. EAL and UK finishing the article.

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Conflicts of Interest

The authors declare no competing interest.

Availability of Data and Materials

Questionnaires and data can be requested by email to the corresponding author.

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