



Research Paper

Gen Z's Cashless Behavior: How QRIS Moderating Digital Financial Literacy and Spending Behavior Affects on E-Wallet Utilization?

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Abstract.

E-Wallet, one of the mobile payment systems, has continued to dominate Indonesia since 2017. Besides e-wallets, QRIS occurrence in 2020 is also estimated as a critical factor in e-wallets' successes. Generation Z supported this condition as a digital native and was labeled the most technologically savvy generation. That is why e-wallets, along with QRIS was predicted as the best solution for Gen Z's demand. Nevertheless, this easiness could lead to lousy spending behavior if not accompanied by excellent digital financial literacy. This study aims to determine how digital financial literacy and spending behavior affect e-wallet utilization moderated by QRIS Barcode. Structural equation models using SMART PLS 3.0 are used for analyzing 403 samples of Generation Z in Malang City. The result showed that digital financial literacy positively affected e-wallet utilization. In contrast, spending behavior does not affect e-wallet utilization on offline payment transactions. Subsequently, the QRIS barcode has a negative correlation with digital financial literacy and spending behavior interaction with e-wallet utilization. Hence, QRIS was determined as a quasi moderator.

Keywords: digital financial literacy, spending behavior, QRIS barcode, Generation Z

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Published 24 January 2024

Publishing services provided by Knowledge E

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Selection and Peer-review under the responsibility of the 4th INCLAR Conference Committee.

1. INTRODUCTION

The internet penetration in Indonesia is increased up to 77,02% in 2022 (APJII, 2022). Based on age, this penetration is divided into five categories (APJII, 2022). First age in range 13-18 years their internet penetration is 99,16%. Second, in the range 19-34, their penetration is 98,64%. Third, in range 87,30% their penetration are 87,30%. Fourth, in the range 5-12 years, their penetration is 62,43%. Moreover, for those in the range 55 years above, their penetration is 51,73%. Furthermore, International Data Corporation (IDC) predicted that e-wallet utilization in Southeast Asia would increase to 250 million, and 130 million of them are from Indonesia (CNN Indonesia, 2022). E-wallets are electronic services for saving and payment instruments such as e-money that could

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be used for digital payment and digital saving (Angelina & Aswin Rahadi, 2020). Some common e-wallets brands are used in Indonesia, such as; GoPay, OVO, ShopeePay, Dana, and LinkAja, which are integrated into e-commerce (Prakosa & Wintaka, 2020). Subsequently, RedSeer (a research and advisory firm from India) projected that e-wallet transaction valuations will reach US\$ 30,8 million in 2022 and increase to US\$ 40,5 million in 2023 (Pahlevi & Hidayat, 2022). Related to this, the Theory of Acceptance Model (TAM) created by Fred. D. Davis (1980) is used to measure how people accept the e-wallet based on end-users behaviour (extremely user's perceptions) in accepting information technology; this theory is labelled as the golden standard of technology acceptance (Abu Bakar et al., 2022; Ammenwerth, 2019; Banjarnahor, 2021).

In order to measure how e-wallets are accepted, TAM provides four indicators they are: perceived usefulness, perceived use, attitude, intention to use (Ammenwerth, 2019; Banjarnahor, 2021; Bich & Thi, 2020).

Nevertheless, that conditions would not be successful if Generation Z did not support it as digital natives and the most technologically savvy (Persada et al., 2021). Moreover, generation Z also adapts to the global lifestyle, which is technologically driven, one of which is e-wallet utilization (Angelina & Aswin Rahadi, 2020). Subsequently, Generation Z also could affect the technology utilization in the family (Ayuni, 2019). In Malang City, Generation Z, which are those who were born in 1995-2010 (17-26 years old) (Persada et al., 2021), recorded as many as 843.810 people (Widyawati, 2021). With that amount, Generation Z is expected to drive economic development through increasing digital infrastructure building (Mahfud, 2021). As one of the digital infrastructure buildings, QRIS was launched by the Central Bank of Indonesia (BI) and the Indonesian Payment System Association (ASPI) in January 2020 as an integrated QR payment in Indonesia (Lonardi & Legowo, 2021; Nada et al., 2021). Nonetheless, the inclusiveness or availability of QRIS becomes the reason for its usage in daily life (Central Bank of Indonesia, 2021; Djayapranata & Setyawan, 2021). Like e-wallet acceptance, In correlation with that, in November 2021, there is 12 million merchants who use QRIS, and it will continue to increase in many sectors (Central Bank of Indonesia, 2021). This condition is used for economic recovery after the pandemic. QRIS is measured with UTAUT (Unified Theory of Acceptance and Use of Technology). This theory, created by Venkatesh and Davis in 2003, aims to understand the critical success factor of technology acceptance, this theory also become such a complement for TAM in order to measures technological acceptance (Abu Bakar et al., 2022; Ammenwerth, 2019; Bich & Thi, 2020). UTAUT measured how QRIS could be accepted in public by seeing five indicators: performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioural



intention to use (Ammenwerth, 2019; Tusyanah et al., 2021). Both e-wallet and QRIS have the same indicators: an intention to use. Nevertheless, in e-wallets, intention to use measures how e-wallets are accepted and used by people in any transaction and occasion. While, in QRIS, intention is to use measures how QRIS being accepted and used for offline payment transactions through e-wallet.

Moreover, the ease of payment systems could create lousy habits if not accompanied by excellent financial literacy, especially on digital financial products (Laturette et al., 2021). Financial literacy means personal knowledge and capability to manage financial sources with those available financial services (Anisah & Crisnata, 2021; Świecka et al., 2021). At the same time, digital financial literacy is a personal understanding of managing or making decisions related to financial resources through digital financial services (Lyons & Kass\(\text{M}\)Hanna, 2021; Setiawan et al., 2020). Research by Anisah & Crisnata (2021), said that those using fintech tend to have excellent financial literacy. Regarding research conducted by Setiawan et al., (2020), digital financial literacy is measured by four indicators; knowledge of digital financial products and services, awareness of digital financial risks, knowledge of digital financial risk control, and knowledge of consumer rights and redress procedures. Digital financial literacy also affects how individuals spend their financial resources.

Therefore, the more individuals understand digital financial literacy. It tends to affect how their spending behaviour (Foster et al., 2022; Setiawan et al., 2020). This statement also proven by research conducted by Mensah and Jumah, (2021), which said that those who use electronical payment (e-money) will tend to have more consumptive behaviour. Or we could say that their spending behaviour is consumptive.

Research by Gosal & Linawati (2018), also said that those who use e-wallets tend to have consumptive behaviour. Spending behaviour itself means the individual habits on spending their money which is affected by individual character, gender, age, and knowledge. Later, the spending behaviour are measured by three indicators: spending planning, actual buying, and saving (Cummins et al., 2005; Omakhanlen et al., 2021).

Based on those descriptions, this study aims to understand how digital financial literacy and spending behaviour correlate with e-wallet utilization and moderated by the QRIS barcode. This study is an establishment of research conducted by Bich & Thi (2020), by adding digital financial literacy and spending behaviour as dependent variables yet supported by QRIS as moderating variables. Therefore, this study focuses on how the relationship among the variables. This study uses Malang City as a research location and Gen Z's population considered as study's objects. Gen Z's are chosen because, in Malang City Gen Z recorded as many as 215.000 people. Those populations



could drive Malang City's economy through digital business (Mahfud, 2021). Besides that, the object of previous research are mostly SMEs, Gen Y or Millennials and individual who use e-wallet generally.

2. METHODS

This study adopted a quantitative approach to conduct the research, which is concluded as descriptive research classified by its explanatory levels (Nuryadi et al., 2017). Questionnaires are used in this study as primary data and research instruments, which are supported by LSR (Likert Summated Ratio) to measure the respondents. The LSR used in range of 1-5, each number has different scale or preferences, they are:

[1] strongly disagree, [2] disagree, [3] average. [4] agree, and [5] strongly agree.

Figure 1. Research Layout

Secondary data was also used in this study by collecting all the documents such as; books, journals, web news or articles, and others. Subsequently, this study uses the Gen Z population in Malang city as the study's object, with an amount of 215.000 people between 17-25 years old. First, the samples are calculated with Slovin's Formula with significance values of 95% or 0,05 error toleration. Later, the samples used in this study were 400 people aged between 17-25 years old who already had buying power and had experienced using e-wallets. Following the data analysis process, this study uses Structural Equation Modelling (SEM) with SMART PLS 3.0 as a tool .SEM analysis would evaluate the outer model using CFA or confirmatory analyses and the inner model using bootstrapping. In order to clarify the research model, here is the research framework illustrated in SEM model:

Despite that, here are some hypotheses constructed in this study:

- H_1 : Digital financial literacy positively and significantly affects e-wallet utilization enlargement on payment by Gen Z in Malang.
- H_2 : Barcode QRIS positively moderates the relationship between digital financial literacy and e-wallet utilization enlargement on payment by Gen Z in Malang.
- $H_3\,$: Spending behavior positively and significantly affects e-wallet utilization enlargement on payment by Gen Z in Malang.
- H_4 : Barcode QRIS positively moderates the relationship between spending behavior and e-wallet utilization enlargement on payment by Gen Z in Malang.
- H_5 : Barcode QRIS as moderating variable has a positive relationship with e-wallet utilization enlargement on payment by Gen Z in Malang.



3. RESULT AND DISCUSSION

In terms of collecting respondent's data, the researcher broadcasted the questionnaire on social media such as; Instagram, Twitter, and WhatsApp. First, on Instagram, the researcher could collect approximately 313 respondents through DM-ing 900 researcher's followers. Second, on Twitter, the researcher broadcasted the questionnaire through Universitas Negeri Malang and Malang City base account, or Gen Z, usually called "Menfess," and got 56 respondents. Last but not least, on WhatsApp researcher broadcasted the questionnaire through group and story, and by this researcher could collect 34 respondents. With total of 403 respondents, here are the descriptive analysis using SMART PLS as tools.

4. SEM ANALYSIS

4.1. Outer Model Evaluation

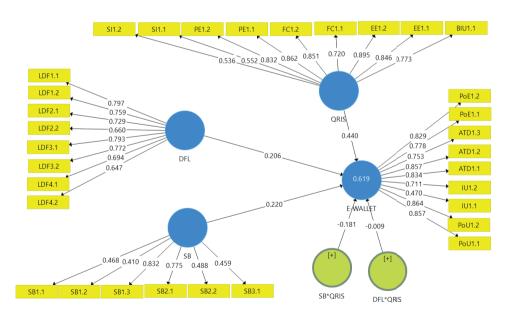


Figure 1: Confirmatory Analysis in Outer Model Evaluation.

By using confirmatory analysis (CFA), we could conclude that several indicator items did not fulfill the rule of thumbs. Items will be convergently valid if outer loadings score is >0,7. From 34 items, only 25 items are determined convergently valid.

Viewed by its discriminant validity, we could conclude that each indicator is discriminantly valid. These conditions are based on its Fornell Lacker Criterion Score, which shows that no indicator starts in the same columns. Hence, after we know how the



validity, we would like to evaluate the reliability of the construct using a composite reliability score. The construct with a composite reliability score >0,70 is considered reliable. Here we provide the constructs reliability score as follows:

TABLE 1: Construct's Reliability Scores.

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	
DFL	0.879	0.896	0.903	0.538	
DFL*QRIS	1.000	1.000	1.000	1.000	
E-WALLET	0.916	0.922	0.932	0.610	
QRIS	0.912	0.931	0.929	0.598	
SB	0.671	0.759	0.752	0.355	
SB*QRIS	1.000	1.000	1.000	1.000	

Based on the table, we can conclude that all the constructs are reliable. These conditions are determined by their composite reliability score higher than 0,70.

4.2. Inner Model Evaluation

In inner model evaluation, some aspects evaluate how each variable correlates and affect each other. First, we focused on the R Square score. This score is used to evaluate how influential endogen variables affect exogen variables (Ghozali & Latan, 2015). For example, the model will be concluded as highly influential if the R Square is higher than 0.75, while moderate influential are scored >0.50, and last weak influential are scored >0.25 (Ghozali & Latan, 2015). Based on the rule of thumbs we could conclude that our research model are moderately influential. Which also means that both digital financial literacy and spending behavior are influencing e-wallet utilization as much as 61,9%. The R Square score of this research model as follows:

TABLE 2: R-Square Score.

	R Square	R Square Adjusted	
E-WALLET	0.619	0.614	

Subsequently, we focused on the effect size (f^2) score to evaluate how each variable influences a construct. The f^2 score of this research models are stated on this table as follows:

First, if f^2 the score is >0.35, the variable has a high effect on a construct. Next, if the f^2 score is >0.15, the variable has a moderate effect on a construct. Last, if the f^2 score is >0.02, the variable has a weak effect on a construct (Ghozali & Latan, 2015). Based on the table above, it can be seen that the influence of DFL (digital financial

TABLE 3: $The \ f^2$ Score.

	E-WALLET
DFL	0.068
DFL*QRIS	0.000
QRIS	0.253
SB	0.080
SB*QRIS	0.070

literacy) and moderation between DFL and QRIS on the decision to use an e-wallet has a low influence. This is reflected in the DFL value to E-Wallet of 0.068 > 0.02 and 0.000 <0.02. With the moderation of DFL and QRIS on E-Wallet, it is stated that there is no effect at all. Alternatively, it can be said that the QRIS barcode does not moderate the relationship between DFL and the decision to use the e-wallet. Then on SB (spending behavior), it can be seen that each value has a low influence. This is reflected in the value of 0.08 > 0.02 and moderation 0.070 > 0.02. We could say that SB has little influence on the decision to use e-wallets, even with SB and QRIS moderation, where QRIS is said to weakly moderate the relationship between SB and the decision to use the e-wallet. Moreover, QRIS as a moderating variable has a moderate or moderate influence on the decision to use an e-wallet. This is reflected in the value 0.253 > 0.15.

After evaluating the f^2 score, we now evaluate the Q^2 score. The Q^2 value reflects how the indicators are suitable for predicting a construct, where a Q^2 value > 0 means that the model has good predictive relevance. While Q^2 < 0, it is said that the model lacks predictive relevance(Ghozali & Latan, 2015). In the research conducted, the predictive relevance (Q^2) value is 0.358 > 0. It can be interpreted that the indicator has good predictive relevance to the model. The Q^2 of this research are provided as follows:

TABLE 4: The O^2 Score.

	sso	SSE	Q ² (=1-SSE/SSO)
E-WALLET	3.627.000	2.329.704	0.358

Last but not least, to determine how each hypothesis is accepted or deniedwe evaluate the significance value. In the SEM-PLS, there are two significance values. The first is the p-value is a value that measures the probability of a hypothesis whether it can be accepted or rejected. If the significance value is <0.05, then it is declared accepted. This statement is also related to the T-statistic value, which assesses whether a coefficient can significantly affect the construct. For example, in the 95% significance level, the T-statistic used is 1.96, where if a coefficient has a value above > 1.96, it is declared to have a significant effect (Ghozali & Latan, 2015; Hair, J. F., Hult, G. T. M.,



Ringle, C. M., & Sarstedt, 2017). The results of the significance test in this study are presented in the following table:

TABLE 5: The Signifinacy Test Result.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (IO/STDEVI)	P Values
DFL -> E-WALLET	0.206	0.214	0.046	4.478	0.000
DFL*QRIS -> E-WALLET	-0.009	-0.020	0.054	0.174	0.862
QRIS -> E-WALLET	0.440	0.439	0.047	9.455	0.000
SB -> E-WALLET	0.220	0.217	0.043	5.102	0.000
SB*QRIS -> E-WALLET	-0.181	-0.169	0.052	3.500	0.001

Based on the table, descriptions analysis of hypothesis testing in the research conducted as follows:

- 1. H_1 : Digital financial literacy positively and significantly affects e-wallet utilization enlargement on payment by Gen Z in Malang is **accepted**. It can be seen by the DFL value that is 0.00 < 0.05, which means that digital financial literacy is considered to have a significant influence on the decision to use the e-wallet. Moreover, when viewed from the T-statistic value, it can be seen that the value is 4,578 > 1.96; from this value, it can be seen that the coefficient is considered significant. Finally, the score is also in line with the original sample. Which shows a value of 0.206 which means that the coefficient has a positive effect of 20.6%.
- 2. H_2 : Barcode QRIS positively moderates the relationship between digital financial literacy and e-wallet utilization enlargement on payment by Gen Z in Malang is **rejected.** It is known that the DFL*QRIS value is 0.862 > 0.05, which means that the QRIS barcode moderation on digital financial literacy is considered insignificant. Furthermore, when viewed from the T-statistic value, it can be seen that the value is 0.174 < 1.96. From this value, it can be seen that the coefficient is also not significant. The score is also in line with the original sample, which shows a value of -0.009. This condition means that the coefficient negatively affects -0.9% in the research construct.
- 3. H_3 : Spending behavior positively and significantly affects e-wallet utilization enlargement on payment by Gen Z in Malang is **accepted.** Based on the p-value, it can be seen that the SB value is 0.00 < 0.05, which means that spending behaviour is considered to have a significant effect on the decision to use the e-wallet. Furthermore, when viewed from the T-statistical value, it can be seen that the value is 5.102 > 1.96. From this value, it can be seen that the coefficient



is considered significant. The score is also in line with the original sample, which shows a value of 0.206. Therefore, the coefficient positively affects 22.0% of the research construct.

- 4. H_4 : Barcode QRIS positively moderates the relationship between spending behaviour and e-wallet utilization enlargement on payment by Gen Z in Malang is **accepted.** Based on the p-value, it can be seen that the SB*QRIS value is 0.001 < 0.05, which means that the QRIS barcode moderation on spending behaviour is considered to have a significant effect on the decision to use the e-wallet. Furthermore, from the T-statistical value, it can be seen that the value is 3.500 > 1.96. From this value, it can be seen that the coefficient is also significant. Although it is said to have a significant effect, the original sample value shows the number -0.181, which means that the coefficient has a negative effect of -18.1% in the research construct.
- 5. H_5 : Barcode QRIS as moderating variable has a positive relationship with e-wallet utilization enlargement on payment by Gen Z in Malang is **accepted.** Based on the p-value, it can be seen that the QRIS value is 0.00 > 0.05, which means that the QRIS barcode moderation on the decision to use an e-wallet has a significant influence and relationship. Furthermore, when viewed from the T-statistic value, it can be seen that the value is 9.445 > 1.96. From this value, it can be seen that the coefficient is also significant, and it is considered that the QRIS barcode is capable of being a moderator variable. The original sample shows a value of 0.440 which means that the coefficient has a positive effect of 44% in the research construct.

5. Further Discussions

In order to extend the clarity, here we provide further discussion about the descriptive analysis result combined with the visualizations of the respondent's profile.

6. Respondents Demographical and E-Wallet Profile

To describe the detail, respondents in this study are classified by gender, domicile, year of birth, and profession.

Accordance with that, to understand how respondents are classified into gender domicile, and status here we provide Figure 2 as follows:

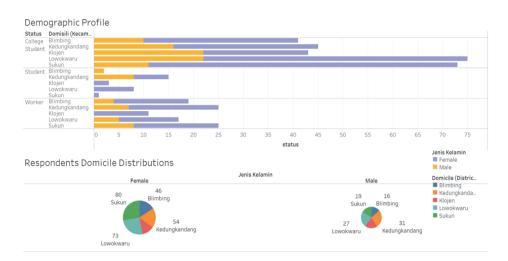


Figure 2: Respondent's Classified by Gender, Status, and Domicile.

In the research, respondents were divided into several subdistricts in Malang City. Where each respondent is spread over five sub-districts in Malang City, including; Sukun, Klojen, Kedungkandang, Lowokwaru, Blimbing. Accumulatively the amount of male respondents were as many as 115 people, and the amount of female respondents was 288. This comparison is in line with the amount of male and female populations in Malang City. The number of the female population is greater than the male. With a breakdown, the female population is 423,909 and males as many as 419,091 (Badan Pusat Statistik Kota Malang, 2020).

Hence, the respondents were also categorized by their status or their occupations. In Figure 2, we can see that female college students are dominating the respondents. Moreover, Lowokwaru and Sukun districts have the highest college student populations. These conditions are related to the fact that many universities are in Lowokwaru and Sukun districts. Nevertheless, the second respondent's dominations are workers. The workers have mostly dominated Sukun and Kedungkandang districts. These conditions are related to the fact that there are many factories, traditional markets, Malls, SMEs, and other industrial sectors. Last but not least, the students (senior high school education) who become respondents mostly live in Kedungkandang and Sukun. The result is related to the fact that many high school educations are dispersed in Kedungkandang and Lowokwaru districts.

7. E-Wallet Utilization Profil

Furthermore, this demographical profile is related to their e-wallet utilization profile. Figure 3 shows how respondent's utilization is profiled as follows:



Figure 3: Respondents Distributions by Status, E-Wallet Usage Frequencies, Domiciles and Income Range.

Related to the Technology Acceptance Model (TAM) Theory, which measures how acceptable e-wallets are in Gen Z's perspective. Based on Figure 1, perceived ease, perceived use, attitude, and intentions to use positively affect how Gen Z accepts e-wallets. Therefore, in this research, as shown in Figure 3, mainly Gen Z in Malang City use e-wallet around 4-7 times a month. Related to that, Gen Z who use e-wallets are mostly college students. Those college students mostly live in Lowokwaru and Sukun districts. As already stated, those areas are dominated by universities and supported by cafes, malls, and many SMEs.

Moreover, those facilities are also increasing the spending behavior of Gen Z in that area. That is why in Table 7, we can see that spending behavior affects 22% of e-wallet usage. According to that, we could say that the inclusiveness indirectly supports the e-wallet utilizations by Gen Z in Malang City. Gen Z's income classifications also support that spending behavior affects e-wallets. In Figure 3, the college students with income or monthly allowance <Rp 500.000- and Rp 500.000 - 1.000.000- use e-wallets 7-10 times a month. Another reason to support why college students are dominating the e-wallet utilizations is that they are considered to have better digital financial literacy.

Nonetheless, they still lack income. Therefore, we could see that workers with more income or monthly salary also have high e-wallet usage frequencies, which are 7-10 times. It is also supported by the fact that Gen Z's workers are spread around Lowokwaru and Sukun districts. In the Lowokwaru districts, there are many cafes, SMEs, and malls. While in Sukun, many SMEs, traditional markets, and recently some cafes have been built there. Last but not least, the students mostly lived in Kedungkandang and Lowokwaru. However, even though they lived near the economic facilities, they had the lowest income. That is why this research uses e-wallets only around 1-3 times a month.



Related to the frequencies, we also categorized respondents based on their e-wallet prefrence combinations in order to get to know more how Gen Z in Malang City's e-wallet penetration. In this research, respondents are allow to choose more than one e-wallet brand they usually use, therefore approximately 25 combinations category as follows:

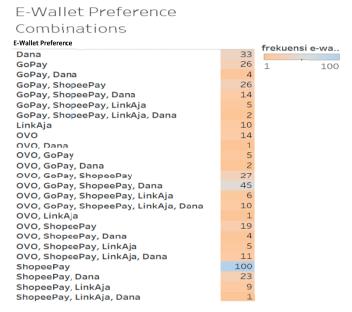


Figure 4: E-Wallet Preference Combinations.

Based on Figure 4, we can conclude that Gen Z in Malang City mainly uses Shopeepay only as their e-wallet. Then, followed by the combinations of OVO, GoPay, Shopeepay, and Dana as their second mainly used e-wallet. However, we also could say that in this e-wallet preference Gen Z in Malang City has various combinations regarding their needs. The researcher divides daily transactions into five categories: primary needs' purchase on e-commerce, digital platform consumptions (food delivery, movie tickets, online transportations), offline transactions, transfer or friend's payment, and bill payments (internet quota, electricity, etc). By those categories, we can conclude that Gen Z in Malang City uses e-wallets mainly for primary needs purchases and digital platform consumption. Furthermore, offline transaction is becoming a minor activity Gen Z does with e-wallet. Same with e-wallet preference, this activity is also a combination of activities that Gen Z could do with an e-wallet.

The visualization of activites combinations using e-wallet are provide below:

Related to the e-wallet preference combinations and also the diversifications of transaction combinations, digital financial literacy has significant impacts. Digital financial literacy measures how individuals manage financial resources through digital financial

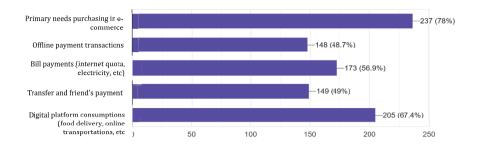


Figure 5: Daily Transactions Activities in E-Wallet.

services. In Table 7, we can see that DFL affects 20,6% of e-wallet utilization. Moreover, the combinations are related to the primary indicator of DFL, knowledge. Gen Z will not use several e-wallets if they do not have excellent capability of digital financial literacy. As already stated before, those combinations are customized by their needs. For example, they will use ShopeePay, GoPay, or OVO when they want to buy online foods. On the other hand, when they want to buy movie tickets, they will use Dana, etc. On the contrary, even though they already have excellent digital financial literacy, online transactions in the store are still lacking, as shown in Figure 5.

As already stated before, Gen Z in Malang City primarily uses e-wallets as its payment for their consumption on e-commerce and other digital platforms. As a result, the QRIS seems less valuable. Contrary, the role of QRIS should be more highlighted in cashless behaviour (Saputri, 2020). This facility could be the primary tool to gain the SDG 2030 for a sustainable economy through a cashless society. In this study, QRIS become the moderating variable, alternatively saying that QRIS could strengthen or weaken the effect of digital financial literacy and spending behaviour to utilizing the e-wallet. By using UTAUT Model in this research, QRIS are accepted and determined by its indicators: performance expectancy, effort expectancy, facilitating conditions and behavioural intention to use (Azzahroo & Estiningrum, 2021). In this study, QRIS affects 44% of ewallet utilization. The percentage is affected by each indicator of QRIS. By seeing the performance expectancy related to how beneficial QRIS for individual payments. It is indirectly shown that Gen Z agrees that QRIS are helpful and advantageous in their practicality. Next, by seeing the effort expectancy, it is shown that Gen Z agrees if QRIS are easy to use. Since the only way to use it is by scanning the QR, it will be integrated into all mobile payment systems. Nevertheless, this result is not the same as research by Azzahroo & Estiningrum, (2021). In her research, effort expectancy does not positively affect the acceptance of QRIS in payment. It is said that many individuals feel uncertain about step by step using QRIS on payment. Later, the other indicators,



such as facilitating conditions, have the same result. Last, the behavioural intentions to use are also significantly correlated to QRIS and e-wallets.

Hence, according to the indicators of the facilitating condition and open questions on the questionnaire. Therefore, Gen Z in Malang City are primarily determined to use QRIS on its offline e-wallet payment. Nevertheless, there is still a lack of inclusiveness in QRIS utilization itself delays the cashless behavior. For example, the QRIS barcode is only available to those merchants or stores that have already grown (up to small enterprises). We could also observe that QRIS barcodes are only available or easily found in crowded places such as cafes, malls, and big restaurants. In contrast, small environments such as; street sellers, small grocery stores, and parking areas generally do not utilize QRIS. Accordance to that, we could also say that those enterprises that are available to facilitate QRIS already have complete trade license administration. The lack of inclusiveness is caused by BI and APJI requirements for registering in QRIS, which conclude all the trade license documents. At the same time, many micro-enterprises do not have complete trade license documents since their incomes are not reach 50 million rupiahs per year. This statement is also supported by the Institute for Development of Economics and Finance (INDEF). Their economist said that QRIS utilizations are still uneven. Besides the inequality of the infrastructures, the cash payment tendency is still strong in society (Kompasiana, 2022). Related to that, research by Faizani & Indriyanti, (2021) stated that QRIS could be accepted if the innovativeness, optimism and perceived use in society are increased. Hence, those hurdle factors are more or less answering why barcode QRIS negatively moderates e-wallet utilization with digital financial literacy and spending behavior. Alternatively, QRIS failed to increase e-wallet utilization through digital financial literacy and spending behavior. Nevertheless, the QRIS significantly and positively correlates to e-wallet utilization in Gen Z in Malang City. Moreover, the relationship of QRIS on the construct are conclude as quasi moderator variable. Because its only interact significantly with spending behavior and become as a predictor variable in digital financial literacy (Sharma et al., 1981).

Therefore, to make QRIS more valuable and accepted, we should focus on the behavioral perspectives of Gen Z and SMEs. Moreover, we know that the main problem is that not every SMEs, such as; convenience stores near Gen Z's houses, small grocery stores, street vendors, and parking areas, uses QRIS. Therefore, to raise the QRIS facilities in SMEs, we need to increase the awareness of SMEs in Malang City to use QRIS and support the cashless society through socialization. Recently, the Head of the Central Bank of Indonesia in Malang conducted the Digifest BI Ngalam 2022 to enhance QRIS usage in traditional markets. As a result, it is said that there are three



traditional markets which are use QRIS. Which are traditional markets in Bunul, Dinoyo and Kepanjen (Anam, 2022). Malang City's Mayor also said that the digitalization of SMEs through QRIS is the agenda of supporting the Malang Creative Center and G20 Presidential. Hence, the process of equalization also needs consistency in evaluations and development. Therefore, there are still merchants who do not use QRIS. Therefore, there are still merchants who do not use QRIS. However, hopefully, the conditions are getting better and cashless payments, primarily through QRIS, are equally implemented.

8. CONCLUSION

E-Wallet acceptance in Gen Z has become the primary part of the digital economy, especially in Malang City. The indicators that determine how e-wallets are accepted are; perceived usefulness, perceived use, attitude, and intention to use. The first indicator, perceived usefulness, represents how advantageous the e-wallet on Gen Z's payment. In some research, perceived usefulness becomes the critical aspect of accepting e-wallets (Singh et al., 2020; Syifa & Tohang, 2020; Teoh Teng Tenk, M., Yew, H. C., & Heang, 2020; Tun, 2020; Yang et al., 2021). In conclusion, Gen Z in Kota Malang generally has excellent digital financial literacy and controlled spending behavior. They already utilize e-wallets primarily for immediate needs purchasing in e-commerce and digital consumptions such as; food delivery, movie tickets, online transportation, etc. Therefore, the relationship between digital financial literacy and spending behavior to e-wallet utilization is positively significant. Nevertheless, the QRIS barcode used for moderating variable is determined as quasi moderator with adverse effects. Furthermore, these conditions are affected by some hurdles in cashless behavior activities, such as; equitable facilitation and internet signals.

However, this research still needs to develop due to its limitations, such as invalid items and sampling techniques. Moreover, to increase the insight of cashless payment in Malang City, the object could be more broad not only focus on Gen Z.

References

[1] Abu Bakar AR, Rahimi WN, Tarmizi SA, Fudzali FA. Malaysian intention to use e-Wallet: Forthcoming expectation in cashless transactions. Malaysian Journal of Social Sciences and Humanities. 2022;7(6):e001537. Available from: https://doi.org/https://doi.org/10.47405/mjssh.v7i6.1537



- [2] Ammenwerth E. Technology acceptance models in ealth nformatics: TAM and UTAUT. Stud Health Technol Inform. 2019 Jul;263:64–71.
- [3] Anam C. Bl Malang Perluas Penggunaan QRIS di Pasar dan Pusat Perbelanjaan Artikel ini telah tayang di Bisnis.com dengan judul "Bl Malang Perluas Penggunaan QRIS di Pasar dan Pusat Perbelanjaan." 2022. Surabaya.Bisnis.Com. https://surabaya.bisnis.com/read/20220613/531/1542822/bi-malang-perluas-penggunaan-gris-di-pasar-dan-pusat-perbelanjaan
- [4] Angelina C, Aswin Rahadi R. A conceptual study on the factors influencing usage Intention of E-wallets in Java. International Journal of Accounting [IJAFB]. Finance and Business. 2020;5(27):19–29.
- [5] Anisah N, Crisnata HF. Analisis Tingkat Literasi Keuangan Pengguna Fintech Payment OVO. Jurnal Riset Akuntansi Dan Keuangan Dewantara. 2021;4(2):46–58. http://ejournal.stiedewantara.ac.id/index.php/JAD/article/view/752
- [6] APJII. APJII: Pengguna Internet Indonesia Tembus 210 Juta pada 2022. APJII. 2022. https://dataindonesia.id/digital/detail/apjii-pengguna-internet-indonesia-tembus-210-juta-pada-2022
- [7] Ayuni RF. The online shopping habits and E-Loyalty of Gen Z as natives in the digital era. Journal of Indonesian Economy and Business. 2019;34(2):168–184.
- [8] Azzahroo RA, Estiningrum SD. Preferensi Mahasiswa dalam Menggunakan Quick Response Code Indonesia Standard (QRIS) sebagai Teknologi Pembayaran. Jurnal Manajemen Motivasi. 2021;17(1):10.
- [9] Badan Pusat Statistik Kota Malang. Badan Pusat Statistik. 2020. https://malangkota.bps.go.id/dynamictable/2019/05/15/19/jumlah-penduduk-di-kota-malang-menurut-kecamatan-dan-jenis-kelamin-2011-2020.html
- [10] Banjarnahor AR. Technology acceptance model and theory of planed behavior: Mapping literature review. Golden Ratio of Mapping Idea and Literature Format. 2021;1(2):134–166.
- [11] Bich N, Thi HN. An investigation of Generation Z's intention to use electronic wallet in Vietnam. Journal of Distribution Science. 2020;18(10):89–99.
- [12] Central Bank of Indonesia. Ekonomi Digital Terus Tumbuh, QRIS Tembus 12 Juta Merchant. 2021. https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2328621.aspx
- [13] Indonesia CN. Lonjakan Pengguna E-Wallet di RI Harus Diantisipasi Penyedia Layanan. 2022. Www.Cnnindonesia.Com. https://www.cnnindonesia.com/teknologi/20220225133939-185-764047/lonjakan-pengguna-e-wallet-di-ri-harus-diantisipasi-penyedia-layanan



- [14] Cummins MM, Haskell J, Jenkins S. Financial attitudes and spending habits of university freshman. Proceedings of the Academy for Economics and Economic Education. 2005;8(1):3–6.
- [15] Djayapranata GF, Setyawan A. Trust or usefulness? QR code payment among millennials in a disrupted market. Proceedings of the 18th International Symposium on Management (INSYMA 2021). 2021;180(Insyma):194–199.
- [16] Faizani SN, Indriyanti AD. Analisis Pengaruh Technology Readiness terhadap Perceived Usefulness dan Perceived Ease of Use terhadap Behavioral Intention dari Quick Response Indonesian Standard (QRIS) untuk Pembayaran Digital (Studi Kasus: Pengguna Aplikasi e-Wallet Go-Pay. Dana. 2021;02(02):85–93.
- [17] Foster B, Sukono, Johansyah MD. Analysis of the effect of financial literacy, practicality and consumer lifestyle on the use of chip⊠based electronic money using sem. Sustainability (Basel). 2022;14(1):32.
- [18] Ghozali I, Latan H. Partial Least Squares: Konsep, Teknik dan Aplikasi Menggunakan Progra, SmartPLS 2.0 M3. 2nd ed. Badan Penerbit Undip; 2015.
- [19] Gosal MA, Linawati N. Pengaruh Intensitas Penggunaan Layanan Mobile Payment terhadap Spending Behavior. Seminar Nasioanl Dan Call for Papers (SENIMA 3). Senima. 2018;3:455–465.
- [20] Hair JF, Hult GT, Ringle CM, Sarstedt M. A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks. In Sage. 2017.
- [21] Kompasiana. Menelisik Efektivitas Penerapan QRIS di Indonesia Halaman 1 Kompasiana.com. 2022. https://www.kompasiana.com/ecofinsc70421/62e746ac08a8b5155b764 efektivitas-penerapan-gris-di-indonesia
- [22] Laturette K, Widianingsih LP, Subandi L. Literasi Keuangan Pada Generasi Z. 2021;9(1):131–139.
- [23] Lonardi H, Legowo N. Analysis of factors affecting use behavior of QRIS Payment System in DKI Jakarta. Turkish Journal of Computer and Mathematics Education. 2021;12(6):3709–3728.
- [24] Lyons AC, Kass\(\text{MHanna J. A methodological overview to defining and measuring "digital" financial literacy. Financ Plann Rev. 2021;4(2):1–19.
- [25] Mahfud L. Dominasi Milenial dan Gen Z Bisa Gairahkan Ekonomi Kota Malang _ Radar Malang Online. Radar Malang. 2021. https://radarmalang.jawapos.com/malang-raya/kota-malang/23/01/2021/dominasi-milenial-dan-gen-z-bisa-gairahkan-ekonomi-kota-malang/



- [26] Mensah MNA, Jumah A. Electronic money and consumer spending behaviour: Evidence from Ghana. Advances in Management and Applied Economics. April 2021;105–121. https://doi.org/10.47260/amae/1136a
- [27] Nada DQ, Suryaningsum S, Kusuma H, Negara S. Digitalization of the quick response Indonesian Standard (QRIS). Payment System for MSME Development. 2021;4(3):551–558.
- [28] Nuryadi ATD, Utami ES, Budiantara M. Dasar-Dasar Statistik Penelitian (1 (ed.)). Mercubuana. 2017.
- [29] Omakhanlen AE, Iyika PI, Chimezie PO, Osho O. Impact of economic and financial literacy on the spending behaviour of selected public servants in Lagos state Nigeria. WSEAS Transactions on Business and Economics. 2021;18:95–105.
- [30] Pahlevi R, Hidayat A. Pasar E-Wallet Indonesia Diproyeksikan Capai US\$70 Miliar pada 2025 | Databoks. 2022. Www.Databoks.Katadata.ld. https://databoks.katadata.co.id/datapublish/2022/03/21/pasar-e-wallet-indonesia-diproyeksikan-capai-us70-miliar-pada-2025
- [31] Persada SF, Dalimunte F, Nadlifatin R, Miraja BA, Redi AA, Prasetyo YT, et al. Revealing the behavior intention of tech-savvy Generation Z to use electronic wallet usage: A theory of planned behavior based. International Journal of Business and Society. 2021;22(1):213–226.
- [32] Prakosa A, Wintaka DJ. ANALISIS FAKTOR-FAKTOR YANG MEMPENGARUHI MINAT PENGGUNAAN ULANG E-WALLET PADA GENERASI MILENIAL DI DAERAH ISTIMEWA YOGYAKARTA. Bisman (Bisnis Dan Manajemen). J Bus Manag. 2020;3(1):72–85.
- [33] Saputri OB. Preferensi Konsumen Dalam Menggunakan Quick Response Code Indonesia Standard (QRIS) Sebagai Alat Pembayaran Digital. Journals of Economics and Business Mulawarman. 2020;17(2):1–11.
- [34] Setiawan M, Effendi N, Santoso T, Dewi VI, Sapulette MS. Digital financial literacy, current behavior of saving and spending and its future foresight. Econ Innov New Technol. 2020;0(0):1–19.
- [35] Sharma S, Durand RM, Gur-Arie O. Identification and analysis of moderator variables. J Mark Res. 1981;18(3):291–300.
- [36] Singh N, Sinha N, Liébana-Cabanillas FJ. Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. International Journal of Information Management. 2020;50(October 2018):191–205. https://doi.org/10.1016/j.ijinfomgt.2019.05.022



- [37] Świecka B, Terefenko P, Wiśniewski T, Xiao J. Consumer financial knowledge and cashless payment behavior for sustainable development in poland. Sustainability (Basel). 2021;13(11):1–19.
- [38] Syifa N, Tohang V. The use of e-wallet system. Proceedings of 2020 International Conference on Information Management and Technology, ICIMTech 2020, August, 342–347.
- [39] Teoh Teng Tenk M, Yew HC, Heang LT. International Journal of Research in Commerce and Management Studies. International Journal of Research in Commerce and Management Studies. 2020;2(2):216–233.
- [40] Tun PM. An investigation of factors influencing intention to use mobile wallets of mobile financial services providers in Myanmar [AJTM]. The Asian Journal of Technology Management. 2020;13(2):129–144.
- [41] Tusyanah T, Wahyudin A, Khafid M. Analyzing factors affecting the behavioral intention to use e-Wallet with the UTAUT model with experience as moderating variable. J Econ Educ. 2021;10(2):113–123. Available from: http://journal.unnes.ac.id/sju/index.php/jeec
- [42] Widyawati S. Hasil Sensus Penduduk 2020, Struktur Penduduk Kota Malang Didominasi Milenial dan Generasi Z - Tribunjatim. Tribun Jatim. 2021. https://jatim.tribunnews.com/2021/01/22/hasil-sensus-penduduk-2020-struktur-penduduk-kota-malang-didominasi-milenial-dan-generasi-z
- [43] Yang M, Al Mamun A, Mohiuddin M, Nawi NC, Zainol NR. Cashless transactions: A study on intention and adoption of e-wallets. Sustainability (Basel). 2021;13(2):1–18.