

Utaut's Implementation of QRIS in the Preferences of the Community in West Sumatra

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Abstract. *In the digital economic ecosystem, the cashless economy is becoming a trend and bringing about a cashless society, however, based on research, cash transactions are still a trend in society, even though currently many digital banking transaction services have developed. This research aims to determine whether there is an influence of effort expectancy, performance expectancy, facilitating conditions, and social influence on the use of QRIS in the preferences of the people of West Sumatra Province. The data for this article was obtained through a questionnaire. The sample in this research was the people of West Sumatra who used QRIS as a means of non-cash payment as many as 100 people. The data analysis used is validity testing, reliability testing, classical assumption testing, and hypothesis testing. Based on the research findings, it can be concluded that the implementation of UTAUT on QRIS in the preferences of the people in West Sumatra that performance expectancy, social influence, and facilitating conditions influence the use of QRIS in the people of West Sumatra.*

Keywords: QRIS, effort expectancy, performance expectancy, facilitating conditions, social influence

1. INTRODUCTION

According to research, the public's tendency for transactions is still to use cash, because people understand that payments via e-wallet or non-cash are still vulnerable to fraud, both fraud and burglary (Nugraheni, 2022). Research conducted (Kompas, n.d.) found that 43.8% of people had never used QRIS, 40.1% did not know about QRIS and very few people had ever used QRIS, namely 16.1%. Based on this research, there are still many people who do not know or do not understand the use of QRIS.

The COVID-19 pandemic became a stepping stone for the government to launch the National Cashless Movement (GNTT) program through Bank Indonesia (Kadim & Sunardi, 2021). During the pandemic, people are expected to reduce transactions using cash, in the hope of reducing interactions and transmission of the virus. GNTT also aims to inform people about the advantages offered by electronic transactions, including easier, faster, more efficient, comfortable and safer (Muzdalifa et al., 2018). The payment method that is currently developing in the digital economic ecosystem is digital-based payments (cashless) (Mayanti, 2020). A cashless economy is understood as an economy without payment barriers using any method and can be implemented at any time when market players such as the government, business world, and consumers realize the benefits and need for non-cash transactions (Gorshkov, 2022).

Digitalization brings a new society, namely a cashless society (non-cash payments) which is more practical and easier. Cashless people are usually millennials who are technology savvy and live in the midst of the Internet of Things because they like things that are practical and can be done via smartphone (Rif'ah, 2019). E-wallets in Indonesia are still less popular, there are too many payment transaction methods and transfers that can only be made to certain e-wallet users, making the use of e-money tends to be more popular (Mulyana & Wijaya, 2018). Based on research by the R&D team (Kompas, n.d.) of 1,014 respondents, 59.5% still make cash payments even though transactions are carried out online (online shopping). Meanwhile, the payment method using a debit/credit card is at 2.3%, this means that payment using this method is not in demand, this could be due to risk and security factors and is not practical because you have to input various data related to the card.

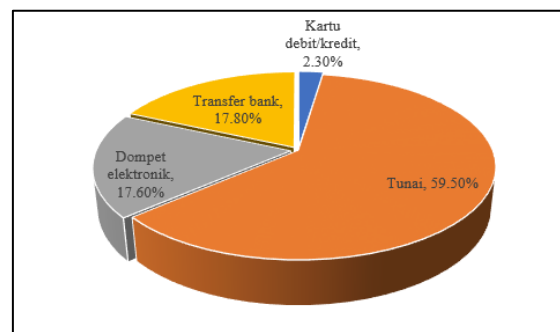


Image 1

Types of Online Transaction Payments

Sumber : (Kompas, n.d.)

Bank Indonesia officially released QRIS (Quick Response Code Indonesia Standard) on January 1, 2020, as the standard for using Indonesian QR codes. The number of QRIS merchants in West Sumatra will continue to increase throughout 2022. At the end of 2022, the number of QRIS merchants reached 368,495 or grew by 59.35% (yoy). However, this growth is much lower than the growth of 130.67% (yoy) in the third quarter of 2022. In the fourth quarter of 2022, more and more merchants are offering payments using QRIS. Meanwhile, the growth in the number of merchants throughout Indonesia reached 25.1 million (BI, 2023).

People still tend to make transactions using cash (Kompas, n.d.) but based on data from Bank Indonesia, the number of merchants using QRIS in West Sumatra will continue to increase throughout 2022. This indicates that non-cash transactions using QRIS are also starting to be popular. What is the tendency for the people of West Sumatra Province to choose QRIS as a means of non-cash payment? In this case, the researcher uses the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh, n.d.). In the UTAUT model,

there are variables that are important for usage behavior and user acceptance, including effort expectancy, performance expectancy, facilitating conditions, and social influence.

2. LITERATURE REVIEW

Several previous researchers calculated the level of public acceptance of technology using TAM (Theory Acceptance Model), including research conducted (Muñoz-Leiva et al., 2017) discussing the use of mobile banking by adapting the TAM method. The research results found that attitudes determine the use of applications, ignoring usability and risks. Meanwhile, research on QR Codes conducted by (Musyaffi & Kayati, 2020) using SEM and PLS methods found that convenience factors that strengthen acceptance of Pay by QR use and risk perceptions do not have a significant impact on QR use.

Research conducted (Dian Octaviani et al., 2023) on purchasing actions by Gen Z at travel agencies using the UTAUT model found that in the basic framework of UTAUT only social influence does not influence purchasing behavior, while 3 other basic variables, namely, performance expectancy, effort expectancy and facilitating conditions influence purchasing actions by Gen Z. Study conducted (Amin et al., n.d.) aims to identify the factors that influence the intention to use e-wallets among users in Malaysia after the COVID-19 pandemic. This study integrates the Unified Theory of Acceptance and Use of Technology (UTAUT) and Mental Accounting Theory (MAT) models by taking into account the additional factors of perceived benefits, perceived safety and trust. Based on PLS-SEM analysis, the findings of the study show that the perception of benefits, perception of security, trust and social influence have a positive effect on the intention to use e-wallets. While the effects of performance expectations and effort expectations are not significant

Research conducted (Mayanti, 2020) with the object of this research being people who are users of Electronic Wallet applications (Go-Pay and OVO) who have implemented the Indonesian Standard Quick Response using the Partial Least Squares-Structural Equation Modeling analysis technique. Results of this research show that Facilitating Conditions and Hedonic Motivation have a positive influence on Behavior Intention, and Behavior Intention also has a positive influence on Use Behavior. Research conducted (Faridhal, n.d.) on the analysis of non-cash payments using e-wallets found that perceptions of trust, habits, performance expectations, facilitating conditions, hedonic motivation, price value, and social influence, had a positive effect on behavioral intentions to use e-wallets. There are many other studies regarding the adaptation of technology in society, especially regarding digital payments, generally with the TAM and UTAUT2 applications. Most research on QRIS has

been carried out using the TAM application, but what the author did was QRIS in the preferences of the people of West Sumatra using the UTAUT method.

Innovations that emerge as a result of modern progress and have an impact on the economy. This technology can make it easier for people to carry out activities (Elit Puteri, 2019). Technological advances greatly influence the development of payment systems. Current payment systems have developed from cash to digital payment systems, which are called electronic money (e-money) (Tarantang et al., 2019). The digital economy is developing through the application of information technology and financial services offered in the form of non-cash payments. Progress in these two fields of financial services is known as financial technology (FINTECH) which is the latest innovation (Hiyanti et al., 2020).

Although the digital economy is also called the "new economy" because its characteristic is the exclusive use of digital information, the term "digital economy" does not only refer to the ICT market (Permana & Puspitaningsih, 2021). The digital economy concept explains how information technology, including the internet, and the economic field, influences macro and micro economies throughout the world (Asnawi, 2022). Along with technological advances, the old digital economic era ended with a new digital economic era, which is characterized by non-cash payments, unlimited internet access, and technology that can be used to run a digital economy (Kumala, 2022).

Digital payment systems consist of money transfer applications, network infrastructure, and the rules and procedures that govern their operations (Tarantang et al., 2019). The use of digital payments (credit cards, debit cards, mobile/internet banking) is usually popular with the 25-40-year-old age group, those with a level of education and formal employment who live in urban areas and have internet access (Aurazo & Vega, 2021).

QR codes are matrix codes or two-dimensional bar codes. This code was developed by Denso Wave, a Japanese company, and published in 1994 with the main functionality being that it can be easily read by scanners. QRIS is an abbreviation for Quick Response or quick response, which is in accordance with its purpose, namely to convey information quickly and get a fast response (Azzahroo & Estiningrum, 2021). The aim of developing QRIS is to make the transaction process with QR codes faster and more efficient (Chania & Rimenda, 2022). The existence of electronic money payments is regulated by Indonesian banks. A Merchant Aggregator is a party other than a Payment System Service Provider (PJSP) that acquires merchants and, through collaboration with PJSP, forwards funds from QRIS transactions to merchants (Chania & Rimenda, 2022).

The new technology acceptance model proposed by Venkatesh, Morris, and Davis is the Unified Theory of Acceptance and Use of Technology (UTAUT). The UTAUT model shows that the behavior to use technology (use behavior) and intention to behave (behavior intention) are influenced by social influence, effort expectancy, performance expectancy, and facilitating conditions. conditions) (Venkatesh, n.d.).

Performance expectancy is the extent to which someone believes that using QRIS will help to achieve benefits at work. Effort expectancy is the level of ease associated with using QRIS. Social influence is the extent to which a person's perception is that other parties believe that it is better to use QRIS. Facilitating conditions are the extent to which a person believes that the technical and organizational infrastructure is available to support the use of QRIS (Venkatesh, n.d.).

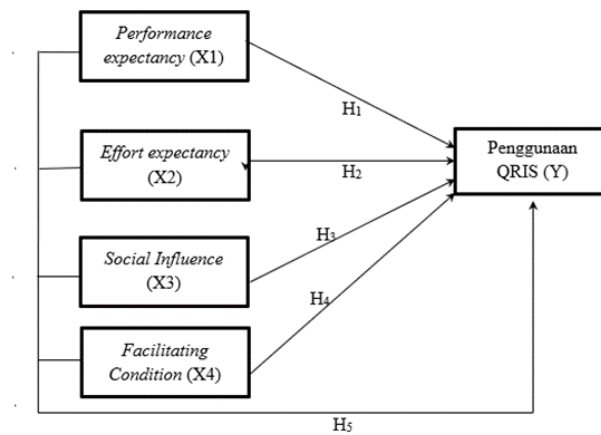


Image 2 Research Framework

H₁: Performance Expectancy will influence the use of QRIS in the people of West Sumatra Province.

H₂: Effort Expectancy will influence the use of QRIS in the people of West Sumatra Province.

H₃: Social Influence will influence the use of QRIS in the people of West Sumatra Province.

H₄: Facilitating Condition will influence the use of QRIS in the people of West Sumatra Province

H₅: Performance expectancy, effort expectancy, social influence, and facilitating condition will influence on the use of QRIS in the people of West Sumatra Province.

3. METHODS

The type of research carried out is field research with a quantitative descriptive approach. This research was conducted in West Sumatra Province. The research instrument used in this research was a questionnaire. To measure research questionnaire indicators, a Likert scale is used to measure attitudes, opinions, and perceptions of individuals or groups of

people about social phenomena (Sugiono, 2011). Distributing questionnaires is a data collection technique related to research conducted by the author. The questionnaire was distributed online via Google Form which was used in the next stage for statistical tests. The population in this study is the people of West Sumatra province with a total of 5,640,629 people. In determining the sample in this study, the author used an accidental sampling technique, with a period of 1 week, the questionnaire was filled out by 100 people.

The techniques used are validity testing, reliability testing, classical assumption testing (normality test, multicollinearity test, and heteroscedasticity test), and hypothesis testing (multiple linear regression test, t- test, f-test, and analysis of the coefficient of determination. For the level of validity, a significant test is carried out using comparing the calculated r value with the r table value. The reliability test shows that the extent to which the measurement gives relatively no different results is carried out again on the same subject. In the normality test, data is said to be normal if the significance is greater than 5% ($p > 0.05$). Multicollinearity is used to determine the correlation relationship between independent variables in the regression model (Widarjono, 2010). For this reason, detection is carried out by looking at the tolerance and VIF (Variance Inflation Factor) values. The heteroscedasticity test is used to determine whether there is an inequality in the variance of the residuals between one observation and another. The scatterplot graph shows heteroscedasticity testing in this study. The multiple linear regression test is used to find out how big the influence is between the independent variable and the dependent variable. Regression equation model:

$$Y=a+bX_1+bX_2+bX_3+bX_4+e$$

The t-test is used to determine whether the independent variable has a significant effect on the dependent variable or not. If the significance is > 0.05 then H_0 is accepted and conversely, if the significance is < 0.05 then H_0 is rejected. Furthermore, if $t_{count} > t_{table}$ then the hypothesis is accepted and if $t_{count} < t_{table}$ then the hypothesis is rejected. The F test is carried out to determine the effect of all independent variables contained in the model together (simultaneously) on the dependent variable. Meanwhile, R-Square is a test carried out to measure how far the influence of the independent variable can vary on the dependent variable, or it can also be said to be the proportion of influence of all independent variables on the dependent variable.

Table 1. Research Questionnaire

Variable	Item
Performance Expectancy (X1)	I find that QRIS is useful in financial transaction activities
	Using QRIS can increase the quantity of output with the same amount of effort
	By using QRIS, I can complete work faster than before
	If I use QRIS, it will increase the effectiveness of my work
Effort Expectancy (X2)	It doesn't take long to learn to use QRIS
	QRIS is clear and easy to understand
	Overall, learning to operate QRIS was easy for me
Social Influence (X3)	People who are important to me, think that I should use QRIS
	I use QRIS because majority of my friends use it
	People in my environment who use QRIS have 'High Profile' status.
	I have the necessary knowledge to use QRIS
Facilitating Conditions (X4)	I have the necessary knowledge to use QRIS
	Guidance is available for me in selecting QRIS
	I think using QRIS suits my lifestyle
Penggunaan QRIS (Y)	I use QRIS for daily needs transactions

I use QRIS more often as a non-cash payment tool than other non-cash services

I really like using QRIS as a non-cash payment tool

I invite my relatives and closest people to use QRIS as a non-cash payment tool.

Source : (Venkatesh et al., 2012)

Result

In this study, researchers studied people's preferences for using QRIS as a non-cash payment tool. Data was obtained by distributing questionnaires made using Google Forms to respondents, namely the people of West Sumatra, in this study used 100 samples who filled out the questionnaire within a period of 1 week. Questionnaire data collected in June 2023.

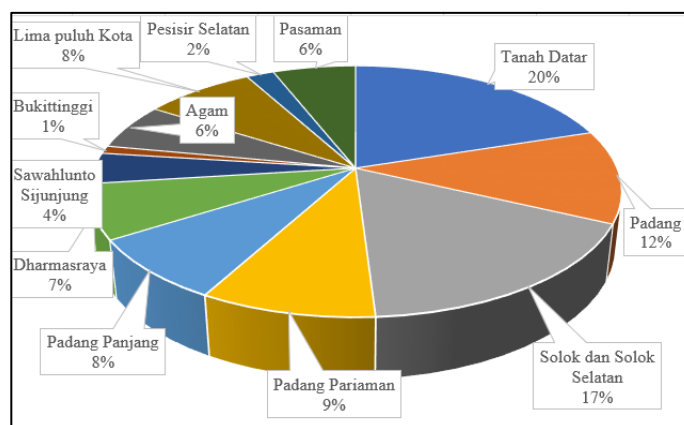


Image 3 . Respondents based on Region

Respondents with various work backgrounds, private employees, civil servants, housewives, entrepreneurs, teachers, doctors, nurses, farmers and students. The instruments used in this research have been tested and have validity and reliability. The statement indicator in each variable can be said to be valid because it has a value of $r_{count} > r_{table}$. The statement item is declared reliable if Cronbach's Alpha is > 0.60 . For the normality test, the variables performance expectancy (X1), effort expectancy (X2), social influence (X3), and facilitating conditions (X4) have a normality value of $0.167 > 0.05$, meaning that the measuring instrument used in this research is normally distributed.

All independent variables used in this research also underwent a multicollinearity test, and it was found that there was no multicollinearity because they were in accordance with the recommended value requirements for the tolerance value, which is > 0.10 and the VIF value < 10 . The heteroscedasticity test, seen from the Scatterplot graph, shows the dots -data points are spread above and below or around the number 0, the points do not collect only above or below, and the spread of points must not form a pattern. So it can be concluded that there are no symptoms of heteroscedasticity.

For the regression model equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

$$Y = 2.746 + 0.242X_1 + (-0.039)X_2 + 0.356X_3 + 0.462X_4$$

It can be interpreted as a regression coefficient This means that if variable X_1 increases by 1% then variable Y will increase by 0.242 or 24.2% assuming that the other independent variables from the regression model are fixed. The regression coefficient This means that if variable X_2 increases by 1% then variable Y will decrease by 0.039 or 3.9% assuming that the other independent variables from the regression model are fixed. The regression coefficient This means that if variable X_3 increases by 1% then variable Y will increase by 0.356 or 35.6% assuming that the other independent variables from the regression model are fixed. The regression coefficient This means that if variable X_4 increases by 1% then variable Y will increase by 0.462 or 46.2% assuming that the other independent variables from the regression model are fixed.

Based on the results of the t test, it was found that all independent variables had an influence on the dependent variable (use of QRIS), except for the effort expectancy variable. Based on the results of the analysis of the coefficient of determination (R^2), the R-Square is 0.476, which means that the influence of the independent variable or variable (X) can explain the dependent variable (Y) is 47.6%, the remaining 52.4% are other factors that influence the use QRIS in the people of West Sumatra Province which is not discussed in this research.

Table 2. Results for t -test

Variabel	t_{hitung}	t_{tabel}	Sig
<i>Performance expectancy</i>	2,410	1,990	0,018
<i>Effort expectancy</i>	-0,271	1,990	0,787

<i>Social</i>	3,857	1,990	0,000
<i>Influence</i>			
Facilitating	3,672	1,990	0,000
<i>Condition</i>			

Source: SPSS processed

The four variables performance expectancy, effort expectancy, social influence, and facilitating conditions simultaneously influence the use of QRIS in the people of West Sumatra Province. The calculated F statistical value is 21,597, which is then compared with the Ftable value which is 2.47 and the significance value is $0.000 < 0.05$.

Discussion

The Influence of Performance Expectancy on the Use of QRIS in the Community of West Sumatra Province

Performance expectancy or performance expectations regarding the use of QRIS in the people of West Sumatra Province, the t-test shows that the t value of the Performance Expectancy variable (X1) is $2.410 > t \text{ table } 1.990$ with a significant probability value of $0.018 < 0.05$, so H01 is rejected and Ha1 is accepted. Ha1 states that there is an influence of Performance Expectancy on the use of QRIS in the people of West Sumatra Province. This is in line with research conducted (Prasetyo, 2017) which states that performance expectancy influences a person's intention to use the system, in his research on the LPPM UNISI website. Meanwhile, in research, (Mayanti, 2020) Performance expectancy has no effect on a person's intention to use technology, in his research on QRIS found in E-Wallet, Go-Pay, and OVO. However, according to (Handayani & Sudiana, 2017) who adopted the UTAUT model, the Performance Expectancy variable influences a person's intention to use academic information systems. Indicators related to the performance expectancy variable include perceptions of usefulness, job suitability, relative benefits, and expected results (Venkatesh et al., 2012).

The Influence of Effort Expectancy on the Use of QRIS in the Community of West Sumatra Province

Effort expectancy or business expectations regarding the use of QRIS in the people of West Sumatra Province, states that the t-calculated value of the effort expectancy variable (X2) is $-0.271 < t \text{ table } 1.990$ with a significant probability value of $0.787 > 0.05$ so that H02 is accepted and Ha2 is rejected. Where H02 states that there is no influence of effort expectancy on the preferences of the people of West Sumatra province in using QRIS. This is in line with

research (Handayani & Sudiana, 2017) which states that effort expectancy has no effect on behavioral intention. When someone uses technology that makes it easier to carry out non-cash transactions, that person hopes that the technology is easy to learn and when it is difficult to understand and use, the technology will not be used (Tusyanah, n.d.).

According to (Musyaffi & Kayati, 2020), the convenience factor influences the acceptance of Pay by QR using the TAM model. Research conducted (Sekarsari et al., n.d.) on Optimizing the Implementation of QRIS found that many traders have not been educated on the use of QRIS. Indicators related to the effort expectancy variable include ease of use and complexity (Venkatesh et al., 2012).

Social Influence on the Use of QRIS in the Community of West Sumatra Province

Social influence or social influence on the use of QRIS in the people of West Sumatra Province, states that the t-calculated value of the social influence variable (X3) is $3.857 > t_{table} 1.990$ with a significant probability value of $0.000 < 0.05$, so H_{03} is rejected and H_{a3} is accepted. H_{a3} states that there is a social influence on the use of QRIS in the people of West Sumatra Province. This is in line with research (Cheng et al., 2008) using the UTAUT method, acceptance of information technology, especially internet banking, is influenced by social influence. A person who is influenced by his social environment is considered to tend to follow the perceptions that exist in their environment (Winduwiratsoko, 2018). Meanwhile, according to (Yuen et al., 2010), social influence does not influence a person's desire to adapt information technology with comparative studies of developed and developing countries. Indicators related to social influence variables include subjective norms, social factors, and status (Venkatesh et al., 2012).

The Influence of Facilitating Conditions on the Use of QRIS in the Community of West Sumatra Province

Facilitating conditions or conditions that facilitate the use of QRIS in the people of West Sumatra Province, states that the t-count value of the facilitating condition variable (X4) is $3.672 > t_{table} 1.990$ with a significant probability value of $0.000 < 0.05$ so that H_{04} is rejected and H_{a4} is accepted. H_{a4} states that there is an influence of facilitating conditions on the use of QRIS in the people of West Sumatra Province. These results are in line with research findings (Muhammad Taufik Hidayat et al., 2020) that facilitating conditions have a significant relationship with behavioral intention and use behavior. Likewise, research (Winduwiratsoko, 2018) found that facility conditions had a positive effect on the acceptance of information

technology, namely the e-banking system. Communities that have supporting facility conditions will be more willing to use QRIS than communities that do not have supporting facility conditions. Indicators related to the facilitating conditions variable include perceived behavior control, facilitating conditions, and compatibility (Venkatesh et al., 2012). Facilitating condition is associated with perceived support availability.

The Influence of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions on the Community of West Sumatra Province

Based on the research results obtained regarding the influence of performance expectancy, effort expectancy, social influence, and facilitating conditions on the people of West Sumatra Province, the F value in the table above is 21,597. This number is the Fcount value, which is then compared with the Ftable value which is 2.47. Fcount value > Ftable, and the significance value is $0.000 < 0.05$. "Sig" here means the level of significance. The test criteria are if the 'Sig.' value is smaller than the significance level used of 0.05, it can be concluded that H05 is rejected and Ha5 is accepted. This means that there is an influence of performance expectancy, effort expectancy, social influence, and facilitating conditions on the use of QRIS in the people of West Sumatra Province.

Research conducted (Taiwo & Downe, 2005) on the UTAUT theory in the acceptance of information technology found that only performance expectancy influenced behavior intention, while effort expectancy, social influence, and facilitating conditions were not significant on behavior intention. In line with research (Soviah, 2019), all basic variables from UTAUT influence behavioral intention towards using the Jember University SFS QR Code service.

This is different from the author's findings, that the four basic variables in UTAUT are only effort expectancy which does not influence the use of QRIS according to the preferences of the people of West Sumatra.

4. CONCLUSION

This research uses the basic model in UTAUT and begins with distributing questionnaires online via Google Forms. The questionnaire was filled in by the people of West Sumatra as a sample with various work backgrounds. As a form of information technology progress, the implementation of UTAUT on QRIS in the preferences of the people of West Sumatra is influenced by the variables performance expectancy, social influence, and facilitating conditions, while the variable effort expectancy has no effect on the use of QRIS in the people

of West Sumatra province. In the future, it is possible that research will be developed further by adding variables, different analysis tools, or a wider population.

REFERENCES

- Amin, Imna Mohd, S., Hamid, A., & Ngayesah, S. (n.d.). Faktor Penentu Niat Penggunaan e-Dompet pasca Pandemi COVID-19 di Malaysia: Integrasi Model UTAUT dan MAT. *Universiti Kebangsaan Malaysia*. <https://doi.org/10.17576/pengurusan-2022-66-09>
- Asnawi, A. (2022). Kesiapan Indonesia Membangun Ekonomi Digital Di Era Revolusi Industri 4.0. *Syntax Literate ; Jurnal Ilmiah Indonesia*, 7(1), 398. <https://doi.org/10.36418/syntax-literate.v7i1.5739>
- Azzahroo, R. A., & Estiningrum, S. D. (2021). Preferensi Mahasiswa dalam Menggunakan Quick Response Code Indonesia Standard (QRIS) sebagai Teknologi Pembayaran. *Jurnal Manajemen Motivasi*, 17(1), 10. <https://doi.org/10.29406/jmm.v17i1.2800>
- BI. (2023, July). QRIS Makin Canggih –Solusi Sangat Praktis. *Www.Bi.Go.Id*.
- Chania, N., & Rimenda, T. (2022). *Pengaruh Perceived Benefit dan Habit terhadap Minat Menggunakan QRIS*.
- Cheng, D., Liu, G., & Qian, C. (2008). *On Determinants of User Acceptance of Internet Banking: A Theoretical Framework and Empirical Study*. <http://dx.doi.org/10.1109/AMIGE.2008.ECP.20>
- Dian Octaviani, R., Sucherly, Prabowo, H., & Sari, D. (2023). Determinants of Indonesian Gen Z's purchase behavior on online travel platforms: Extending UTAUT model. *Innovative Marketing*, 19(4), 54–65. [https://doi.org/10.21511/im.19\(4\).2023.05](https://doi.org/10.21511/im.19(4).2023.05)
- Elit Puteri, A. (2019). *Strategi Promosi Melalui Media Sosial dalam Pengembangan Produk-Produk Bank Syariah (Studi Pada BNI Syariah Cabang Bengkulu)*. IAIN Bengkulu.
- Gorshkov, V. (2022). Cashless Payment in Emerging Markets: The Case of Russia. *Asia and the Global Economy*, 2(1), 100033. <https://doi.org/10.1016/j.aglobe.2022.100033>
- Handayani, T., & Sudiana, S. (2017). Analisis Penerapan Model UTAUT (Unified Theory of Acceptance and Use of Technology) Terhadap Perilaku Pengguna Sistem Informasi Akademik pada STTNAS Yogyakarta. *Angkasa: Jurnal Ilmiah Bidang Teknologi*, 7(2), 165. <https://doi.org/10.28989/angkasa.v7i2.159>
- Hiyanti, H., Nugroho, L., Sukmadilaga, C., & Fitrijanti, T. (2020). Peluang dan Tantangan Fintech (Financial Technology) Syariah di Indonesia. *Jurnal Ilmiah Ekonomi Islam*, 5(3). <https://doi.org/10.29040/jiei.v5i3.578>

- Kadim, A., & Sunardi, N. (2021). Financial Management System (QRIS) based on UTAUT Model Approach in Jabodetabek. *International Journal of Artificial Intelligence Research*, 6(1). <https://doi.org/10.29099/ijair.v6i1.282>
- Kompas. (n.d.). *Pembayaran tunai Masih Diminati dalam Ekosistem Digita*. <https://www.kompas.id/baca/metro/2022/02/11/pembayaran-tunai-masih-diminati-dalam-ekosistem-digital>
- Kumala, S. L. (2022). Perkembangan Ekonomi Berbasis Digital Di Indonesia. *Journal of Economics and Regional Science*, 1(2), 109–117. <https://doi.org/10.52421/jurnal-esensi.v1i2.190>
- Mayanti, R. (2020). Faktor-Faktor yang Mempengaruhi Penerimaan User Terhadap Penerapan Quick Response Indonesia Standard Sebagai Teknologi Pembayaran Pada Dompet Digital. *Jurnal Ilmiah Ekonomi Bisnis*, 25(2), 123–135. <https://doi.org/10.35760/eb.2020.v25i2.2413>
- Muhammad Taufik Hidayat, Qurrotul Aini, & Elvi Fetrina. (2020). Penerimaan Pengguna E-Wallet Menggunakan UTAUT 2 (Studi Kasus). *Jurnal Nasional Teknik Elektro dan Teknologi Informasi*, 9(3), 239–247. <https://doi.org/10.22146/v9i3.227>
- Mulyana, A., & Wijaya, H. (2018). Perancangan E-Payment System pada E-Wallet Menggunakan Kode QR Berbasis Android. *Komputika : Jurnal Sistem Komputer*, 7(2), 63–69. <https://doi.org/10.34010/komputika.v7i2.1511>
- Musyaffi, A. M., & Kayati, K. (2020). Dampak Kemudahan dan Risiko Sistem Pembayaran QR Code: Technology Acceptance Model (TAM) Extension. *Jurnal Inspirasi Bisnis dan Manajemen*, 3(2), 161. <https://doi.org/10.33603/jibm.v3i2.2635>
- Muzdalifa, I., Rahma, I. A., & Novalia, B. G. (2018). Peran Fintech Dalam Meningkatkan Keuangan Inklusif Pada UMKM Di Indonesia (Pendekatan Keuangan Syariah). *Jurnal Masharif al-Syariah: Jurnal Ekonomi dan Perbankan Syariah*, 3(1). <https://doi.org/10.30651/jms.v3i1.1618>
- Nugraheni, A. (2022, February 13). *Pembayaran Tunai Masih Diminati dalam Ekosistem Digital*. <https://www.kompas.id/baca/metro/2022/02/11/pembayaran-tunai-masih-diminati-dalam-ekosistem-digital>
- Permana, T., & Puspitaningsih, A. (2021). Studi Ekonomi Digital Di Indonesia. *Jurnal Simki Economic*, 4(2), 161–170. <https://doi.org/10.29407/jse.v4i2.111>
- Prasetyo, D. Y. (2017). *Penerapan Metode UTAUT (Unified Theory of Acceptance and use Of Technology) dalam Memahami Penerimaan dan Penggunaan Website KKN LPPM UNISI*. 6.

- Rif'ah, S. (2019). *Fenomena Cashless Society di Era Milenial dalam Perspektif Islam*. 2.
- Sekarsari, K. A. D., Indrawati, C. D. S., & Subarno, A. (n.d.). *Optimalisasi Penerapan Quick Response Code Indonesia Standard (QRIS) pada MERchant di Wilayah Surakarta*.
- Soviah, S. (2019). *Analisa Pengaruh Performance Expectancy, Social Influence, dan Facilitating Condition terhadap Intensitas Penggunaan Layanan QR Code Sister For Student (SFS) Universitas Jember*.
- Sugiono. (2011). *Metode Penelitian Kualitatif Kuantitatif*. Alfabeta.
- Taiwo, A. A., & Downe, A. G. (2005). The Theory of User Acceptance and Use of Technology (UTAUT): A Meta Analytic Review of Empirical Findings. . . Vol., 49.
- Tarantang, J., Awwaliyah, A., Astuti, M., & Munawaroh, M. (2019). Perkembangan Sistem Pembayaran Digital pada Era Revolusi Industri 4.0 di Indonesia. *JURNAL AL-QARDH*, 4(1), 60–75. <https://doi.org/10.23971/jaq.v4i1.1442>
- Tusyanah. (n.d.). *Eksplorasi Faktor-Faktor yang Mempengaruhi Perilaku Adopsi Transaksi Non Tunai dengan model UTAUT Pada Generasi Milenial*.
- Venkatesh, Thong, & Xu. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, 36(1), 157. <https://doi.org/10.2307/41410412>
- Venkatesh. (n.d.). *User Acceptance of Information Technology: Toward a Unified View*.
- Widarjono. (2010). *Analisis Statistika Multivariat Terapan (Pertama)*. UPP STIM YPKN.
- Winduwiratsoko. (2018). *Analisis Penerapan Model Unified Theory of Acceptance and Use of Technology (UTAUT) untuk Memahami Penerimaan dan Penggunaan Layanan E-Banking oleh Nasabah di Provinsi Daerah Istimewa Yogyakarta*.
- Yuen, Yeow, Lim, & Saylani. (2010). *Internet banking adoption: Comparing developed and developing countries*.