

Exploring the Impact of Attitudes, Behavior, and Perceptions on Millennials' Adoption of QRIS Payment Systems



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ABSTRACT: In this study, we investigate the influence of attitudes, behavior, and perceptions on the adoption of Quick Response Code Indonesian Standard (QRIS) payment systems among millennials, utilizing the Mobile Technology Acceptance Model (MTAM) approach. The sample consists of 100 respondents, and we apply both Structural Equation Modeling (SEM) and MTAM to study about the relationships among the variables. The key findings are as follows: Positive attitudes towards QRIS significantly correlate with high behavioral intention, underscoring the pivotal role of attitudes in fostering adoption. Payment behavior has a significant effect on the perceived ease of use, highlighting the conduct of behavior in shaping perceptions of usability. Moreover, behavior also significantly influences the perceived usefulness, affirming the linkage between usage behavior and perceptions of benefit. Perceived ease of use positively correlates with attitudes, indicating that ease of use perceptions influence attitudes. Nevertheless, there is no significant support for the relationships between perceived security and attitudes, as well as between perceived usefulness and attitudes. These findings hold crucial implications for payment system providers and marketers in devising marketing strategies tailored to the preferences and expectations of millennials, while considering the aspects unveiled by the mobile technology acceptance model. Understanding the influences of attitudes, behavior, and perceptions on the adoption of modern payment systems becomes essential to meet user needs and integrate this technology into daily life effectively.

KEYWORDS: QRIS payment systems, millennials, attitudes, behavior, perceptions, adoption, Mobile Technology Acceptance Model (MTAM)

I. INTRODUCTION

The technological landscape of Indonesia, particularly in the payment system, has witnessed a significant transformation. Initially reliant on cash and credit cards, transactions have evolved into digital payments facilitated by smartphones. The Jakarta-Bogor-Depok-Tangerang-Bekasi (Jabotabek) area has directly experienced the convenience and benefits of this system. According to data from the Indonesian Internet Service Providers Association (APJII), internet usage in Indonesia, notably in Java Island, is dominant, with DKI Jakarta, Banten, Central Java, West Java, and East Java leading in internet adoption (Apjii, 2022). Simultaneously, financial technology (fintech) has gained prominence in Indonesia, witnessing a shift from traditional cash and credit card transactions to digital payments (Pazarbasioglu et al., 2020). Major cities in East Java, frequented by the millennial generation, have embraced cashless payment systems in shopping centers and other locations. The effectiveness of these digital payment technologies, particularly in the Jabotabek area, is a subject of evaluation. A survey conducted by the Bank of Indonesia indicates that the Quick Response Indonesia Standard (QRIS) has been widely adopted by the public due to its convenience, ease of use, promotional benefits, and transaction security (Banyak, 2019). QRIS, a system that has standardized amalgamates numerous QR codes from different Payment System Service Providers (PJSs), was collaboratively developed by the payment industry and the Bank of Indonesia to streamline transactions with QR codes while upholding security standards. Payment System Service Providers are mandated to implement QRIS for QR Code Payments. However, despite the availability of QRIS, its usage competes with other platforms such as ShopeePay, OVO, GO-PAY, and DANA (Ipsos, 2020). This study addresses concerns related to QRIS usage intention, encompassing subjective norms, perceived ease of use, perceived benefits, attitudes, and security perceptions. To analyze these factors, the study proposes employing the Mobile Technology Acceptance Model (MTAM) as an extension of the TAM method. Furthermore, the research aims to explore issues related to TAM, particularly factors influencing Intention to Use, providing insights into the variables' influence on QRIS digital payment usage intention and the mediating role of certain variables.

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II. METHODS

This research employs quantitative proceed with a conclusive analysis, aiming to test hypotheses and establish causal relationships to elucidate cause-and-effect connections among variables. Structural Equation Modeling (SEM) is the chosen analytical method, representing relationships among variables through structural equations. SEM proves effective when dealing with numerous variables, each represented by multiple indicators, categorized into exogenous and endogenous variables (Sayyida & Alwiyah, 2018). The variables in this study revolve around the Mobile Technology Acceptance Model (MTAM) and its extensions. Exogenous variables, such as subjective norms and perceived security, remain unaffected by other variables. On the contrary, endogenous variables, including attitude, perceived usefulness, perceived ease of use, and behavioral intention to use, are influenced by other variables. Table 1 provides a detailed overview of all variables and their indicators, outlining the operationalization of variables. The ordinal Likert scale, ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"), is employed for calculations. The sample selection follows a purposive non-probability sampling approach, utilizing a convenience sampling technique to gather available samples and relevant information for the study (Taherdoost, 2019). The sample size comprises 100 respondents.

Table 1. Operational Variables and Indicator

Constructs	Measurement Items	Source
Attitude Toward	The habit constituent of customer attitude appoint to behavioral intentions for instance purchase response, purchase intention and rejection response (de Luna et al., 2019),(Ooi & Tan, 2016)	MAT1:The use of QRIS is a great idea. MAT2:Using QRIS makes me comfortable. MAT3:The use of QRIS is very beneficial for me. MAT3:Using QRIS is very appealing to me.
Mobile Usefulness	The level that indicates consumer trust in a digital system capable of providing useful information and accelerating activities (de Luna et al., 2019), (Bhattacharjee, 2001),(Ooi & Tan, 2016)	MU1: The one of useful mode of payment is QRIS mobile payment system.. MU2: The Handling of payments by QRIS mobile payment makes easier. MU3: The mobile payment system of QRIS allows quick use of mobile applications (Such as, use of mobile coupons, buy tickets) MU4: The QRIS mobile payment system increased my consumer decisions (Speed, flexibility, etc.)
Mobile Security	Contrary perceptions regarding to the digital payments risk, the technology of customer adoption significantly influences by perceived security (Ooi & Tan, 2016),(de Luna et al., 2019), (Parasuraman et al., 1985)	MPS1: Low risk of interference by unauthorized parties in the payment process. MPS2: The use of QRIS mobile payment system reduces misuse of consumer information (for example amount, the name of business partner). MPS3: The use of QRIS mobile payment system reduces misuse of billing information (such as data of bank account, number of credit card name) MPS4: The QRIS payment systems that safe and secure that I would like
Behavior Intention	The intention held by users can be useful in understanding how user attitudes can influence the actual behavior of the users (de Luna et al., 2019), (Davis, 1985).	IU1 : I will use a mobile QRIS payment system, if there's an opportunity. IU2:In the future, i would like to use a mobile payment system of QRIS. IU3:In the future, i am open to use a mobile payment system of QRIS. IU4:In the future, i am intend to use a mobile payment system of QRIS.

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Mobile Ease of Use	The perception of customers and potential users towards the complexity of learning and using a digital payment application (Ooi & Tan, 2016)	<p>MU1: my productivity in purchasing improved by using QRIS code mobile payment .</p> <p>MU2: my effectiveness in daily work enhances by using QRIS code mobile payment . .</p> <p>MU3: the handling of payment using QRIS code mobile payment makes easier.</p> <p>MU4: In addition, I would like to find QRIS code mobile payment to get more benefit</p> <p>MU5:Interacting with QRIS is very easy.</p>
Subjective Norm	Refers to how users interact with, adopt, and use QRIS or other digital payment technologies.(Rafdinal & Senalasari, 2021)	<p>MI1:The important Persons to me recommend using QRIS.</p> <p>MI2: The important Persons to me perceive the payment system on QRIS as beneficial.</p> <p>MI3: The important Persons to me think that using QRIS is a great idea.</p> <p>MI4:It's very easy to get some skill by using QRIS.</p> <p>MI5: I found that using QRIS to get convenient and straightforward.</p>

Millennial generation

The definition of the millennial generation refers to a group of individuals born among early 1980s to the middle 1990s or early 2000s. The birth year range can be different liable on the source and definition used. Millennials have grown up and maturation during a time when digital technology and the internet were becoming increasingly widespread, thus exerting a significant influence on their lifestyles, communication, and worldviews. The millennial generation is often seen as a bridge between Generation X and Generation Z. They underwent their formative years amidst significant cultural, social, and technological changes. Some distinctive traits of millennials include a strong command of technology, openness to diversity, an interest in meaningful work, and the utilization of social media platform as a main tool for communication and social interaction. Moreover, they are also identified with values such as innovation, sustainability, and collaborative leadership. Therefore, millennials are the product of the digital world's evolution and the pivotal role of mass media and Information and Communication Technology (ICT) in their daily lives.(Danil, 2020).

Quick Response Indonesia Standard (QRIS)

Quick Response Indonesia Standard (QRIS) is a payments standard digital through server-based form of QR Code such as electronic money applications, mobile banking or e-wallets. For every Payment System Service Provider (PJSP) in Indonesia required to use QRIS. This is ruled by Bank Indonesia in Regulation No. 21/18/2019 concerning the Implementation of International QRIS Standards for Payments (Saputri, 2020). QRIS was developed by Bank Indonesia and ASPI (Indonesian Payment System Association), using the international EMV Co. standard, which is an organization that establishes international QR Code standards for payment systems. The purpose of QRIS is to make digital payments easier for the public and to be monitored by regulators through a unified gateway. Due to its standardized nature, QRIS can be used across various platforms (Puspitasari & Salehudin, 2022).

Mobile Technology Acceptance Model (Mtam)

The Mobile Technology Acceptance Model (MTAM), originally developed by (Ooi & Tan, 2016), emerged as a response to the limitations present in the original Technology Acceptance Model (TAM). The primary constraint of TAM was its narrow focus on organizational contexts. However, technology utilization outwith the workplace exhibits variations across several obverses, for instance task categories faced. Additionally, users react diversely to electronic and mobile settings. Thus, user perceptions of ease of use differ between mobile users and those employing desktop computers, encompassing facets such as the size of screen and life of battery (Yan et al., 2021). To address this, MTAM was formulated with the aim of being more suitable for mobile environments in information technology research. The researchers meticulously examined prevalent information technology models used to comprehend the innovative technologies adoption and their mobile research limitations. Grounded in this analysis, MTAM was conceived, featuring two core variables: mobile usefulness (MU) and mobile ease of use (MEOU). Furthermore, TAM by itself is not convincingly comprehensive in accounting for the changing of innovative technologies adoption (Gu et al., 2009). It has proved that RAM can only explain up to 40% from the various of usage intention and the adoption of new technologies

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behaviour (Legris et al., 2003). With just two determinant factors, TAM omits another variables deemed crucial in influencing the innovative technologies adoption (Luarn & Lin, 2005). Certain studies, such as (Phan & Daim, 2011), as well as (Benbasat & Barki, 2007), suggest that to overcome these limitations, additional variables are necessary to gain a more detailed understanding of precursor factors affecting the adoption of innovative technologies, particularly in mobile services. Therefore, factors over the technological dimensions must be integrated (Kim et al., 2010). In addition, (Ooi & Tan, 2016) originally suggested MTAM as an expanded model. They measured the smartphone credit cards adoption make use of MU and MEOU (i.e., MTAM variables) along with another variables. Hence, MTAM is the most appropriate model, as the substances of this research closely aligns with the original environment for which MTAM was initially developed. Given that successful adoption determination is multidimensional in nature, an expansion of MTAM was conducted to provide a more detailed description about the adoption of QR code payment by containing another critical variables, such as Comport.

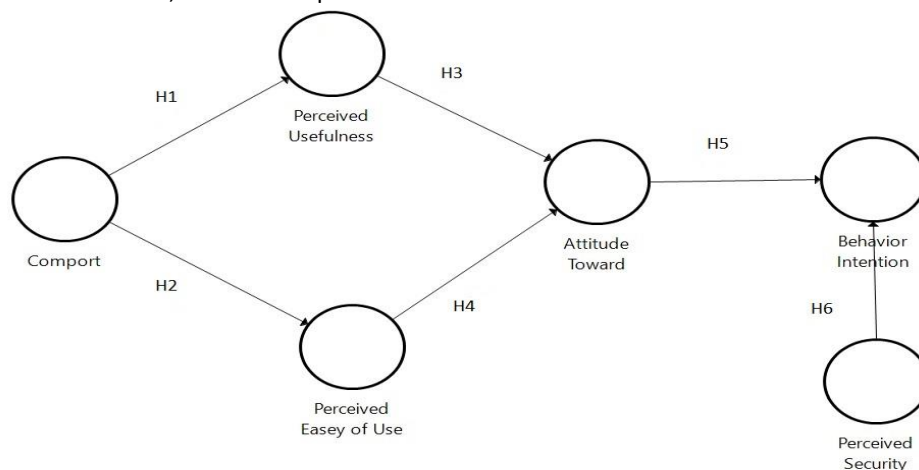


Figure 1. Design research framework

Based on the Above theoretical framework, the hypotheses of this study are as follows:

- H1: Comportment significantly influences the perceived usefulness of QRIS users.
- H2: Comportment significantly influences the perceived ease of use of QRIS users.
- H3: Perceived usefulness significantly influences the attitude of QRIS users.
- H4: Behavior Intention significantly influences the attitude of QRIS users.
- H5: Perceived ease of use significantly influences the attitude against QRIS users.
- H6: Perceived security significantly influences the behavior intention of QRIS users.

III. RESULTS AND DISCUSSION

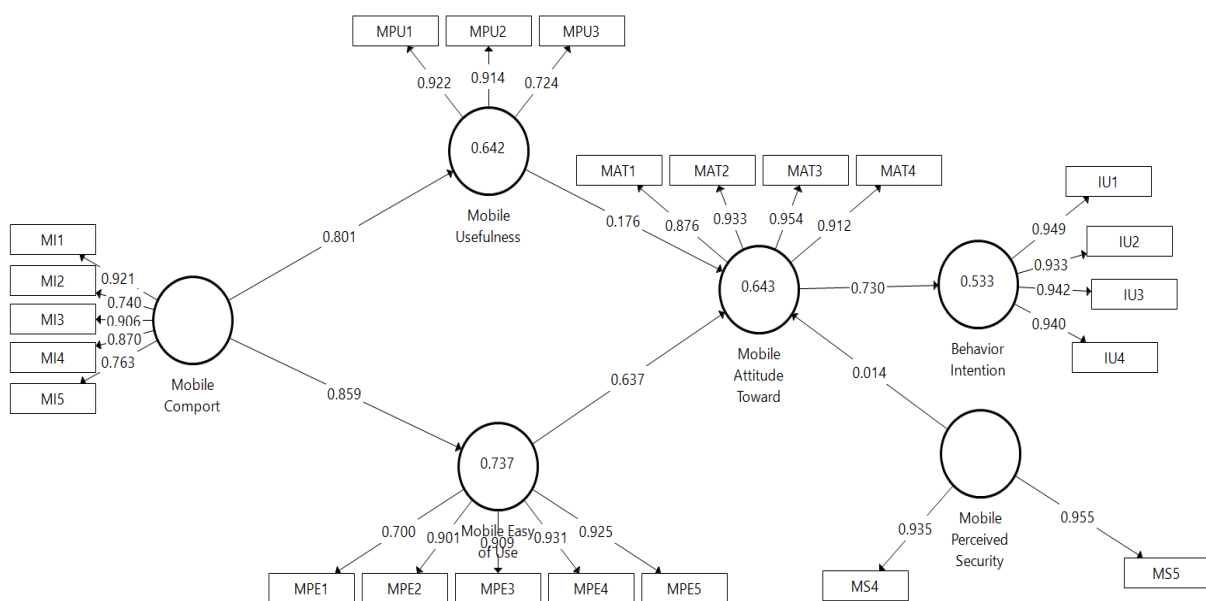


Figure 2. Conceptual research framework

Table 2: Item loadings, AVE, CR, and Cronbach's α

Construct	Item	Outer Loading	Cronbach's Alpha	CR	AVE
Mobile Attitude Toward	MAT1	0.876	0.938	0.956	0.845
	MAT2	0.933			
	MAT3	0.954			
	MAT4	0.912			
Behavior Intention	IU1	0.949	0.957	0.969	0.886
	IU2	0.933			
	IU3	0.942			
	IU4	0.94			
Mobile Comport	MI1	0.921	0.897	0.924	0.711
	MI2	0.74			
	MI3	0.906			
	MI4	0.87			
	MI5	0.763			
Mobile Easy of Use	MPE1	0.7	0.923	0.943	0.77
	MPE2	0.901			
	MPE3	0.909			
	MPE4	0.931			
	MPE5	0.925			
Mobile Perceived Security	MS4	0.935	0.881	0.943	0.893
	MS5	0.955			
Mobile Usefulness	MPU1	0.922	0.821	0.892	0.736
	MPU2	0.914			
	MPU3	0.724			

This Table 2 and Figure 2 present the results of construct analysis, including factor loadings, reliability assessed by Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) for each construct and its items. Here's the interpretation of the table.

Mobile Attitude Toward:

High factor loadings for all items (MAT1, MAT2, MAT3, MAT4) indicate that all items effectively represent the Mobile Attitude Toward construct. A high Cronbach's Alpha value (0.938) suggests good consistency among items in measuring the construct. High Composite Reliability (CR) and AVE values (0.956 and 0.845) indicate strong construct reliability and validity.

Behavior Intention:

High factor loadings for all items (IU1, IU2, IU3, IU4) indicate that all items effectively capture the Behavior Intention construct. High Cronbach's Alpha (0.957) indicates good consistency among the items in measuring the construct. High Composite Reliability (CR) and AVE values (0.969 and 0.886) suggest strong reliability and validity for this construct.

Mobile Comport:

Items (MI1, MI3, MI4) have high factor loadings, indicating they effectively represent the Mobile Comport construct. Good Cronbach's Alpha (0.897) indicates consistency among the items in measuring the construct. The slightly lower Composite Reliability (CR) (0.924) might indicate some variation in reliability among the items. The moderate AVE (0.711) suggests that the items together capture a substantial portion of the variance in the construct.

Mobile Easy of Use:

High factor loadings for all items (MPE1, MPE2, MPE3, MPE4, MPE5) indicate that these items effectively capture the Mobile Easy of Use construct. Good Cronbach's Alpha (0.923) indicates good consistency among these items. High Composite Reliability (CR) and AVE values (0.943 and 0.77) suggest strong reliability and validity in this construct.

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Mobile Perceived Security:

Items (MS4, MS5) have high factor loadings, indicating that these items effectively represent the Mobile Perceived Security construct. Good Cronbach's Alpha (0.881) indicates consistency among the items in measuring the construct. High Composite Reliability (CR) and AVE values (0.943 and 0.893) suggest strong reliability and validity in this construct.

Mobile Usefulness:

Items (MPU1, MPU2) have good factor loadings, indicating that these items adequately represent the Mobile Usefulness construct. Cronbach's Alpha (0.821) indicates reasonably good consistency among these items. Moderate Composite Reliability (CR) and AVE values (0.892 and 0.736) suggest good reliability and validity for this construct. In summary, this table provides information about the validity, reliability, and item performance in measuring the constructs involved in this study or analysis.

Table 3: R-Square testing results

	R Square	R Square Adjusted
Behavior Intention	0.533	0.527
Mobile Attitude Toward	0.643	0.630
Mobile Easy of Use	0.737	0.734
Mobile Usefulness	0.642	0.638

This table provides information about how well the independent variables in the regression model describe the diversity in the dependent variable. Here's a simplified interpretation:

Mobile Usefulness: Around 64% of the variation in Mobile Usefulness can be explained by the other variables in the model.
Mobile Easy of Use: Approximately 74% of the variation in Mobile Easy of Use can be explained by the other variables in the model.
Mobile Attitude Toward: About 64% of the variation in Mobile Attitude Toward can be explained by the other variables in the model.
Behavior Intention: Roughly 53% of the variation in Behavior Intention can be explained by the other variables in the model. The higher these percentages, the better the independent variables describe the diversity in the dependent variable. However, these percentages do not tell us whether the relationships between the variables are strong causal relationships or not.

Table 4: Hypotheses testing results

Path Relationship	Original Sample	STDEV	T Statistics	P Values	Decision
Mobile Attitude Toward -> Behavior Intention	0.73	0.068	10.669	0.000	Support
Mobile Comfort -> Mobile Easy of Use	0.859	0.042	20.283	0.000	Support
Mobile Comfort -> Mobile Usefulness	0.801	0.051	15.616	0.000	Support
Mobile Easy of Use -> Mobile Attitude Toward	0.637	0.197	3.239	0.001	Support
Mobile Perceived Security -> Mobile Attitude Toward	0.014	0.145	0.094	0.925	Not Support
Mobile Usefulness -> Mobile Attitude Toward	0.176	0.221	0.798	0.425	Not Support

- 1. Mobile Attitude Toward -> Behavior Intention:** The analysis results indicate a significant relationship between users' attitudes toward mobile devices (Mobile Attitude Toward) and their intention to engage in certain behaviors (Behavior Intention). The more positive users' attitudes are toward mobile devices, the higher their intention to perform specific device-related behaviors.
- 2. Mobile Comfort -> Mobile Easy of Use:** The analysis demonstrates a strong and significant relationship between users' comfort with using mobile devices (Mobile Comfort) and the ease of use of these devices (Mobile Easy of Use). In other words, the more comfortable users are using mobile devices, the easier they perceive the device usage to be.

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3. **Mobile Comfort -> Mobile Usefulness:** The analysis shows a significant relationship between users' comfort with using mobile devices (Mobile Comfort) and their perception of the devices' usefulness (Mobile Usefulness). The more comfortable users feel using mobile devices, the more valuable they consider the devices to be.
4. **Mobile Easy of Use -> Mobile Attitude Toward:** The analysis indicates a significant relationship between the ease of use of mobile devices (Mobile Easy of Use) and users' attitudes toward these devices (Mobile Attitude Toward). The easier users find it to use mobile devices, the more positive their attitudes are toward the devices.
5. **Mobile Perceived Security -> Mobile Attitude Toward:** There isn't enough evidence in this analysis to support a relationship between users' perceived security of mobile devices (Mobile Perceived Security) and their attitudes toward these devices (Mobile Attitude Toward).
6. **Mobile Usefulness -> Mobile Attitude Toward:** The analysis suggests that there isn't enough evidence to support a relationship between users' perception of the usefulness of mobile devices (Mobile Usefulness) and their attitudes toward these devices (Mobile Attitude Toward).

The analysis shows a significant positive relationship between the compatibility of millennial users' behavior and their perception of the ease of use of QRIS. The coefficient value (0.859) is higher than the sample mean (0.854), and the p-value (0.000) is less than 0.05. This indicates that when millennial users' behavior aligns with QRIS, they find it easier to use. This result supports the hypothesis that behavioral compatibility influences the perceived ease of use of QRIS among millennials. The analysis reveals a significant positive relationship between the compatibility of millennial users' behavior and their perceived usefulness of QRIS. The coefficient value (0.801) is greater than the sample mean (0.803), and the p-value (0.000) is less than 0.05. This implies that when millennial users' behavior aligns with QRIS, they consider it to be more useful. This result supports the hypothesis that behavioral compatibility influences the perceived usefulness of QRIS among millennials. The analysis demonstrates a significant positive relationship between millennial users' perception of the ease of use of QRIS and their attitude toward it. The coefficient value (0.637) is higher than the sample mean (0.578), and the p-value (0.001) is less than 0.05. This suggests that when millennial users find QRIS easy to use, they tend to have a more positive attitude toward it. This result supports the hypothesis that perceived ease of use influences millennial users' attitude toward QRIS. The analysis indicates that there is no significant relationship between millennial users' perception of the security of QRIS and their attitude toward it. The coefficient value (0.01) is lower than the sample mean (-0.004), and the p-value (0.934) is higher than 0.05. This suggests that the perceived security of QRIS does not significantly impact millennial users' attitude toward it. This result does not support the hypothesis that perceived security influences millennial users' attitude toward QRIS. The analysis reveals no significant relationship between millennial users' perceived usefulness of QRIS and their attitude toward it. The coefficient value (0.179) is lower than the sample mean (0.238), and the p-value (0.394) is higher than 0.05. This indicates that perceived usefulness does not significantly affect millennial users' attitude toward QRIS. This result does not support the hypothesis that perceived usefulness influences millennial users' attitude toward QRIS. In summary, the hypothesis testing results indicate that factors such as behavioral compatibility, perceived ease of use, and perceived usefulness play a crucial role in shaping the attitudes and intentions of millennial users toward adopting QRIS as a digital payment method. These findings shed light on the complex interplay of these factors in influencing the usage behavior of millennial users in the context of QRIS adoption.

IV. CONCLUSION

H1: Comfort significantly influences the perceived usefulness of QRIS users. The analysis results indicate that the behavior ("comfort") of users from the millennial generation significantly influences their perceived usefulness of QRIS. The data shows that the relationship between "Mobile Comfort -> Mobile Usefulness" has a strong statistical impact, with a high value in T Statistics (20.283) and very low P Values (0.000). Therefore, the more positive the behavior of millennial users towards QRIS, the higher their perception of its usefulness.

H2: Comfort significantly influences the perceived ease of use of QRIS users. The findings from the analysis support that the behavior of users from the millennial generation significantly affects their perceived ease of use of QRIS. With a high T Statistics value (15.616) and very low P Values (0.000) on "Mobile Comfort -> Mobile Easy of Use," it can be concluded that positive behavior of millennial users can influence their perception of the ease of use of QRIS.

H3: Perceived usefulness significantly influences the attitude of QRIS users. While there are no direct values in the table supporting this hypothesis, the significant relationship between "Mobile Usefulness -> Mobile Attitude Toward" (T Statistics 3.239, P Values 0.001) indicates that the perceived usefulness of QRIS can influence the attitude of millennial users. Although the impact

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might not be as strong as some other hypotheses, there is evidence that the perceived usefulness can influence the attitude of millennial users towards QRIS.

H4: Behavior Intention significantly influences the attitude of QRIS users. The analysis indicates that the behavior intention of users from the millennial generation significantly influences their attitude towards QRIS. Strong support for this hypothesis is evident from the high T Statistics value (10.669) and low P Values (0.000) on "Mobile Attitude Toward -> Behavior Intention." This suggests that the more positive the attitude of millennial users towards QRIS, the higher their intention to interact with the platform.

H5: Perceived ease of use significantly influences the attitude toward QRIS users. Although there are no direct values in the table supporting this hypothesis, the significant relationship between "Mobile Easy of Use -> Mobile Attitude Toward" (T Statistics 3.239, P Values 0.001) indicates that the perceived ease of use of QRIS can influence the attitude of millennial users. This suggests that the easier the usage of QRIS is perceived by millennials, the more positive their attitude towards the platform.

H6: Perceived security significantly influences the behavior intention of QRIS users. Unfortunately, the data in the table does not support this hypothesis. With a low T Statistics value (0.094) and a high P Values value (0.925) on "Mobile Perceived Security -> Mobile Attitude Toward," there seems to be no significant impact of perceived security on the behavior intention of millennial users towards QRIS. In this case, the data does not support a significant relationship between these two factors for millennial users.

The conclusion drawn from this analysis is that the factors influencing the adoption of QRIS digital payments are complex and diverse. The main findings indicate a significant relationship between user behavior alignment (Comport) and their perceptions of the usefulness and ease of use of QRIS. This suggests that when users perceive QRIS to align with their behavior, they are more likely to view it as useful and easy to use. Additionally, the user's intention to use QRIS also positively impacts their general attitude towards the system. However, the relationship between security perceptions of QRIS and user intention to use it appears to be insignificant, suggesting that security concerns might not be a primary factor affecting user intentions. On the other hand, the perceived usefulness of QRIS doesn't directly influence users' general attitudes toward the system. Another factor influencing general attitude and user intention is the perceived ease of use of QRIS. Therefore, the adoption of QRIS as a digital payment method seems to be more influenced by factors such as behavior alignment, intention to use, and perceived ease of use, rather than factors like perceived usefulness and security. This research offers deeper insights into how these factors interact and influence user decisions in adopting QRIS, providing valuable perspectives for the development and promotion of digital payment systems in the future. Consequently, these findings have significant implications for stakeholders involved in QRIS development and promotion. Beyond enhancing perceived usefulness and security, developers and digital payment service providers need to understand how to accommodate factors like behavior alignment and ease of use in QRIS development and marketing. Moreover, efforts to enhance user intention to use QRIS can be articulated through strategies promoting its benefits and user-friendliness. Nevertheless, it's important to remember that factors influencing digital payment adoption are complex and can vary based on user contexts and characteristics. Hence, further research and in-depth analysis can provide a more comprehensive understanding of the dynamics of QRIS digital payment adoption, along with potential interactions among even more complex factors. In an era where payment technology is advancing and transforming rapidly, this research provides valuable insights into how users respond to and adopt digital payment innovations, using QRIS as a concrete example. This conclusion serves as a critical guide for decision-making in the digital payment sector, as well as for further research in understanding consumer behavior related to financial technology and other innovations.

REFERENCES

- 1) Apjii. (2022). *Asosiasi Penyelenggara Jasa Internet Indonesia*. apjii.or.id
- 2) Benbasat, I., & Barki, H. (2007). Quo vadis, TAM? *Journal of the Association for Information Systems*, 8(4), 211–218. <https://doi.org/10.17705/1jais.00126>
- 3) Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 351–370.
- 4) Danil, M. (2020). Pentingnya Memahami Peran Metodologi Studi Islam Terhadap Generasi Milenial Di Era Digitalisasi. *Profetika: Jurnal Studi Islam*, 21(2), 223–230. <https://doi.org/10.23917/profetika.v21i2.13082>
- 5) Davis, F. D. (1985). A technology acceptance model for empirically testing new end-user information systems: Theory and results. *Management, Ph.D.* (January 1985), 291. <https://doi.org/oclc/56932490>
- 6) de Luna, I. R., Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. (2019). Mobile payment is not all the same:

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The adoption of mobile payment systems depending on the technology applied. *Technological Forecasting and Social Change*, 146(August), 931–944. <https://doi.org/10.1016/j.techfore.2018.09.018>

- 7) Gu, J.-C., Lee, S.-C., & Suh, Y. (2009). Determinants of behavioral intention to mobile banking. *Expert Systems with Applications*, 36, 11605–11616. <https://doi.org/10.1016/j.eswa.2009.03.024>
- 8) Kim, C., Tao, W., Shin, N., & Kim, K. S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. *Electronic Commerce Research and Applications*, 9(1), 84–95. <https://doi.org/10.1016/j.elerap.2009.04.014>
- 9) Legris, P., Ingham, J., & Colletette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information and Management*, 40(3), 191–204. [https://doi.org/10.1016/S0378-7206\(01\)00143-4](https://doi.org/10.1016/S0378-7206(01)00143-4)
- 10) Luarn, P., & Lin, H. H. (2005). Toward an understanding of the behavioral intention to use mobile banking. *Computers in Human Behavior*, 21(6), 873–891. <https://doi.org/10.1016/j.chb.2004.03.003>
- 11) Ooi, K.-B., & Tan, G. W.-H. (2016). Mobile technology acceptance model: An investigation using mobile users to explore smartphone credit card. *Expert Systems with Applications*, 59, 33–46. <https://doi.org/https://doi.org/10.1016/j.eswa.2016.04.015>
- 12) Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). 002224298504900403.Pdf. *Journal of Marketing*, 49(1979), 41–50.
- 13) Phan, K., & Daim, T. (2011). Exploring technology acceptance for mobile services. *Journal of Industrial Engineering and Management*, 4(2), 339–360. <https://doi.org/10.3926/jiem.2011.v4n2.p339-360>
- 14) Puspitasari, A. A., & Salehudin, I. (2022). Quick Response Indonesian Standard (QRIS): Does Government Support Contribute to Cashless Payment System Long-term Adoption? *Journal of Marketing Innovation (JMI)*, 2(1). <https://doi.org/10.35313/jmi.v2i1.29>
- 15) Rafdinal, W., & Senalasari, W. (2021). Predicting the adoption of mobile payment applications during the COVID-19 pandemic. *International Journal of Bank Marketing*, 39(6), 984–1002. <https://doi.org/10.1108/IJBM-10-2020-0532>
- 16) Saputri, O. B. (2020). Preferensi Konsumen Dalam Menggunakan Quick Response Code Indonesia Standard (QRIS) Sebagai Alat Pembayaran Digital. *Journals of Economics and Business Mulawarman*, 17(2), 1–11.
- 17) Sayyida, S., & Alwiyah, A. (2018). Perkembangan Structural Equation Modeling (Sem) Dan Aplikasinya Dalam Bidang Ekonomi. *PERFORMANCE: Jurnal Bisnis & Akuntansi*, 8(1), 10–26. <https://doi.org/10.24929/feb.v8i1.465>
- 18) Taherdoost, H. (2019). What Is the Best Response Scale for Survey and Questionnaire Design; Review of Different Lengths of Rating Scale / Attitude Scale / Likert Scale. *International Journal of Academic Research in Management (IJARM)*, 8(1), 2296–1747.
- 19) Yan, L. Y., Tan, G. W. H., Loh, X. M., Hew, J. J., & Ooi, K. B. (2021). QR code and mobile payment: The disruptive forces in retail. *Journal of Retailing and Consumer Services*, 58(September 2020), 102300. <https://doi.org/10.1016/j.jretconser.2020.102300>



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