

## DETERMINANTS INFLUENCING ADOPTION OF MOBILE PAYMENT (QR PAY) AMONG YOUTHS IN MALAYSIA

Siti Nur Zahirah Omar\*<sup>1</sup>

Batrisya Adriana Jamri<sup>2</sup>

Faizah Roslan<sup>3</sup>

Nur Razliyatul Natasha Zakaria<sup>4</sup>

Siti Nurmuniza Farisya Irwayu Muhammad<sup>5</sup>

Hashim Mohammad<sup>6</sup>

<sup>1</sup>Faculty of Business and Management, University Teknologi MARA, Kelantan Branch, Machang Campus, Kelantan, Malaysia. (E-mail: sitinurzahirah@uitm.edu.my )

<sup>2</sup>Faculty of Business and Management, University Teknologi MARA, Kelantan Branch, Machang Campus, Kelantan, Malaysia. (E-mail: 2022747981@student.uitm.edu.my )

<sup>3</sup>Faculty of Business and Management, University Teknologi MARA, Kelantan Branch, Machang Campus, Kelantan, Malaysia. (E-mail: 2022787601@student.uitm.edu.my )

<sup>4</sup>Faculty of Business and Management, University Teknologi MARA, Kelantan Branch, Machang Campus, Kelantan, Malaysia. (E-mail: 2022793787@student.uitm.edu.my)

<sup>5</sup>Faculty of Business and Management, University Teknologi MARA, Kelantan Branch, Machang Campus, Kelantan, Malaysia. (E-mail: 2022923201@student.uitm.edu.my )

<sup>6</sup>Faculty of Business and Management, University Teknologi MARA, Kelantan Branch, Machang Campus, Kelantan, Malaysia. (E-mail: 2022780321@student.uitm.edu.my )

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**Abstract:** *The rapid growth of digital payment technologies has transformed how consumers and organizations conduct financial transactions. Among these developments are QR-based e-wallets, which are likely to gain popularity, particularly in emerging markets. E-wallet providers could strengthen their value propositions by providing smooth, engaging, and simple experiences that increase consumers' brand perceptions. The purpose of this study is to determine the factors influencing the adoption of mobile payment (QR Pay) among youths in Malaysia. A total of 420 youth was randomly selected from all over Malaysia and only 382 data were usable for this analysis. The findings may indicate social influence, perceived usefulness, perceived ease of use, perceived security, and reward.*

**Keywords:** *Social influences, perceived usefulness, perceived ease of use, perceived security, rewards*

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## Introduction

The development of mobile payment systems, in particular QR Pay, is closely related to how smartphones have revolutionized everyday life all over the world. According to Nawang and Moses (2023), smartphones have not only fundamentally changed how mobile phone companies operate, but they have also had a big impact on people's daily activities. It's difficult to imagine daily life without smartphones given the remarkable uptake of these devices in conjunction with technology improvements and internet accessibility. Consequently, there has been an increasing number of mobile payment methods. Aydin & Burnaz (2016) have noted that the increasing usage of smartphones and online commerce is the driving force behind the shift from traditional cash transactions to cashless transactions.

Even though mobile payments are not as common in Malaysia as they are in some other nations, the country is moving towards a cashless future because of proactive efforts by Bank Negara Malaysia (BNM) (The Edge Market, 2016). The expectation that mobile payment systems, especially QR code mobile payments, will grow into a crucial element of Malaysia's payment landscape is what stimulates the rise of the cashless market (Ibrahim, Hussin & Hussin, 2019). According to Nawang and Moess (2023), QR codes are so efficient and affordable that they will play a major role in determining how financial transactions are carried out in Malaysia in the future. This is particularly relevant given the country's favorable conditions, which include a high rate of smartphone adoption, a fast internet connection, and financial institutions' support (Hamzah, Ramli & Shaw, 2023). The objective of conducting this research is to evaluate the determinant influencing adoption of mobile payment (QR Pay) among youth in Malaysia.

## Literature Review

Mobile payment (QR Pay) has undergone rapid global development, fundamentally transforming the payment landscape (Nasir & Mohammad, 2023). Malaysia, in tandem with global trends, has witnessed a consistent rise in mobile payment service usage. Mustaffa, Johari, and Yusof (2019) highlight the growing prominence of mobile wallets such as Boost, GrabPay, and Touch 'n Go eWallet in Malaysia. Utilizing the QR code payment service, consumers can efficiently conduct transactions by transferring funds from their accounts to the point of sale, employing their smartphones' cameras and mobile banking applications to scan QR codes (Minh, Nam & Nguyen, 2023).

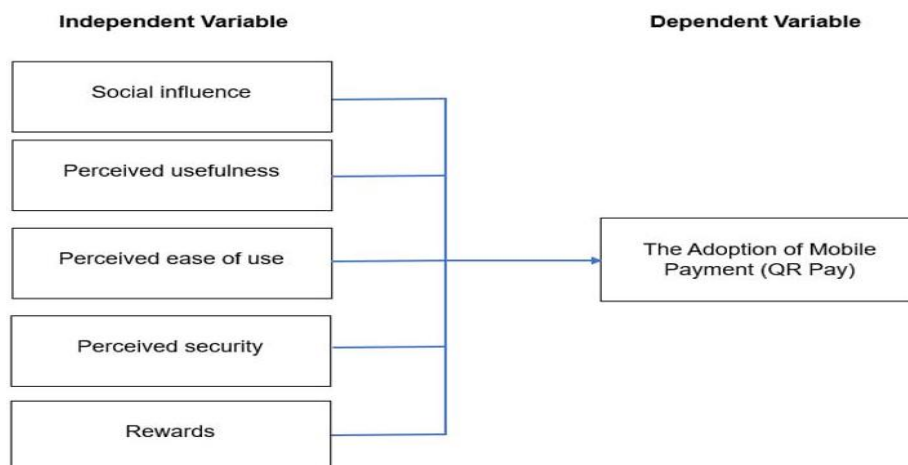
In the early stages of technology adoption, social networks play a vital role in shaping consumer attitudes, as highlighted by De Kerviler et al. (2016). Social influence from sources like family, friends, and celebrities positively impacts consumer behavior in the context of mobile wallet adoption (Megadewandanu, Suyoto, & Pranowo, 2017). Numerous studies emphasize that social influence significantly boosts individuals' intentions to adopt new products or services, including mobile money banking (Park, Ahn, Thavisay, & Ren, 2019; Singh & Srivastava, 2020).

Perceived usefulness is a key factor in predicting users' intention to continue using e-wallets, according to Shaw and Sergueeva (2019) and Faroughi et al. (2019). Users are more likely to adopt and stick with an e-wallet if they perceive it as making their financial transactions easier, safer, or more convenient. This perception is influenced by the perceived usefulness and sacrifices involved in using an e-wallet, as users consider these factors in their decisions (Hsu & Lin, 2018). When users have a clear goal, there's an increase in perceived usefulness, as the service helps them achieve their intended tasks or goals (Cho, 2016).

Individuals who will utilize the technology and the readiness of the technology itself are the primary indicators of information technology readiness (TAHAR et al.,2020). The perceived ease of use of a new system such as the mobile payment (QR Pay) system in this case is one of the factors that consumers find concerning when adopting it (Hajazi, Chan, Ya’kob, Siali, & Abdul Latip 2021). According to Hajazi et al., (2021), if someone believes that the new system is simple to use and requires little effort to comprehend, learn, and operate, they will discover that the system is worthwhile to try and implement.

According to TAHAR et al. (2020), once a technology system is secure and free from risks, it is considered excellent and ready for use. Wilson, Alvita, and Wibisono (2020) emphasize the importance of perceived security in electronic commerce (e-commerce) businesses. Customers' judgments and perceptions of the security of transactions on an e-commerce platform can significantly influence their decision to make purchases. The perceived security element is a crucial factor for customers when adopting new technology for financial transactions, as noted by Suebtimrat and Vonguai (2021). This is particularly relevant as many newly introduced products and services are naturally seen as risky.

As a crucial component of financial technology (Fintech), mobile payments enable customers to shop via smartphones. According to Hopali, Egemen, Vayvay, Kalender, Turhan, and Aysuna (2022), mobile wallets offer a cashless transactional approach, cost-effective services, and traceable choices that enhance sustainability in payment services. Various businesses such as drugstores and supermarkets provide loyalty programs to their customers, which vary based on their preferences and lifestyles (Tavilla, 2017). Cashback, shop rewards, and other incentives will facilitate the shift from fiat to digital currency. Reward makes mobile wallets more alluring because it benefits companies as well as prospective clients.



**Figure 1: The Hypothesized Model of The Adoption of Mobile Payment (QR Pay)**

The hypothesized model is shown in Figure 1 and the hypotheses develop a relationship between social influence, perceived usefulness, perceived ease of use, perceived security, and rewards.

*H1: Social Influence has a positive and significant influence on the adoption of mobile payment (QR Pay) among youth in Malaysia.*

*H2: Perceived Usefulness has a positive and significant influence on the adoption of mobile payment (QR Pay) among youth in Malaysia.*

*H3: Perceived ease of use has a positive and significant influence on the adoption of mobile payment (QR Pay) among youth in Malaysia.*

*H4: Perceived Security has a positive and significant influence on the adoption of mobile payment (QR Pay) among youth in Malaysia.*

*H5: Rewards have a positive and significant influence on the adoption of mobile payment (QR Pay) among youth in Malaysia.*

## Methodology

The study on the adoption of QR Pay among Malaysian youth using a questionnaire. This questionnaire, created on Google Forms, is distributed through various channels like Email, WhatsApp, and other social media platforms. The questionnaire is divided into three sections. Section A collects demographic information such as age and state of origin. Section B focuses on the usage of QR Pay with a total of 7 questions. Section C, with 35 questions, delves into factors influencing the use of QR Pay, including social influence, perceived usefulness, ease of use, security, and rewards. Respondents indicate their level of agreement with the statements in Sections B and C on a 5-point Likert scale, ranging from “strongly disagree” to “strongly agree”. This method allows you to gauge the respondents’ attitudes and perceptions towards QR Pay. According to the Department of Statistics Malaysia, there are 32.4 million youth population in Malaysia. However, this research requires around 384 sample sizes, considering the need for statistical reliability and ensuring a comprehensive representation of the youth cohort. As a result, 420 respondents might be deemed enough for this survey, allowing for robust analysis and insights into the trends and factors influencing QR Pay adoption among Malaysian youth.

## Result and Analysis

### Reliability Test

According to research by Taber and K.S. (2017), Cronbach's alpha is a statistic that researchers frequently use to illustrate that tests and scales designed or used for research projects are suitable for use. Cronbach's Alpha is extensively used since it is the most commonly accepted reliability test technique (Mohamad Adam, 2018). When the Cronbach's Alpha reliability research is close to 1, the internal accuracy dependability is higher. As a result, the reliability test evaluates internal consistency, and the dependability of the questionnaire can be critical. As a result, the Cronbach's Alpha is computed as follows:

**Table 1: Cronbach’s Alpha Reliability Test**

Variables	Coefficient of Cronbach’s Alpha	Number of Items Reliability	Level
<b>Dependent Variable:</b> The Adoption of Mobile Payment (QR Pay)	0.950	7	Excellent
<b>Independent Variables:</b> Social Influence	0.924	7	Excellent
Perceived Usefulness	0.956	7	Excellent
Perceived Ease of Use	0.966	7	Excellent
Perceived Security	0.950	7	Excellent
Rewards	0.911	7	Excellent

Source: Developed for the research

Reliability, as defined by Livingston (2018), is the extent to which test outcomes are not influenced by random factors. It measures how much a test taker's score is independent of the test's timing, the specific questions they answered, and the evaluators. The reliability data for your study, which includes one dependent variable (The Adoption of Mobile Payment (QR Pay)) and five independent variables (social influence, perceived usefulness, perceived ease of use, perceived security, and rewards), shows Cronbach's Alpha coefficients ranging from 0.911 to 0.966. This indicates excellent reliability as all values exceed 0.9, which is the threshold for excellent reliability on the Cronbach's Alpha scale. The variable with the highest reliability is 'perceived ease of use' (0.966), and the one with the lowest is 'rewards' (0.911).

### Regression Analysis

**Table 2: Linear regression between Independent Variable and Dependent Variables**

Variables	R <sup>2</sup>	Adj. R <sup>2</sup>	F statistics
Social Influence	0.592	0.591	554.131
Perceived Usefulness	0.641	0.640	681.850
Perceived Ease of Use	0.618	0.617	617.247
Perceived Security	0.467	0.466	335.277
Rewards	0.391	0.389	245.273

Table 2 reveals a significant positive relationship between social influence and the adoption of mobile payment (QR Pay), as indicated by the correlation values of adjusted  $r^2 = 0.591$  while the  $r^2 = 0.592$ . It showed that 59.1% of the adoption of mobile payment (QR Pay) is explained by social influence. A significant positive relationship between perceived usefulness and the adoption of mobile payment (QR Pay), as indicated by the correlation values of adjusted  $r^2 = 0.640$  while the  $r^2 = 0.641$ . It showed that 64% of the adoption of mobile payment (QR Pay) is explained by perceived usefulness. There is a significant positive relationship between perceived ease of use and the adoption of mobile payment (QR Pay), as evidenced by the correlation values of adjusted  $r^2 = 0.617$  and the  $r^2 = 0.618$ . It showed that 61.7% of the adoption of mobile payment (QR Pay) is explained by perceived ease of use. A significant positive relationship between perceived security and the adoption of mobile payment (QR Pay), which is proven by the correlation values of adjusted  $r^2 = 0.466$  and the  $r^2 = 0.467$ . According to adjusted  $R^2$ , it showed that 46.6% of the adoption of mobile payment (QR Pay) is explained by perceived security. A significant positive relationship between the rewards and the adoption of mobile payment (QR Pay), as indicated by the correlation values of adjusted  $r^2 = 0.389$  while the  $r^2 = 0.391$ . As indicated by adjusted  $R^2$ , it showed that 38.9% of the adoption of mobile payment (QR Pay) is explained by the rewards.

### Hypothesis Testing

**Table 3: Result of the Correlation Test and Hypothesis**

Dependent Variables	Independent Variables	Pearson Correlation	P-Value (p>0.05)	Result	Hypothesis
Adoption of Mobile Payment (QR Pay)	Social Influence	0.769	0.000	Significant	Accepted
	Perceived Usefulness	0.801	0.000	Significant	Accepted
	Perceived Ease of Use	0.786	0.000	Significant	Accepted
	Perceived Security	0.684	0.000	Significant	Accepted
	Rewards	0.625	0.000	Significant	Accepted

Notes: \*Significance at  $p < 0.05$ , \*\*Significance at  $p < 0.10$

The correlation test and hypothesis summary show strong positive relationships between the adoption of mobile payment (QR Pay) and all five factors studied. Social influence shows strong positive relationships ( $r = 0.769$ ,  $p < 0.001$ ), explaining 76.9% of the adoption. Perceived usefulness shows strong positive relationship ( $r = 0.801$ ,  $p < 0.001$ ), explaining 80.1% of the adoption. Perceived ease of use shows a strong positive relationship ( $r = 0.786$ ,  $p < 0.001$ ), explaining 78.6% of the adoption. Perceived Security indicates a moderate positive relationship ( $r = 0.684$ ,  $p < 0.001$ ), explaining 68.4% of the adoption. Rewards display moderate positive relationships ( $r = 0.625$ ,  $p < 0.001$ ), explaining 62.5% of the adoption. All hypotheses are supported, indicating that each of these factors significantly influences the adoption of QR Pay.

### Conclusion and Recommendation

This research investigates the factors of social influences, perceived usefulness, perceived ease of use, perceived security, and rewards influencing the adoption of QR Pay among youth in Malaysia. Research results indicate that social influences, perceived usefulness, perceived ease of use, perceived security, and rewards have a strong correlation with the adoption of QR Pay. The study's findings also revealed that social influences, perceived usefulness, perceived ease of use, perceived security, and rewards were significantly related to the adoption of QR Pay. The technology acceptance model (TAM) was proposed as a theoretical framework for research. Alternative theoretical models, such as Innovation Diffusion Theory (IDT) and Unified Theory of Acceptance and Use of Technology (UTAUT), were suggested for a more comprehensive understanding. The global trend toward QR code payments was emphasized, with a recommendation for future researchers to explore adoption and use across various countries and regions to understand cross-cultural differences. The research focused on Malaysian youth who utilize mobile payments (QR Pay), although it was suggested that future research should also examine the influence on businesses and the economy. This might assist researchers gain a better understanding of the influence. The limited research from the merchants' perspective was noted, despite extensive studies on customer acceptance and usage of mobile payment systems. As a result, these findings have effectively evaluated the adoption of mobile payment (QR Pay) among youth in Malaysia. Following our findings, all five variables are tested. The variables include social influence, perceived usefulness, perceived ease of use, perceived security, and rewards. The study revealed a significant relationship between all five variables which are social influence, perceived usefulness, perceived ease of use, perceived security, and rewards. Furthermore, elements from previous researchers are employed for data comparison purposes to aid us in achieving the outcome of this study.

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