

FACTORS AFFECTING MUSLIMS' BEHAVIORAL INTENTION TO USE E-WALLET: A PILOT STUDY USING UTAUT2

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Abstract: *Electronic payment (e-payment) has been acknowledged as one of the platforms for online transactions due to its effectiveness in raising business productivity levels and reducing operating expenses. Consequently, the availability of electronic payments can aid in the reduction and substitution of conventional paper-based payments. A few forms of electronic payments are available in Malaysia such as debit cards, credit cards, charge cards, checks, and electronic money (e-money). E-wallets, known as digital wallets, refer to a smartphone application that enable users to execute financial transactions via their devices. Despite various incentives introduced by Malaysia's government, the usage of e-wallet is still considered low. Thus, this study intends to analyze factors influencing consumers' behavioral to use e-wallet. On other hand, a few Shariah issue arise regarding the usage of e-wallet. Therefore, researcher intend to identify the effect of that issue towards consumers' usage. Quantitative method has been used through a survey distributed to Muslim who resides in Klang Valley. Data collected has been analyzed using Statistical Package for Social Science (SPSS). Result obtains indicate a positive effect of performance expectancy, effort expectancy and facilitating conditions as the strongest determinants towards Muslims' behavior intention to use e-wallet.*

Keywords: *e-payment, e-wallet, behavioral intention, Muslim's user.*

Introduction

Globally, e-wallets have become a dominant mode of digital payment, with China continuing to lead the market through platforms such as WeChat Pay and Alipay, which together facilitated trillions of dollars in mobile transactions (Ali & Kamal, 2023). India has also emerged as one of the fastest-growing mobile payment markets, driven by government initiatives and rapid smartphone penetration (Lim et al., 2025). In contrast, Malaysia's adoption trajectory remains slower. Despite government incentives and campaigns to promote cashless transactions, many Malaysians continue to rely on traditional payment methods (Hairudin et. al., 2024). This persistent reliance on cash raises important questions about the underlying factors shaping consumer behavior.

Malaysia's demographic context further underscores the significance of this issue. With Muslims comprising approximately 63.7% of the population (World Population Review, 2022), concerns about Shariah compliance in digital finance are central. Issues such as the handling of user deposits, cashback mechanisms, and the investment of pooled funds have raised doubts about permissibility under Islamic principles (Mohamad, 2019; Abdul Muneem, Ali, Zainuddin, & Zulkepli, 2025). Consequently, adoption decisions among Muslim consumers are not only influenced by technological ease and usefulness but also by ethical and religious considerations.

Existing studies using the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) have consistently identified performance expectancy, effort expectancy, social influence, and facilitating conditions as significant predictors of e-wallet adoption (Rahmi & Adhy, 2019; Singh & Sinha, 2020; Ganeswanga & Fajar, 2020). However, these models remain limited in accounting for Muslim-specific concerns. In particular, Perceived Security has emerged as a decisive factor in shaping behavioral intention, yet they are underexplored within the TAM and UTAUT2 frameworks (Bakri, Almansoori, & Mohd Azlan, 2023; Lim et al., 2025). While Shariah compliance is widely recognized in the literature as an important contextual consideration, this study focuses on perceived security as an extension to UTAUT2, thereby addressing a critical gap in explaining Muslims' behavioral intention to adopt e-wallets in Malaysia.

Therefore, this study extends UTAUT2 by incorporating perceived security to better explain Muslims' behavioral intention to adopt e-wallets in Malaysia. While Shariah compliance is acknowledged as a broader contextual issue influencing adoption, it is not modeled as an independent variable in this study. By addressing the overlooked role of perceived security, the research provides a more holistic framework that integrates technological and trust-related dimensions, offering insights for policymakers, regulators, and fintech providers seeking to accelerate adoption in Muslim-majority contexts.

Literature Review

A few prior studies have examined the variables influencing users' behavior and intention to use e-wallets. Rahmi and Adhy (2019) examined the variables affecting consumers' behavioral intentions to use e-wallets. In addition to other criteria including trust, enjoyment perception, feature, and m-payment experience, the study used the Technology Acceptance Model (TAM), which is thought to be practical and easy to use. The findings demonstrated a favorable and significant relationship between trust in behavioral intention to use an e-wallet, reported enjoyment, and m-payment experience. In the meantime, trust was positively and significantly impacted by perceived simplicity of use.

According to Singh and Sinha (2020), TAM and UTAUT2 were examined in their study to identify the key variables affecting users' intentions to use mobile wallets. The findings showed that users' intention is significantly influenced by perceived risk, usefulness, attitude, social influence, and convenience of use. This in turn affects users' reported satisfaction and recommendation to use mobile wallet services.

Ganeswangga and Fajar (2020) used UTAUT to identify the variables influencing Indonesian users' interest in e-wallet technology. Performance expectancy, effort expectancy, social influence, facilitating conditions, behavior intention, use behavior, and other moderating factors are all examined using the UTAUT model as the theoretical foundation. The effort expectancy variable was recognized by the study's findings as a significant determinant of public interest in electronic wallet technology.

According to Yee (2019), concerns about overspending, limited merchant acceptance, and security are some of the factors that contribute to Malaysia's low e-wallet adoption and usage. The report showed that 46% of non-users see security concerns as the biggest obstacle to using e-wallets. 38% are worried about missing transactions, and up to 59% think that e-wallets can result in credit and debit card fraud because of perceived security issues.

More recent studies have reinforced and expanded these findings in the Malaysian context. Lim, et, al. (2025) investigated factors influencing e-wallet adoption and found that perceived usefulness, ease of use, security, and social influence were the most significant drivers of behavioral intention. Their study highlighted that security concerns remain a barrier, but trust in system reliability can enhance adoption.

Similarly, Ibrahim et al. (2025) examined drivers of e-wallet adoption in Malaysia and emphasized the importance of facilitating conditions and infrastructural readiness, such as merchant acceptance and internet reliability, in shaping behavioral intention. They concluded that while hedonic motivation plays a minor role, utilitarian and contextual factors dominate. In addition, Lokman (2025) explored resilience among Malaysian millennials and found that peer influence and normative pressure were crucial for sustained e-wallet usage, suggesting that social influence may become more important over time as adoption matures.

In Muslim-majority contexts such as Malaysia, adoption is shaped by additional religious and ethical considerations. Zulkefli et al. (2019) mentioned that the lack of a standardized e-wallet system in Malaysia and Shariah concerns are the main causes of the low rate of e-wallet usage among Muslims. Many Muslims in Malaysia are still hesitant to utilize e-wallets as a form of payment in their daily lives because of this.

Similarly, Abojeib (2020) highlighted that Shariah concerns are among one of the factors in the low percentage of e-wallet usage among Muslim users. The ambiguity of the relationship between the user and the e-money issuer, as well as the usage of user-advanced funds that are being used for investment reasons, are some of the issues. Mohamad (2019) raised questions about whether user deposits are invested in halal or non-halal activities, underscoring the importance of transparency in fund management.

Bakri et, al, (2023) found that ease of use and perceived usefulness significantly influenced millennials' adoption of Islamic e-wallets, but Shariah compliance was equally critical in

shaping trust. Abdul Muneem et, al, (2025) emphasized that unresolved Shariah issues, such as cashback mechanisms and pooled fund investments, continue to hinder adoption.

These recent studies confirm that behavioral intention toward e-wallets is multifaceted, shaped by both technological constructs (performance expectancy, effort expectancy, facilitating conditions) and socio-cultural considerations (social influence, perceived security). Importantly, in Muslim-majority contexts such as Malaysia, Shariah compliance has emerged as a decisive factor influencing behavioral intention.

Theoretical Framework

The theoretical framework employed in this study is UTAUT2 as the considerable variance that UTAUT2 can explain in comparison to the other model/theory is relatively the highest. Research using the UTAUT2 theory can explain up to 52% of technology use and 74% of behavioral intention (Venkatesh et al., 2012). Furthermore, as UTAUT2 is specifically made to look at acceptance and usage from a consumer perspective, it seems sense to incorporate it into this study. In the same way, this study aims to determine consumers' behavioral intention to use an e-wallet.

However, the basic theory has undergone a modification. The adjustment relates to the elimination of price value, which is one of the fundamental constructs in UTAUT2. The elimination is because of e-wallet users can easily obtain the software from the Apple Store or Play Store. Therefore, the price value construct is no longer applicable to this study as it does not require users to spend money to get them. On top of that, this study also incorporates a new variable (perceived security) into the theory as a lot of studies mention above indicated its significant effect in technology adoption context.

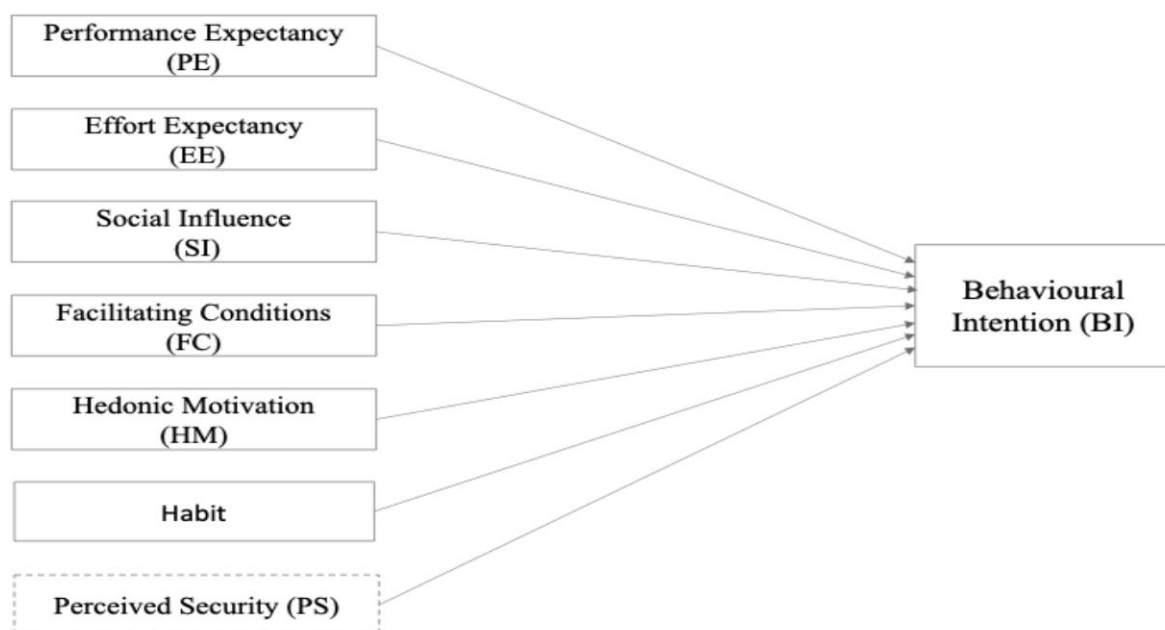


Figure 1: Theoretical Framework

Source: Authors owns work

Methodology

This study uses a quantitative approach to look at the variables that may affect Muslims' inclination to use electronic wallets. A self-administered survey has been created and distributed to the targeted population in Klang Valley due to the large number of users there (Oppotus, 2019). The questionnaire distribution is based on purposive sampling via online platform, due to the existence of predetermined standards established by the researcher, which are respondents must be Muslims' consumer that resides in Klang Valley.

According to a study by Krejcie and Morgan (1970), for every population that are larger than 1 million people, the survey should be participated by at least 384 respondents. However, as this study is a pilot test, the number of respondents used is only 69 people. The data collected has been analyzed through SPSS software to get the result of frequency analysis, reliability test, descriptive test and correlation test. The results are as below.

Results and Discussion

The consumers' demographic profiles can be divided into gender, age, education level, employment sector as well as their income level. The demographic profiles are as shown below in Table 1.

Table 1. Demographic Profiles

Variables	Details	Frequency (N=69)	Percentage (%)
Gender	Male	22	31.9
	Female	47	68.1
Age	21 – 30 years old	23	33.3
	31 – 40 years old	20	29.0
	41 – 50 years old	15	21.7
	51 years old and above	11	15.9
Highest Education level	SPM/STPM	6	8.7
	Diploma	12	17.4
	Bachelor's Degree	43	62.3
	Master's Degree	5	7.2
	Doctor of Philosophy	1	1.4
	Professional Certificate/License	2	2.9
Employment Sector	Self-Employed	16	23.2
	Private	42	60.9
	Government	9	13.0
	Professional Service	2	2.9
Income Level	RM4850 and below	45	65.2
	RM4851 – RM10970	20	29.0
	RM10971 and above	4	5.8

Source: Authors owns work

From Table 1, 22 out of 69 respondents are male (31.9%) while 47 respondents are female (68.1%). Majority of the respondents are between 21-30 years old (33.3%), 31-40 years old (29%), 41-50 years old (21.7%) and 51 years old and above are the minority (15.9%). Most of the respondents are bachelor's degree holder (62.3%), followed by diploma holder (17.4%), SPM (8.7%), master's degree (7.2), professional License (2.9%) and PHD holder with the least

number (1.4%). Besides that, the largest number of respondents are working in private sector (60.9%), 23.2% are self-employed, 13% work with government and 2.9% are from professional service sector. Majority of the respondents are under B40 category (65.2%), followed by M40 (29%) and a small number of respondents come from T20 category (5.8%).

On top of that, the reliability test shows a very significant value of cronbach's alpha. Five out of eight variables generate a very good value, two get a good value while 1 variable, namely habit gets an acceptable value. Below is the table of cronbach's alpha value with all the variables tested in this study.

Table 2. Reliability Test

Variables	Cronbach's alpha	Strength relationship
Performance Expectancy	0.917	0.920
Effort Expectancy	0.959	0.960
Social Influence	0.877	0.879
Facilitating Conditions	0.864	0.873
Hedonic Motivation	0.909	0.912
Habit	0.713	0.731
Perceived Security	0.911	0.914
Behaviour Intention	0.951	0.951

Source: Authors owns work

Five constructs (Performance Expectancy, Effort Expectancy, Hedonic Motivation, Perceived Security, Behaviour Intention) show very good reliability as the value are above 0.90. Variables Facilitating Conditions (0.864) and Social Influence (0.877) fall into the good range (0.80–0.89), still strong and acceptable. Meanwhile, Habit (0.713), is the lowest but still consider as acceptable. This may suggest that the items measuring habit may not be as consistent as other constructs. It could be due to fewer items, or respondents having varied experiences with habitual e-wallet use.

Besides that, the descriptive statistics provide an overview of respondents' perceptions toward the constructs examined in this study. Below is the result of the constructs' mean and standard deviation.

Table 3. Descriptive Test

Constructs	N	Mean	Standard Deviation
Performance Expectancy	69	4.3986	.62913
Effort Expectancy	69	4.4529	.64778
Social Influence	69	3.8599	.79089
Facilitating Conditions	69	4.2681	.64643
Hedonic Motivation	69	4.1014	.74163
Habit	69	4.0072	.66140
Perceived Security	69	4.0242	.77821
Cognitive Rigidity	69	4.1208	.71394
Behaviour Intention	69	5.9082	1.00144

Source: Authors owns work

As shown in Table 3, the mean values for most constructs are above 4.0, indicating generally positive attitudes toward e-wallet adoption among Muslim consumers in the Klang Valley. Performance Expectancy (M = 4.39, SD = 0.63) and Effort Expectancy (M = 4.45, SD = 0.64) recorded relatively high scores, suggesting that respondents perceive e-wallets as both useful

and easy to use. These findings are consistent with study by Cheah, Emma, and Ammeran (2026), who reported that performance and effort expectancy remain important predictors of continuous e-wallet usage in Malaysia's post-COVID context. Similarly, Bakri, Almansoori, and Mohd Azlan (2023) found that ease of use and perceived usefulness significantly influenced millennials' adoption of Islamic e-wallets.

Social Influence ($M = 3.86$, $SD = 0.79$) was the lowest among the UTAUT2 constructs, reflecting weaker peer or societal pressure in driving adoption. This result is contradicted with Lokman (2025), who highlighted that peer influence and resilience among millennials are crucial for sustained e-wallet usage. The relatively lower mean here may indicate that adoption decisions are more individually driven rather than socially motivated.

Facilitating Conditions ($M = 4.27$, $SD = 0.65$) scored positively, showing that respondents feel confident about the infrastructure and resources available to support e-wallet usage. Ibrahim et al. (2025) similarly emphasized that infrastructural readiness and merchant acceptance are critical enablers of adoption in Malaysia.

Hedonic Motivation ($M = 4.10$, $SD = 0.74$) and Habit ($M = 4.00$, $SD = 0.66$) were moderate, suggesting that enjoyment and habitual use are present but not dominant factors. Kamil and Kumar (2025) found that Malaysian youth prioritize security and social norms over hedonic enjoyment, while Cheah et al. (2026) noted that habit formation is essential for continuous usage but develops gradually over time.

The mean score of 4.02 for Perceived Security indicates that respondents generally trust e-wallet systems but still hold moderate reservations. This finding is consistent with earlier studies which identified security as a critical barrier to adoption (Yee (2019); Singh and Sinha (2020); Lim et al. (2025)). Thus, the present study's result aligns with prior findings, underscoring that while technological ease and usefulness are important, security assurance is indispensable in shaping users' behavioral intention to adopt e-wallets.

Interestingly, Cognitive Rigidity ($M = 4.12$, $SD = 0.71$) suggests that respondents may hold firm beliefs about financial practices, which could influence their openness to new technologies. This construct warrants further exploration in future studies.

Finally, Behavioral Intention ($M = 5.91$, $SD = 1.00$) recorded the highest mean, indicating strong willingness among respondents to adopt e-wallets. This finding supports Yaakub et al. (2023), who reported increasing adoption among small Muslim merchants, and aligns with the World Bank Group (2025), which emphasized the role of Shariah-compliant digital finance in enhancing trust and adoption.

The descriptive results suggest that respondents view e-wallets positively, particularly in terms of usefulness, ease of use, and infrastructural support. While social influence appears weaker, trust, security, and Shariah compliance remain critical considerations. The high mean for behavioral intention demonstrates strong potential for adoption, reinforcing the relevance of integrating UTAUT2 constructs with religious and ethical dimensions in Muslim-majority contexts.

Lastly, this study also conducted correlation test, to identify the strength of predictors toward Behavioral Intention.

Table 4. Correlation Test

Constructs	Pearson r	Sig. (2-tailed)	Strength & Interpretation
Performance Expectancy	.631**	< .001	Strong → usefulness strongly drives intention
Effort Expectancy	.562**	< .001	Moderate-strong → ease of use influences intention
Social Influence	.301*	.012	Weak → peer pressure has limited effect
Facilitating Conditions	.631**	< .001	Strong → usefulness strongly drives intention
Hedonic Motivation	.618**	< .001	Strong → usefulness strongly drives intention
Habit	.410**	< .001	Moderate-strong → ease of use influences intention
Perceived Security	.661**	< .001	Strongest → trust and safety

Source: Authors owns work

Correlation analysis revealed that Perceived Security ($r = .661, p < .001$) was the strongest predictor of Behavioral Intention, underscoring the importance of trust in shaping adoption. Performance Expectancy ($r = .631, p < .001$) and Facilitating Conditions ($r = .631, p < .001$) also showed strong associations, highlighting the role of usefulness and infrastructural readiness. Hedonic Motivation ($r = .618, p < .001$) and Effort Expectancy ($r = .562, p < .001$) were moderately strong, while Habit ($r = .410, p < .001$) was weaker, reflecting the early stage of habitual use. Social Influence ($r = .301, p = .012$) was the weakest, suggesting that adoption decisions are more individually driven than socially pressured. These findings highlight that while technological ease and usefulness remain central, security assurance and infrastructural support are indispensable in influencing Muslims' behavioral intention to adopt e-wallets.

Conclusion

This study has conceptually examined the factors influencing Muslims' behavioral intention to adopt e-wallets in Malaysia, drawing on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) and integrating Perceived Security as a contextual variable. The descriptive analysis revealed that constructs such as performance expectancy, effort expectancy, and facilitating conditions scored highly, indicating that usefulness, ease of use, and infrastructural readiness remain central drivers of adoption. Conversely, social influence and hedonic motivation were less dominant, reflecting the Malaysian context where utilitarian and ethical considerations outweigh enjoyment or peer pressure.

Recent literature (2022–2025) reinforces these findings, highlighting that perceived security and Shariah compliance are decisive factors in Muslim-majority societies (Bakri et al., 2023; Abdul Muneem et al., 2025). While global leaders such as China and India demonstrate rapid adoption driven by technological innovation and government initiatives, Malaysia's trajectory is shaped by the intersection of technological readiness and religious values. This underscores the importance of embedding Shariah governance into fintech ecosystems to enhance trust and legitimacy among Muslim consumers.

The high mean score for behavioral intention suggests strong willingness among respondents to adopt e-wallets, provided that the issues of security and compliance are addressed. This offers practical implications for policymakers, regulators, and fintech providers: strengthening

infrastructural support, ensuring transparent Shariah compliance mechanisms, and promoting awareness campaigns can accelerate adoption.

In conclusion, the integration of UTAUT2 constructs with Shariah compliance will provides a more holistic framework for understanding e-wallet adoption in Malaysia. Future research should empirically validate this conceptual model across different Muslim-majority contexts, such as Indonesia and GCC countries, to test its generalizability. By doing so, scholars and practitioners can better understand how technological, cultural, and religious factors collectively shape digital finance adoption in diverse settings.

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