

# The Role of Technology Acceptance Model on Intentions of Zakat Payers in Using Online Zakat Payment Services

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## ABSTRACT

This study aims to examine how Technology Acceptance Model factors; perceived usefulness and perceived ease of use affect the intention of muzakki (zakat payers) to adopt online zakat payment services. Data were collected through an online survey of 230 zakat payers in Malaysia. Participants were chosen using cluster sampling from both government and private sectors. The findings show that both perceived usefulness and perceived ease of use are positively and significantly associated with the intention of zakat payers to use online zakat payment services. Given the scarcity of research on the adoption of online zakat services, this study makes a substantial contribution to understanding the factors shaping the utilization of such services in the country. Additionally, these findings provide important insights for formulating strategies to improve the uptake of online zakat payment services in comparable developing countries.

**Keywords:** Online zakat payment service, Theory of Acceptance Model, Zakat payer's adoption intention

**Paper type** Research paper

## INTRODUCTION

Zakat is one of the five pillars of Islam, a form of obligatory charity that requires Muslims to give a portion (e.g. 2.5%) of their wealth, including savings and employment income, to help those in need. It is a means of wealth redistribution aimed at reducing inequality and ensuring that the less fortunate have access to necessities (Bilo & Machado, 2020). Zakat plays a significant role in promoting social welfare by directly addressing poverty, fostering solidarity within the community, and encouraging a sense of responsibility among the wealthy. Economically, it helps stimulate the circulation of wealth, prevent hoarding, and contribute to overall economic stability (Zauro et al., 2020), as it channels funds into the hands of those who need it most, potentially boosting local markets and consumption.

Rapid technological advancement has significantly transformed the management of zakat institutions, shifting from traditional methods to digitalization. Traditionally, zakat collection and distribution relied on manual processes, face-to-face interactions, and physical records, which were often time-consuming and prone to inefficiencies. With the advent of digital technologies, zakat institutions can now leverage online platforms, mobile apps, and digital payment systems (Al Anshory et al., 2020) to streamline these processes. Automation helps in efficient zakat calculation, tracking donations, and ensuring transparent, real-time distribution to eligible beneficiaries. Digital platforms also expand the reach of zakat institutions by enabling global participation, making it easier for Muslims worldwide to fulfill their obligations (Kasri & Yuniar, 2021; Cahyani, Sari, & Afandi, 2022; Saro, et al., 2023).

In Malaysia, online zakat services have created a more efficient, flexible, and user-friendly system, ultimately enhancing the collection and distribution of zakat funds. For instance, the digitalization of zakat contributed to

a 9% increase in zakat collection for the Federal Territory Islamic Religious Council (MAIWP), reaching RM816.48 million, and a 10% increase for the Zakat Collection Centre (PPZ-MAIWP), totalling RM12.19 million for zakat harta and zakat fitrah in 2021 (The Malaysian Reserve, Jan 2022). Despite the growing popularity and transformative potential of online zakat payment services, there remains a significant gap between actual and potential collections. Paizin and Sarif (2021) emphasize that while zakat collections have shown steady growth, they have yet to reach their full potential. This suggests that Malaysia's zakat institutions have substantial room for improvement in optimizing their collection management through digital platforms, unlocking further opportunities to enhance the overall impact of zakat on society.

Understanding Muslim behavior and intentions regarding the adoption of alternative zakat payment methods, such as online zakat services, is crucial for zakat institutions, policymakers, and relevant government agencies to enhance and strengthen the country's digital zakat management. However, there is a significant lack of empirical studies focused on Muslim behavior and intentions toward online zakat services in the Malaysian context, with most previous research concentrating on Indonesia (Muflih, 2023; Kasri & Yuniar, 2021; Cahyani, Sari, & Afandi, 2022; Ferdana et al., 2022; Farhatunnada & Wibowo, 2022; Nuryahya et al., 2022; Oktavendi & Mu'ammal, 2022) and other Muslim countries (Bin-Nashwan, 2022; Bin-Nashwan et al., 2023a; Bin-Nashwan et al., 2023b). This study seeks to fill that gap by exploring the influence of Technology Acceptance Model (TAM) factors on muzakki's intention to adopt online zakat payment systems in Malaysia, expanding upon previous research in this area.

The paper is structured as follows: Section 2 presents a review of the relevant literature that informs the development of the hypotheses. Section 3 outlines the research methodology used, followed by Section 4, which presents the results of the analysis. Section 5 discusses the findings, and Section 6 concludes the paper with final remarks and recommendations for future research.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Theoretical framework

This study investigates zakat payers' intentions to use online zakat payment services, utilizing the Technology Acceptance Model (TAM) as the foundational theory. The TAM, introduced by Davis (1989) and further elaborated by Parasuraman (2000), is a model specific to understanding systems adoption. It incorporates two primary cognitive factors—perceived usefulness and perceived ease of use—to study individuals' attitudes or intentions toward accepting new technology. Perceived usefulness refers to an individual's belief that a particular system enhances job performance (Davis et al., 1989), while perceived ease of use relates to the belief that using the system requires minimal effort (Davis et al., 1989). Several studies have found that the TAM can be applied in predicting online zakat services such as mobile zakat services in the Indonesia context (Muflih, 2023). Thus in this study, the TAM was selected as an underpinning theory to examine how its factors; perceived usefulness and perceived ease of use affect muzakki's intention to use online zakat payment service in Malaysia. Figure 1 presents the research framework of this study.

### Perceived usefulness and online zakat payment service adoption intention

Perceived usefulness is crucial in influencing an individual's intention to adopt new technology. Defined by Davis (1989) as the belief that using a specific technology will improve work performance, perceived usefulness implies that individuals are more likely to adopt a technology if they believe it enhances efficiency, productivity, or overall performance in a particular context. This perception of usefulness establishes a tangible value, where users expect the technology to meet their needs and offer clear benefits. Thus, when perceived usefulness is high, it increases the likelihood that individuals will adopt and integrate new technology into their daily routines. For online zakat, muzakkis can benefit through time and cost savings by avoiding physical visits to zakat institutions (Rachman & Salam, 2018; Ninglasari, 2021), which strengthens their willingness to embrace online zakat payment services. Previous studies in various fields—such as mobile apps (Roy, 2017), digital health wearables (Ahmad et al., 2020), and online zakat services (Ahmad et al., 2021; Hasyim et al., 2020)—support the influence of perceived usefulness. However, research by Muflih (2023) and Ninglasari

(2021) does not establish a direct link between perceived usefulness and online zakat payments, highlighting a need for further exploration of this relationship. To address this gap, the following hypothesis is proposed:

**H1.** Perceived usefulness has a significant positive affect on online zakat payment adoption intention.

### Perceived ease of use and online zakat payment service adoption intention

Davis (1989) defines perceived ease of use as the degree to which an individual believes that using a technology will require minimal effort. As a key construct in the Technology Acceptance Model (TAM), it assesses how much effort an individual perceives is involved in using a system. Research has shown that people generally aim to minimize effort in their actions, supporting the TAM-proposed link between perceived ease of use and usage behavior, primarily through intention. In the context of zakat research, it can be said that when the muzakkis feel that an online system is easy to use to perform zakat payment, then the intention to use e-zakat collection service will be higher. Prior research has found a significant association between perceived ease of use and technologies adoption intention as well as behaviour. For example, Al-Emran and Teo (2020) investigated factors affecting e-learning adoption among 403 students enrolled at Al Buraimi University College (BUC) in Oman. The findings reveal that perceived ease of use has significant direct effects on the students' behavioral intention to adopt e-learning systems. Similarly, Yang et al. (2021) found that perceived ease of use displayed a significant positive effect on both intentions to use an e-wallet and adoption of an e-wallet. In zakat research area, Muflih (2023) reveals that perceived ease of use plays a positive and significant role in increasing the adoption of mobile zakat services. However, Ninglasari (2021) reports an insignificant effect of perceived ease of use on the intention of using Fintech to pay zakat. In a similar vein, Sun and Gao (2020) report that perceived ease of use, was not associated with students' behavioral intention in Mobile-assisted language learning apps. Given the mixed findings, this study aims to re-examine the relationship and proposes the following hypothesis:

**H2.** Perceived ease of use has a significant positive affect on online zakat payment adoption intention.

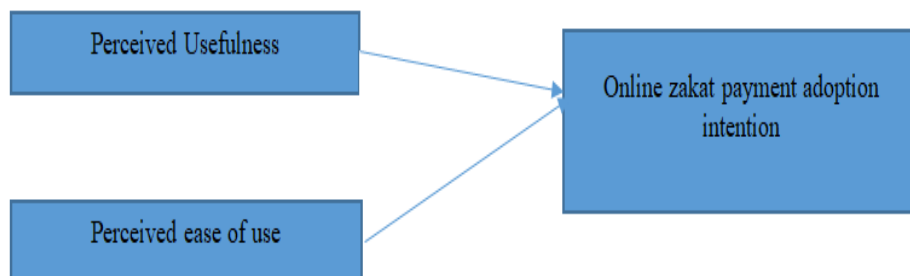


Figure 1 Research Framework

## RESEARCH METHODOLOGY

### Research design, research instrument and data collection

This study employed a survey method using questionnaires to collect data, structured into three sections. Section A gathered demographic details, including age, gender, education level, and occupation. Section B focused on factors influencing muzakkis' intentions to adopt online zakat payment services, while Section C contained items directly related to these adoption intentions. Data for both independent and dependent variables were measured on a seven-point Likert scale, ranging from 1 ("strongly disagree") to 7 ("strongly agree"). Perceived usefulness and perceived ease of use were assessed with three and four items, respectively, adapted from Bitrián et al. (2021). The dependent variable—intention to adopt online zakat payment services—was measured using three items adapted from Muflih (2023).

The research aimed to understand the intentions of muzakkis in Malaysia to adopt online zakat payment services by asking about their likelihood of using the online system to fulfill zakat obligations. Questionnaires were administered in person, with assurances of confidentiality and data use strictly for research purposes. Of

the 350 questionnaires distributed, 230 valid responses were obtained for analysis, yielding a response rate of 66%.

## DATA ANALYSIS AND FINDINGS

### Respondent profile

Table 1 provides the demographic profile of the 230 respondents. The sample consisted of 118 (51%) male and 112 (49%) female muzakkis. The majority of the respondents were aged 41–50 years old (42%). Most of the respondents possessed a bachelor’s degree (36%) and worked as government officials (56%).

Table 1. Demographic characteristics of respondents

Characteristics	Items	Frequency	%
Gender	Male	118	51%
	Female	112	49%
Age	21 - 30 years old	10	4%
	31 - 40 years old	42	18%
	41 - 50 years old	96	42%
	More than 50 years old	82	36%
Academic background	PhD	54	23%
	Master degree	64	28%
	Bachelor degree	84	36%
	Diploma and below	28	13%
Occupation	Government	130	56%
	Private	100	44%

### Assessment of the measurement model

The questionnaire data was analyzed using a two-step approach in Smart PLS: assessment of the measurement model and assessment of the structural model. The measurement model evaluates the relationships between items and constructs, while the structural model examines the relationships between exogenous and endogenous constructs within the research framework. For the measurement model, it is essential to establish both convergent validity and discriminant validity. Convergent validity assesses the degree of agreement among items measuring the same concept. To confirm convergent validity, the loadings, composite reliability (CR), and average variance explained (AVE) were evaluated. According to Hair et al. (2017), minimum acceptable values are 0.6 for loadings, 0.5 for AVE, and 0.7 for CR. Table 2 shows that these criteria were met, with loadings between 0.880 and 0.991, AVE between 0.841 and 0.957, and CR between 0.911 and 0.988, indicating adequate convergent validity.

Following this, discriminant validity was assessed using the Fornell and Larcker criterion to ensure each construct was distinct from the others in the model. As seen in Table 3, the square root of AVE for each construct exceeded the inter-construct correlations, confirming discriminant validity across all study constructs. Thus, the model met the recommended criteria for both convergent and discriminant validity.

Table 2. The measurement model assessment

Constructs	Measurement items	Loadings	Cronbach's $\alpha$	CR	AVE
Perceived Ease of Use	PE1	0.963	0.978	0.985	0.957
	PE2	0.986			
	PE3	0.987			
Perceived Usefulness	PU1	0.969	0.985	0.988	0.954
	PU2	0.991			
	PU3	0.974			
	PU4	0.972			
Online zakat Payment Adoption Intention	OZI1	0.911	0.905	0.911	0.841
	OZI2	0.958			
	OZI3	0.880			

Table 3. Discriminant validity of measurement model using Fornell and Larcker

Constructs	1	2	3
Online Zakat Payment Adoption Intention (1)	0.917		
Perceived Ease of Use (2)	0.787	0.978	
Perceived Usefulness (3)	0.770	0.842	0.977

**Assessment of the structural model**

Once the measurement model was validated, a structural model analysis was conducted to test the nine hypotheses. In evaluating the structural model, the direction of the beta values, the significance of the t-values, and the p-values were analyzed, as recommended by Hair et al. (2017). A bootstrapping procedure with 5,000 resamples was applied to examine the direct effects. Figure 2 illustrates the structural model, while Table 4 presents the hypothesis testing results. Specifically, H1 hypothesized a positive influence of perceived usefulness on the intention to adopt online zakat payment. The analysis confirmed this with a significant, positive relationship ( $\beta= 0.367, t = 2.000, p < 0.05$ ), thus supporting H1. As for H2, in which it was hypothesized that perceived ease of use would have a positive influence on online zakat payment adoption intention, the results showed that perceived ease of use had a positive influence on the dependent variable ( $\beta= 0.478, t = 2.602, p < 0.01$ ), and thus H2 was also supported.

Table 5 presents the values of the coefficient of determination ( $R^2$ ) and effect size ( $f^2$ ) of the exogenous variables on the endogenous variable. The  $R^2$  value represents the amount of variance in the endogenous construct explained by all the exogenous constructs in the research model. As can be seen from the table, the  $R^2$  was 0.659 which denoted that the exogenous variables (perceived ease of use and perceived usefulness) explained 65.9 % of the variance in the endogenous variable (online zakat adoption intention). As regards the effect size,  $f^2$ , represents the value of  $R^2$  that is changed when a specific construct is omitted from the model. Following Cohen (1988), the impact of the effect size was judged to be small if the value of  $f^2$ , was 0.02,



medium if it was 0.15 and large if it was 0.35. The results in Table 5 indicate that the supported exogenous variables; perceived ease of use,  $f^2 = 0.195$ ; and perceived usefulness,  $f^2 = 0.115$  had a medium and small effect size, respectively on the endogenous variable.

Table 4. Structural model assessment and hypothesis testing –direct affects

Hypothesis	Relationship	Beta	Std Deviation	t value	p-value	Decision
H1	Perceived Usefulness -> Online Zakat Payment Adoption Intention	0.367	0.184	2.000	0.046	Supported
H2	Perceived Ease of Use ->Online Zakat Payment Adoption Intention	0.478	0.184	2.602	0.009	Supported

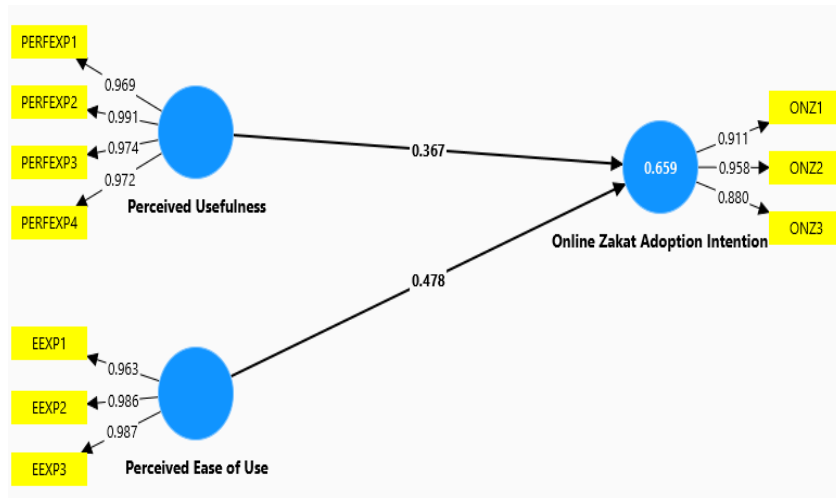


Figure 2. Structural Model

Table 5. Result of  $R^2$  and  $f^2$

Construct	$R^2$	$f^2$	Decision
Online Zakat Adoption Intention	0.659		
Perceived Usefulness		0.115	Small
Perceived Ease of Use		0.195	Medium

## DISCUSSION

This study aimed to provide empirical support for the effectiveness of TAM factors in explaining the online zakat payment intentions of muzakki in Malaysia. The findings contribute new insights to the online zakat literature, showing that both TAM factors—perceived usefulness and perceived ease of use—significantly influence muzakki’s intention to use online zakat payment platforms.

Firstly, the results demonstrate a positive and significant relationship between perceived usefulness and online zakat payment intention, aligning with previous studies (Ali et al., 2020; Roy, 2017; Ahmad et al., 2021; Hasyim et al., 2020). This may stem from the belief among muzakki that online zakat payment systems offer practical benefits, such as reduced time and costs compared to traditional zakat payment methods. Additionally, this study found that perceived ease of use has the most substantial positive and significant impact on muzakki’s intention to adopt online zakat payment services. Empirically, this finding is consistent

with studies in different contexts (Yang et al., 2021; Muflih, 2023), which identify ease of use as a strong predictor of technology adoption intentions.

## CONCLUSION

This study aims to explore how the Technology Acceptance Model (TAM) factors—perceived usefulness and perceived ease of use—impact muzakki's intention to adopt online zakat payment services in Malaysia. The findings reveal that both TAM factors significantly influence muzakki's intention to use an online platform for zakat payments. While this study makes valuable contributions by addressing research gaps and providing practical insights, certain limitations need consideration. The survey was conducted solely among the muzakki population in Perak, Selangor, and Kelantan, Malaysia. Additionally, the cross-sectional research design means that results may differ if similar studies are conducted in varied contexts or over different timeframes. Therefore, generalizing these findings should be approached cautiously. Future research should consider a broader geographic scope, potentially including other countries, to enhance the generalizability of the study's results.

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