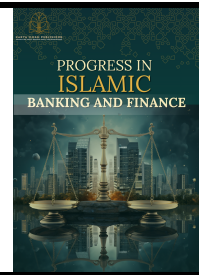




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E-Wallet-Based Cash *Waqf* Giving Behaviour in Malaysia

Hanudin Amin^{1,*}, Muhsinah Hasanar Kunju², Dwi Suhartanto³, Mohd Zulkifli Muhammad⁴

¹ Labuan Faculty of International Finance, Universiti Malaysia Sabah, Malaysia

² Shipping and Aviation College, Negeri Sembilan, Malaysia

³ Politeknik Bandung, Indonesia

⁴ Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia

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ABSTRACT

This study investigated e-wallet-based cash *waqf* giving behaviour among Malaysians, particularly in one of its states called Negeri Sembilan. Two theories namely the theory of Planned Behaviour (TPB) and the Islamic Theory of Consumer Behaviour (ITCB) were integrated to analyse the behaviours of 397 respondents using SPSS v.28. Further, the results show that all TPB and ITCB factors were influential in determining e-wallet-based cash *waqf* giving behaviour. Moderating the role of Islamic religiosity is also fruitful. The results were then discussed to better understand the idea for *waqf* collectors to increase their collection of cash *waqf*. Some limitations are found in this study and therefore it is essential for future researchers to interpret our findings with caution. Importantly, this study has contributed to the enrichment of measurement items for TPB and ITCB variables in the cash *waqf* context

1. Introduction

This study focuses on the use of e-wallets among Malaysian waqifs or donors for cash waqf giving in Negeri Sembilan. Historically, Maybank was the first bank in Malaysia to introduce an e-wallet called Maybank Mobile Money for cashless transactions including donations, angpau and duit rata. Other e-wallets include Boost, GrabPay and Touch 'n Go eWallet, to mention some. Negeri Sembilan has an established waqf management system under the Negeri Sembilan Islamic Religious Council (NSIRC), which actively promotes cash waqf initiatives through digitalisation. This state has shown progressive efforts in the formation and development of waqf assets for socio-economic benefits, including state policies on Islamic philanthropy, cash waqf integration with Fintech platforms and waqf-based development projects, among others. The state has explored the use of e-wallets for waqf contributions. This aligns with broader trends in Malaysia, where Fintech is increasingly being

* Corresponding author.

E-mail address: hanudin@ums.edu.my

used to enhance Islamic charitable giving. This state is a strategic location for studying cash waqf giving due to its institutional support, active waqf programme, demographic diversity and Fintech integrations, among others.

Worth mentioning, that cash waqf collection in Negeri Sembilan is somewhat marginal though there was a proliferation in the contributions of cash waqf among Malaysian donors. Therefore, the amount earned by the responsible organisation is still at an unsatisfactory level. Perbadanan Wakaf Negeri Sembilan [30] reported the amount of cash waqf received from the donors in Negeri Sembilan has considerably diminished from 2016 with a total volume of RM 625,948.00 to RM 280,993.00 in 2017 and slightly decreased to RM 196,894.00 in 2018. This inconsistent trend is somewhat alarming and needs intervention to improve donations. By any means, e-wallets can address the intervention issue to promote the habit of cash waqf giving without time and geographical limitations. However, studying e-wallet-based cash waqf giving behaviour in Negeri Sembilan is somewhat missing and remains inconclusive [17,24]. Hence, the current investigation like others is needed to close the gap at best.

Although promotions and facilities associated with cash waqf are rendered like online cash waqf through e-wallets, there are still negative attitudes and behaviours on the willingness or readiness to donate for cash waqf funds. Essentially, Osman et al. [25] contended that the level of awareness among Malaysians concerning cash waqf is, however, still in the infancy stage. This is also drawn from a fallacy by laymen in that it is paid voluntarily compared with obligatory zakat, resulting in poor receptiveness and uneven financial performance of the cash waqf and the culture of building up a conscious society on the system is relatively fallen short. To close the gap, the present study examines the factors influencing e-wallet-based cash waqf giving behaviour, where waqifs from Negeri Sembilan matter and for that, new insight can be obtained to improve their receptiveness for improved performance of the system.

2. Literature Review

2.1 Theoretical Foundation

Two theories namely the theory of Planned Behaviour (TPB) and the Islamic Theory of Consumer Behaviour (ITCB) were used simultaneously to meet the purpose of this work. TPB has been defined as relevant and valid when managing human social behaviour and its complexity. TPB factors notably attitude, subjective norm and perceived behavioural control are critical in the formation of behaviour. We extend this theory due to some merits that it can address accordingly. Following Ajzen [1], this theory has been powerful in explaining human behaviour and by correlation analysis one can understand what factor is the leading in social science studies. The current study is about behaviour whilst the same issue is addressed by the theory and hence both can go together.

Nevertheless, the theory has been developed in the West and the worldview can be different and might insufficient to reflect the reality of the Islamic philosophy of consumerism [16]. Islamic philosophy of consumerism includes but is not limited to moderation in consumption, the avoidance of lavish lifestyles and the promotion of sadaqah, among others. Modification in terms of conceptualisation and operationalization is therefore essential to reflect the reality of the study setting.

To reflect the Islamic worldview, this study is humility to introduce ITCB to reflect the reality of the Islamic philosophy of consumerism and to be integrated with TPB for impactful results. The theory was developed by Amin [6] when he improved the earliest theory he introduced notably the Theory of Islamic Consumer Behaviour (TiCB) published in 2014 [3]. The theory is confined in its scope to consider halal consumption only and there is no green light for haram consumption like liquor

intake and cobra blood drinking. TPB and ITCB have been chosen due to the parsimony factor, whereby parsimony is defined as simplicity in explaining the phenomenon that happens to create a solution [37].

2.2 Hypotheses Discussion

2.2.1 Attitude

Attitude refers to an individual's general feeling either favourable or unfavourable toward some object, action or event [12]. This study used attitude as one of the variables that affect the behaviour of an individual in whether to participate or not participate in cash waqf. Supported by Ajzen [1], which suggests that it can be defined as the level of belief to which a person has an optimistic or deleterious assessment or consideration of certain behaviour. Furthermore, it has been suggested that the more constructive one's attitude towards behaviour, the more expected the person to perform the behaviour [26]. Osman *et al.*, [26] in their research about the factor influencing cash waqf giving behaviour stated that there is an insignificant connexion between the attitude and behavioural intention. However, numerous studies have stated and proved the significance of the person's attitude toward the behavioural intention [2,18,26,32]. Importantly, Razak *et al.*, [32] discovered a significant influence of one's belief on behaviour in cash endowment. We expect to generalise these studies' findings to the current context. Hence:

H1: Attitude will influence the e-wallet-based cash waqf giving behaviour

2.2.2 Subjective norm

Valid to argue that, some individuals in our circle have a tendency to be influenced, affecting their decision to be resemble the individuals in their society. If one discovers in his society, charitable giving is a normal and encouraging activity, it is acknowledged that he will perform the same behaviour, allowing him to be accepted as a part of the team in the community that he serves. This study expects that people's influence can to a certain extent determine one's behaviour towards giving [26]. Amin *et al.* [5] investigated the significant role of people influence in shaping the formation of behavioural decisions among donors and the result was significant between people influence and decision. Earlier, Md Zabri and Mohammed [19] proved the significant result of subjective norms on behavioural decisions. However, there was countless research that proven the significance of subjective norms towards behaviour specifically e-wallet and waqf [2,13,18,32]. Selectively, the study that was done by Hasbullah *et al.*, [13] gives another perspective where cash waqf can be collected by the employees of religious entities. Their finding indicates that one's circle of behaviour is confirmed. In acute situations, Razak *et al.*'s [32] study viewed that cash waqf collection can be more likely in terms of its impact when examining the behaviour when emergencies or difficult situations are found in our circle. Hence, we expect this variable can influence donors to pay cash waqf through e-wallets. Thus:

H2: Subjective norm will influence the e-wallet-based cash waqf giving behaviour

2.2.3 Perceived behavioural control

Based on Ajzen [1], one decision pertinent to certain work is also influenced by knowledge, skill and ability to digest before doing it. In our context, charitable giving, which is termed here as cash

waqf giving, should not occur naturally or automatically based on instinct but instead, it occurs due to one's ability to control the setting. When donors are quite confident and can control the environment that they deal with, the inclination to promote the donations is likely possible and greater. Several studies have confirmed the effect that control mechanisms in oneself have on behaviour [13,18,19,25]. Selectively, Hasbullah *et al.*, [13] conducted an investigation involving those employees from a religious entity and found control factor is instrumental in leading to actual behaviour for donations. The latest investigation by Amin *et al.*, [5] proved control is not only essential but also has the largest influence on decisions. These studies though useful to understand a noteworthy linkage between the factors examined none of these is focused specifically on the e-wallets used for donations. Hence:

H3: Perceived behavioural control will influence the e-wallet-based cash waqf giving behaviour

2.2.4 Islamic religiosity

When one learns about the Islamic religion, he/she will acknowledge that five rulings guide individual decisions including when it comes to donations. These include obligatory, forbidden, reprehensive, permissible and recommended. Concerned with cash waqf, it lies in the recommended action in which if it is done then one will be rewarded whilst if he is leaving it, there will be no punishment to breed. A study by de Abreu *et al.*, [10] investigated religiosity as one of the factors shaping donation practices. The context is Portugal. They found that religiosity is crucial in shaping donation practices. In another context, Chourou [9] investigated company donations and religiosity from cross-country evidence. Interestingly, it is reported that firms that operate in religious countries than others are more likely to take the initiative for donations. Interestingly, other preferences are likely more important than self when donating money for social wellness. Following Rizal and Amin [34], we expect religiosity to be a comprehensive measure that can provide an improved understanding of why people donate money for other well-being. One who is religious tends to act according to God's commandments and for this purpose, this hypothesis is postulated.

H4: Islamic religiosity will influence the e-wallet-based cash waqf giving behaviour

2.2.5 Islamic altruism

Trivers [40] examined the behaviour that benefits others, for example, altruistic behaviour can be seen in the situation of one human leaping into the water danger himself to save another person that was drowning in the water. Suzuki and Miah [39] in their articles stated that Islam emphasised altruism as can be seen from the history of Madinah Muslims in Al-Quran (59:9). In this verse, Allah praised those Madinah's Muslims for giving priority to the migrants (muhajirin) more than themselves, even if they are in a state of need and desperate. Furthermore, research on the altruism models in the Islamic consumption system was conducted by Muflih [23] and addressed three important stages in Islamic altruism. First, the utility of compassion comes from the essence of social-emotional, which allows it to craft a symbol of expressive contentment. Second, rationalising the socio-spiritual gains that stem from the motivation to achieve the rewards promised by religion for the sacrifices made by participants for the poor and needy, yields indicators of consumer profits. Lastly, the relationship between God and man derives from the participant's passion to always be close to God without reward. Through the assertions made by Suzuki and Miah [39] and Muflih [23],

we expect to generalise the scope of Islamic altruism to include e-wallet-based cash waqf giving behaviour to reduce the gap available and therefore:

H5: Islamic altruism will influence the e-wallet-based cash waqf giving behaviour

2.2.6 Knowledge of waqf

Generally, knowledge is associated with one's education and experience – that is – the more education and experience are, the more individuals' knowledge. The knowledge or information that they have, will guide them in whether to act positively or negatively. Amin *et al.*, [3] reported that the knowledge positively affected online waqf acceptance. Moreover, the research that was made by Osman *et al.*, [25] about the awareness of cash waqf in Malaysia, indicated that the level of understanding among Malaysian people is still low. On the other hand, Mokhtar [21] examined university staff knowledge of cash waqf, which was directed at the staff of Universiti Sains Malaysia (USM), showed that there was a moderate level of understanding or knowledge about the cash waqf among the staff. A substantial association between knowledge of cash waqf awareness has been found in the recent article by Hassan *et al.*, [14] in their article on the effect of campaigns and acquaintance with cash waqf consciousness in the Pahang region. We expect to generalise the scope of knowledge to include e-wallet-based cash waqf giving behaviour to reduce the gap available and therefore:

H6: Knowledge of waqf will influence the e-wallet-based cash waqf giving behaviour

2.2.7 Islamic religiosity as a moderator

Talking to a moderator is viewed as a third consideration which can understand whether the interaction among independent variables can help to strengthen their effect on a dependent variable [37]. Following Chetoui *et al.*, [8], they found that Islamic religiosity is a crucial moderator. In more detail, People who consider they to be religious are more likely to adopt a positive outlook on charitable giving and, as a result, are more likely to donate. A moderator variable is a variable that might increase, decrease or reverse the relationship between the Y and the Xs. Various studies used Islamic religiosity as a moderator [11,22,27]. Unfortunately, many of it was from a different field including traveller gratification [1], medical conditions of elders [21], and also in performing income zakat [28]. Selectively and importantly, Othman *et al.*, [27] proved that Islamic religiosity is a sound moderator in studying zakat behavioural intention in Kedah, Malaysia. We expect to extend this finding to include e-wallet-based cash waqf giving behaviour and therefore the following hypotheses were proposed:

H7 – H11: Islamic religiosity moderates the association between attitude, subjective norm, perceived behavioural control, Islamic altruism, knowledge and the e-wallet-based cash waqf giving behaviour

Given these discussions, Figure 1 presents the research framework.

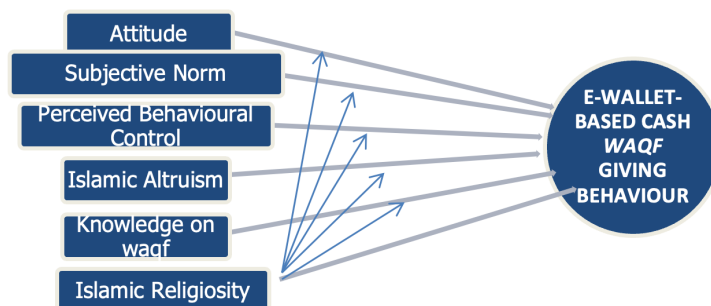


Fig. 1. The conceptual framework

3. Methodology

3.1 Subjects

The targeted population was Muslim donors in Negeri Sembilan, Malaysia. The main reason for choosing Negeri Sembilan is because of the limited research that was conducted in this city, especially in the field of cash waqf. Only a few types of research were conducted in Negeri Sembilan such as a study that was written by Rifin *et al.*, [33] which explained the development of waqf in three sectors which include religiosity, technology and health in Negeri Sembilan. Besides, their study was non-quantitative and does not relate to cash waqf. In contrast, it intends to conduct a questionnaire survey on e-wallet-based cash waqf giving behaviour. While, in the field of cash waqf, there are a few studies that were conducted in other states such as Selangor [35] that were not extended to Negeri Sembilan. The uneven sum of the collected cash waqf in Negeri Sembilan has increased the reasons for selecting this city as a sampling frame.

Furthermore, the environment as a location of a few universities and colleges such as INTI International University Nilai and Universiti Sains Islam Malaysia (USIM) in here can be assumed that there is a knowledgeable population that can help answer the questionnaire. Having a knowledgeable person as a respondent in answering the questionnaire was assumed to reduce invalid data. Table 1 outlines the subjects in more detail.

Table 1

Profiles of respondents

Demographic Variables	Categories	Frequency	Percentage
Gender	Male	189	47.6
	Female	208	52.4
Ethnic	Malay	390	98.2
	Chinese	3	.8
	Indian	1	.3
	other	3	.8
Religion	Islam	397	100.0
Education	SPM and below	21	5.3
	STPM/STAM/Diploma	63	15.9
	Degree	273	68.8
	Masters	38	9.6
	PhD and above	2	.5

3.2 Sample size

According to Sekaran and Bougie [37], several methods can be applied to define the sample size for each inquiry. Considering the uncertain actual total population in this research, Cochran's formula for computing sample size with the immeasurable people had been chosen in determining the sample size of this study. In calculating a representative sample for proportions, Cochran developed a formula:

$$n_o = \frac{z^2 pq}{e^2} = 384.16$$

whereby n_o represents sample size, z^2 is the critical value of the desired confidence level which can be found in the Z table, p symbolises the proportion of the population that was estimated to have attributed in question, while q stands for $1-p$ and e indicates the anticipated degree of precision.

Consequently, the calculation for the sample size needed in this study will be:

$$z = 1.96, p = 0.5, q = 1-0.5, e = 0.05$$

$$n_o = \frac{(1.96)^2(0.5)(1 - 0.5)}{(0.05)^2} = 384.16$$

Therefore, our sample size of 397 is considered relevant and sufficient.

3.3 Statistical analysis used

SPSS v28 was used to analyse the data for validity analysis, consistency test, correlation, regression and importantly hierarchical regression model. Therefore, the ability of SPSS v28 to test the aforementioned analyses was a reason for it being chosen as the statistical analysis tool for analysing data for this study. Rather than the other statistical analysis tools, the researchers found that SPSS is much simpler and the results were much easier to interpret.

4. Results

4.1 Independent variables – factor analysis

Table 2 below shows the result that was gained by conducting the dimensional reduction of factor analysis. Based on the results, six factors were produced by having each of their eigenvalues more than one and explained 66.851% of the total variance which is considered to be acceptable [29]. Afterwards, the value of Kaiser-Meyer-Olkin in this factor analysis was .919 and the Bartlett test of sphericity reached a weighty level at $p < 0.000$ which indicated that this factor analysis is acceptable. Further, the result that was gained for the anti-image correlation of all 37 variables exceeds 0.8. While the commonalities results ranged between 0.56 and 0.85. Moreover, Table 2 shows that factor one "Islamic Altruism" captures the highest value of eigenvalue which is 11.713 and explains 36.602% of the total variance. This factor consists of 7 elements. Followed by factor two labelled as "subjective norm" which consists of five elements. This factor captured a value of 3.049 for eigenvalue and explained 9.530% of the total variance. Next, factor three enlightened 6.045% of total variance with an eigenvalue of 1.934 was labelled as "Islamic religiosity". This factor consists of five elements.

Factor four namely “perceived behavioural control” had an eigenvalue of 1.727 and explained 5.398% of the total variance. This factor consists of five elements. Captured 1.699 of eigenvalue and explained 5.308% of the total variance, five elements were comprised in factor five and named "knowledge of waqf". Lastly, factor six was formed by explaining 3.870% of the total variance and had 1.238 for the eigenvalue. This factor is named "attitude" and consists of five elements.

Table 2

Factor analysis of independent variables and reliability results

Items	F1	F2	F3	F4	F5	F6
Factor 1: Islamic altruism						
Helping others is necessary for me	.829					
Performing good behaviour to others is relevant to me	.703					
I like giving money for charity to obtain Allah S.W.T's blessing	.698					
Giving benefits to others makes me a real Muslim	.684					
Giving benefits to others is essential to me	.656					
I feel obliged to help others for the sake of Allah S.W.T	.637					
I give a helping hand to others when needed	.623					
Factor 2: Subjective norm						
Most people who are close to me think that I have to participate in cash <i>waqf</i>		.851				
My friends would think that I should perform cash <i>waqf</i>		.826				
Most people whose opinion I value would think that I should participate in cash <i>waqf</i>		.804				
Most people who are important to me participated in cash <i>waqf</i>		.692				
My family support my actions to participate in cash <i>waqf</i>		.631				
Factor 3: Islamic religiosity						
I believe I earn the mercy and protection of Allah S.W.T by participating in cash <i>waqf</i>			.871			
I believe I help other Muslims by participating in cash <i>waqf</i>			.793			
I believe, God will reward me if I participate in cash <i>waqf</i>			.778			
The prophet Muhammad S.A.W shows us the importance of giving			.719			
I believe, my wealth increases many folds if I participate in cash <i>waqf</i>			.670			
Factor 4: Perceived behavioural control						
I am able to participate in cash <i>waqf</i>				.779		
I have sufficient financial resources to participate in cash <i>waqf</i>				.779		
If I want, I can participate in cash <i>waqf</i> at any time				.735		
The decision to participate in cash <i>waqf</i> is entirely up to me				.670		
I am often motivated to participate in cash <i>waqf</i>				.670		
Factor 5: Knowledge						
I understand that <i>waqf</i> participation belongs to Allah S.W.T.					.812	
I know that cash can be contributed as <i>waqf</i>					.748	
The practice of <i>waqf</i> has been derived from the practice of Prophet Muhammad S.A.W					.712	
I know that there are four pillars of <i>waqf</i>					.701	

There are two types of <i>waqf</i> 's property, which are tangible and intangible							.654
Factor 6: Attitude							
Participating in cash <i>waqf</i> is beneficial							.772
Participating in cash <i>waqf</i> is positive							.650
Participating in cash <i>waqf</i> will make me a better person							.634
Participate in cash <i>waqf</i> is a noble practice							.611
Participating in cash <i>waqf</i> will be rewarded							.609
Eigen Value	11.713	3.049	1.934	1.727	1.699	1.238	
% Of Variance	36.602	9.530	6.045	5.398	5.308	3.870	
Total Variance Explained	66.851						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.919						
Bartlett's Test of Sphericity	8198.675						
Significant	.000						
Cronbach's alpha	.893	.906	.881	.859	.848	.777	

4.2 The E-Wallet-based Cash Waqf Giving Behaviour – Factor Analysis

Table 3 displays the result of factor analysis for the behaviour. Only one factor was extracted with the Kaiser-Meyer-Olkin value of 0.893, and Bartlett's Test of Sphericity was noteworthy at $p < 0.000$ which indicates that all items were interrelated and acceptable for factor analysis. Five items were gathered in this factor. This factor captured an eigenvalue of 3.958 and explained a total variance of 79.164%. Besides, the commonalities of these five items ranged between 0.748 and 0.842.

Table 3

Factor analysis of dependent variable and reliability result

Items	Factor Loadings
E-wallet-based cash <i>waqf</i> giving behaviour	
I donate cash <i>waqf</i> through e-wallet	.917
I donate cash <i>waqf</i> often through e-wallet	.898
I donate cash <i>waqf</i> through e-wallet previously	.898
I prioritise cash <i>waqf</i> through e-wallet	.896
I donate cash <i>waqf</i> continuously through e-wallet	.865
Eigen Value	3.958
Total Variance Explained	79.164
The measure of Sampling Adequacy	.893
Bartlett's Test of Sphericity	1639.531
Significant	.000
Cronbach's alpha	.933

4.3 Reliability test

Sekaran and Bougie [37] asserted that a Cronbach's alpha close to 1.0 designates that the item is deliberated to have in height interior stability reliability, > 0.8 is considered good and acceptable. Tables 2 and 3 show the results of the reliability analyses. It can be observed that most of the constructs can be considered good by having Cronbach's alpha more than 0.8. This includes "e-wallet-based cash *waqf* giving behaviour" by gaining Cronbach's alpha of 0.933, subsequently "subjective

norm" (0.906), "Islamic altruism" (0.893), "Islamic religiosity" (0.881), "perceived behavioural control" (0.859) and "knowledge" (0.848). However, one of the constructs was only considered acceptable by obtaining 0.777 which is attitude.

4.4 Correlation Analysis

It is needed to examine the multicollinearity issue that can potentially exist among the analysed relationships involving all constructs under consideration [29]. When Table 4 is examined, it is reported that five out of six variables are strongly correlated with behaviour while one variable has a moderate relationship and is significant at 0.01. Besides, by having all of these inter-correlations not too high (.80 or .90) the likelihood of multicollinearity was relatively low or did not exist in this study [29].

Table 4

Correlation analysis

Variables	ATT	SN	PBC	IR	IA	KW	EWGB
Attitude	1						
Subjective Norm	.420**	1					
Perceived Behavioural Control	.430**	.542**	1				
Islamic Religiosity	.575**	.395**	.294**	1			
Islamic Altruism	.549**	.532**	.466**	.534**	1		
Knowledge	.419**	.499**	.456**	.301**	.487**	1	
E-wallet-based cash waqf giving behaviour	.525**	.546**	.626**	.475**	.630**	.534**	1

** . Correlation is significant at the 0.01 level (2-tailed).

4.5 Multiple Regression Analysis

When Table 5 is examined, a 60.8% variance in the behaviour is explainable by six factors. The $R^2 = .608$, $p < 0.01$ was acceptable. In more detail, it can be observed that there was a positive noteworthy association between attitude and e-wallet-based cash waqf giving behaviour ($\beta = .092$, $p < 0.05$). Similarly, the subjective norm also shows a positive significant relationship with e-wallet-based cash waqf giving behaviour $\beta = .100$ significant at 0.05. The result reveals that perceived behavioural control has the strongest positive significant relationship with e-wallet-based cash waqf giving behaviour by obtaining the largest standardised coefficient beta ($\beta = 0.320$, $p < 0.01$). It can be concluded that the use of TPB was valid for this study.

Moreover, there was also an interaction between Islamic religiosity and e-wallet-based cash waqf giving behaviour ($\beta = 0.084$, $p < 0.05$). Of course, there was a noteworthy relationship between Islamic altruism and e-wallet-based cash waqf giving behaviour ($\beta = 0.255$, $p < 0.01$). Lastly, it was reported that there was also a noteworthy relationship between knowledge of waqf with e-wallet-based cash waqf giving behaviour ($\beta = 0.255$, $p < 0.01$). In other words, knowledge of waqf influences e-wallet-based cash waqf giving behaviour is relevant. On the other hand, by having the ITCB factors which were significant, it is to be concluded that the use of ITCB was valid for this study.

Table 5
Regression analysis

Dependent Variable	Independent Variables	Std. beta	t-value	Sig
E-wallet-based cash <i>waqf</i> giving behaviour	Attitude	.092	2.141	.033
	Subjective norm	.100	2.362	.019
	Perceived behavioural control	.320	7.848	.000
	Islamic religiosity	.084	2.012	.045
	Islamic altruism	.255	5.804	.000
	Knowledge	.177	4.554	.000
	R^2		.608	
	Adjusted R^2		.602	
	Std. Error of the Estimate		.40464	

4.6 Hierarchical Regression Analysis

This study highlights Islamic religiosity – serving as a moderator in this study. In conducting this analysis, first, the interaction terms were developed by multiplying the values of each model variable with the moderator variable separately. Then, a hierarchical regression process was steered using the recommended procedures advocated by Sharma *et al.*, [38] the first step tested the association between dependent variables with the independent variable, followed by the second step by adding moderator variables, and lastly, the aforementioned interaction terms were entered. Table 6 shows that Islamic religiosity is a good moderator. The result reveals that in step 1, the R^2 change (0.604) and F change (118.166) with $p < 0.01$, denoting Xs and Y were statistically significant.

Meanwhile, in step 2, when the F change is significant ($p < 0.05$), it signposts that the moderator (Islamic religiosity) is positively significant to either the model variables or the behaviour. In the final step, when the interaction between predictors and moderator was entered, the result revealed that the F change was significant ($p < 0.01$). These indicate that Islamic religiosity significantly influenced the effect of predictors on the e-wallet-based cash *waqf* giving behaviour. By having all of the three steps [b(x), b(x*z) and b(z)] to be significant, it can be concluded that Islamic religiosity acts as a quasi-moderator based on the recommendation by Sharma *et al.*, [38].

Table 6
Hierarchical regression analysis

Dependent Variable	Variables	Std. beta Step 1	Std. beta Step 2	Std. beta Step 3
E-wallet-based cash <i>waqf</i> giving behaviour	<i>Model variable:</i>			
	Attitude	.147**	.107*	.370
	Subjective norm	.094*	.083	1.21*
	Perceived behavioural control	.289**	.297**	1.810**
	Islamic altruism	.301**	.272**	.065
	Knowledge	.175**	.177*	1.349**
	<i>Moderating variable:</i>			
	Islamic Religiosity		.096*	.205
	<i>Interaction terms:</i>			
	Attitude X Islamic religiosity			.776
	Subjective norm X Islamic religiosity			1.568*
	Perceived behavioural control X Islamic religiosity			1.813**
	Islamic altruism X Islamic religiosity			.297
	Knowledge X Islamic religiosity			1.416*
R^2		.604	.609	.632

Adjusted R^2	.599	.603	.622
R^2 Change	.604	.005	.023
F Change	118.166**	5.292*	4.882**

**p < 0.01, *p < 0.05

5. Discussion

It is acknowledged that there was a noteworthy association between attitude and e-wallet-based cash waqf giving behaviour. This result contradicted the result gained by Osman *et al.*, [25] in their research which found that attitude did not influence cash waqf giving behaviour. This might have been due to the difference in environment or locations in conducting the survey whereby their study has been conducted at Selangor while this study was conducted at Negeri Sembilan. Providentially, this result was in tandem with the study by Osman *et al.*, [25] in their research on cash waqf participation at IIUM, research by Yusoff *et al.*, [41] on cash waqf participation at University Teknologi MARA Kelantan and a recent study on the use of cash waqf in Malaysia [32]. This significant relationship between a person's attitude with their behaviour was believed to stem from their belief in the prominence of cash waqf [41]. Further, the environment, population, and classification [25] of this study might also influence the result.

Subjective norm was significantly found. This was supported by Pitchay *et al.*, [31] that suggest people's surroundings and environment significantly influence an individual's behaviour. However, this result contradicted some previous studies such as a study by Osman *et al.*, [25] among donors in Selangor and Osman *et al.*, [25] who reported an insignificant relationship between the factor and the social engagement. This study was found to be in line with several studies that revealed the significant relationship between subjective norm and e-wallet-based cash waqf giving behaviour [26, 35] and corporate waqf [13]. Recently, Razak *et al.*, [32] also proved the significant role of this variable on behaviour. In other words, this result suggests that most Muslim donors in Negeri Sembilan agree that the perceptions or pressure and influence of others affect their donation decisions.

Perceived behavioural control was significantly found. This finding concludes that Muslim donors in Negeri Sembilan have the ability and sufficient resources to donate in cash waqf. This result aligns with a study conducted by Amin *et al.*, [5], extending its generalisability to include e-wallets for cash waqf donation channels. Conversely, research on corporate waqf by Hasbullah *et al.*, [13] argued by saying that there is an insignificant relationship between perceived behavioural control with people's behaviour to contribute to corporate waqf. Despite that, research on cash waqf by Md Zabri and Mohammed [19] and Osman *et al.*, [19] argued that one who has a high control tends to have strong donation behaviours. Md Zabri and Mohammed [19] supported our result in which control is essential in shaping one's development of behavioural action for cash waqf donations.

The present study reports that Islamic religiosity was significant, which is inconsistent with Sakti *et al.*, 's [35] examinations. Though, this finding was consistent with numerous studies such as a cash waqf contribution among young intellectuals [27], online waqf acceptance [4] that explained the positively significant relationship between Islamic religiosity toward person's behaviour. Notably, Osman *et al.*, [25] in their research also uncovered that there was a positive noteworthy association between religiosity and the cash waqf giving behaviour. This result specifies that Muslim donors in Negeri Sembilan believe that Allah's reward, mercy and protection played a role in increasing their actual donations.

Islamic altruism was essentially significant. This result indicates that Muslim donors in Negeri Sembilan have a higher inclination to participate in cash waqf when they have a higher level of Islamic altruistic behaviour. Therefore, the ITCB suggestion on the role of one's selfless behaviour will affect

one's behaviour was supported. This outcome differed from the outcome gained by Sayuti and Amin [36] who reported that altruism is insignificant, due to the poor item representation of "Islamic altruism". Despite that, this result was in line with and supported the suggestion from a few past studies [15,20,34] on the effect that Islamic altruism can bring for actual donations.

Knowledge was significantly related to the behaviour. In the context of this study, knowledge of waqf affects e-wallet-based cash waqf giving behaviour. The result reveals that knowledge of waqf can explain the e-wallet-based cash waqf giving behaviour. In other words, Muslim donors in Negeri Sembilan with higher information or knowledge of waqf tend to have higher actual donations. This outcome was similar to several past studies like the study on the intention to enrol in Islamic accounting course [2], online waqf acceptance [3], awareness of cash waqf [42] and behavioural intention to contribute in cash waqf [7] that uncovered a significant association between the amount of information with one's decision.

Following Chetioui *et al.*, [8], our finding indicates that Islamic religiosity is acceptable as a moderator. Our study finding also supports Eid and El-Gohary's [11] finding and therefore extending it to include e-wallets and actual donations. This study further reported the role of Islamic religiosity as a moderating variable on the relationships between IVs and e-wallet-based cash waqf giving behaviour. Following Sharma *et al.*, [38], Islamic religiosity was revealed to act as a quasi-moderator. Further, the finding of hierarchical regression shows that Islamic religiosity has a positive moderating effect, adding its scope to include e-wallet-based cash waqf giving behaviour.

6. Contributions

6.1 Theoretical Contribution

In terms of theoretical contributions, this research provides empirical support to the findings of past studies. The results obtained provide strong empirical support for the validation of both theories that have been tested which include TPB and ITCB in the current setting. TPB has been used widely and corroborated in innumerable existing studies [5,25], but in the context of cash waqf, it remains inconclusive. This research has successfully validated the use of TPB in determining factors influencing e-wallet-based cash waqf giving behaviour. The TPB factors are relevant to explain e-wallet-based cash waqf giving behaviour. For this reason, this study suggests that TPB played a role and validated to be used as a factors influencing behaviour in cash waqf.

Besides, ITCB has not yet been used in determining the factors influencing e-wallet-based cash waqf giving behaviour. Since the development of ITCB is still in the infancy stage [1], this study suggests three variables to influence behavioural intention which include Islamic religiosity, Islamic altruism and knowledge. Some literature reviews and an interview with five Shariah scholars have strengthened the measurement items used for each construct. The results show that all of these three variables (Islamic religiosity, Islamic altruism and knowledge of waqf) have a positive noteworthy association with e-wallet-based cash waqf giving behaviour. Under those circumstances, this study validates the use of ITCB (Islamic religiosity, Islamic altruism and knowledge of waqf) in influencing e-wallet-based cash waqf giving behaviour.

Furthermore, this work also validates Islamic religiosity as a moderator. This study provides new comprehension concerning the influence of Islamic religiosity as a moderator on the relationships between subjective norms, perceived behavioural control, knowledge of waqf and e-wallet-based cash waqf giving behaviour. As a result, these findings add new knowledge to the body of knowledge by expanding the understanding of the examined inter-relationships.

6.2 Methodological Contribution

Methodologically, this work managed to create and test a few new measurement scales in representing attitude, perceived behavioural control, Islamic altruism and knowledge of waqf. There were limited studies, especially in the field of cash waqf that were using such scales. To close this gap, this study comes up with some relatable measurement items. The proposed measurement items were then examined by five Shariah scholars to ensure that each measurement item reliably reflects their factors. Specifically, one item was developed for each factor namely attitude and perceived behavioural control. Additionally, because of the lack of research that has been used on these factors in the field of cash waqf, five items have been developed to better reflect on each of the constructs that were labelled as Islamic altruism and knowledge of waqf. Moreover, it has been tested that all of these new measurement items have proven to have high reliability. In return, the new measurement items especially on Islamic altruism would perhaps be helpful for future research.

6.3 Practical Contribution

This research's results will provide society's benefit in a few ways, considering that cash waqf plays a vital role in providing resources expressly in managing waqf land. The countless demand for cash waqf indicates the need for waqf collectors to be more effective in approaching societies to donate in cash waqf. Thus, it is expected that waqf institutions should consider the results obtained for better future planning of donation practices. Administrators will be guided on what should be emphasised by cash waqf collectors to improve the performance of cash waqf's collection, while researchers will be able to find some uncovered critical areas in influencing one's behaviour to donate in cash waqf.

7. Conclusions

Understanding factors influencing e-wallet-based cash waqf giving behaviour is essential for its sustainability and resilience. Out of 11 hypotheses that have been proposed, nine were found to be accepted. In return, it explains that the framework used in this study has a superior clarifying power which leads to offering a greater perception in understanding the factors determining e-wallet-based cash waqf giving behaviour. Understanding donors' preferences that make them involved in charitable giving brings a new insight that can be used in attracting people to donate in cash waqf and also can strengthen the intention of current participants to continue their contribution in cash waqf. Therefore, six elements or factors have been discovered as essential and for that, they can be applied by Cash Waqf's fundraisers to improve their collection and productivity.

This study acknowledged at least three drawbacks. These include firstly limited geographical areas that it covered, secondly, limited application of Islamic religiosity as a moderator in Islamic donation empirical works and lastly the confined examined exogenous variables. Future studies should be based on these flaws. First, to strengthen cash waqf's giving framework; it is recommended that future studies on factors influencing cash waqf participation be covered in other states in Malaysia such as Malacca, Perak, Perlis, Sarawak and the Federal Territories of Labuan and Putrajaya. Second, considering the reputation of Islamic religiosity in Muslim life, more studies on testing the moderating effect of Islamic religiosity should be conducted. Likewise, the future researcher can also consider testing the mediating effect on Islamic religiosity which will enrich the literacy on its significance in this field. Third, future research should also be considered testing more variables which might help in understanding the factors influencing the giving behaviour. After all, this work

provides new perspectives pertinent to e-wallet cash behaviour, where integration between TPB and ITCB is brought into play.

References

- [1] Ajzen, Icek. 1991. "The Theory of Planned Behaviour." *Organizational Behavior and Human Decision Processes* 50: 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- [2] Amin, Hanudin, Abdul Rahim Abdul Rahman, and T. Ramayah. "What makes undergraduate students enroll into an elective course? The case of Islamic accounting." *International Journal of Islamic and Middle Eastern Finance and Management* 2, no. 4 (2009): 289-304. <https://doi.org/10.1108/17538390911006359>
- [3] Amin, Hanudin, Abdul-Rahim Abdul-Rahman, Thuraishamy Ramayah, Rostinah Supinah, and Masmurniwati Mohd-Aris. "Determinants of online waqf acceptance: An empirical investigation." *The Electronic Journal of Information Systems in Developing Countries* 60, no. 1 (2014): 1-18. <https://doi.org/10.1002/j.1681-4835.2014.tb00409.x>
- [4] Amin, Hanudin, Abdul-Rahim Abdul-Rahman, and Dzuljastri Abdul Razak. "Theory of Islamic consumer behaviour: An empirical study of consumer behaviour of Islamic mortgage in Malaysia." *Journal of Islamic Marketing* 5, no. 2 (2014): 273-301. <https://doi.org/10.1108/JIMA-05-2013-0035>
- [5] Amin, Hanudin, Nor Syakina Jam, and Patrick J. Ring. "Examining cash waqf giving decisions in Malaysia." *International Journal of Social Economics* (2025). <https://doi.org/10.1108/IJSE-12-2023-0964>
- [6] Amin, Hanudin. "The Islamic theory of consumer behaviour for ijarah home financing." *Journal of Asia Business Studies* 13, no. 4 (2019): 672-693. <https://doi.org/10.1108/JABS-09-2018-0261>
- [7] Abdul, Syed Muhammad Hilal Azizi Syed, Safura Ahmad Sabri Aziz, and Nur Fikhriah Takril. "Faktor-faktor mempengaruhi sumbangan wakaf tunai di KUIS." In *Proceeding of the 4th International Conference on Management and Muamalah*, pp. 362-372. 2017. <https://doi.org/10.1108/978-1-78769-296-520171>
- [8] Chetioui, Youssef, Harit Satt, Hind Lebdaoui, Maria Baijou, Sara Dassouli, and Sara Katona. "Antecedents of giving charitable donations (Sadaqah) during the COVID-19 pandemic: does Islamic religiosity matter?." *Journal of Islamic Marketing* 14, no. 5 (2023): 1169-1187. <https://doi.org/10.1108/JIMA-09-2021-0296>
- [9] Chourou, Lamia. "Corporate donations and religiosity: Cross-country evidence." *Journal of Behavioral and Experimental Finance* 39 (2023): 100811. <https://doi.org/10.1016/j.jbef.2023.100811>
- [10] de Abreu, Madalena Eça, Raul MS Laureano, Rui Vinhas da Silva, and Pedro Dionísio. "Volunteerism, compassion and religiosity as drivers of donations practices." *International Journal of Nonprofit and Voluntary Sector Marketing* 20, no. 3 (2015): 256-276.
- [11] Eid, Riyad, and Hatem El-Gohary. "The role of Islamic religiosity on the relationship between perceived value and tourist satisfaction." *Tourism management* 46 (2015): 477-488. <https://doi.org/10.1016/j.tourman.2014.07.012>
- [12] Fishbein, Martin, and Icek Ajzen. 1975. *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- [13] Hasbullah, Nurul Adilah, Khairil Faizal Khairi, and Muhammad Ridhwan Ab Aziz. "Intention to contribute in corporate waqf: Applying the Theory of Planned Behaviour." *UMRAN-Journal of Islamic and Civilizational Studies* 3, no. 1 (2016).
- [14] Hassan, Surita Hartini Mat, Ramlan Mustapha, Maziah Mahmud, Siti Norma Aisyah Malkan, and Nurul Hidayah Che Hassan. "The influence of promotion and waqf knowledge toward cash waqf awareness in Pahang region." *International Journal of Academic Research in Business and Social Sciences* 11, no. 4 (2021): 1252-1260.
- [15] Kamil, Mohammed, and Khaliq Ahmad. "Development of a scale for measuring the construct of organizational citizenship behaviour from the Islamic perspective." *Kamil, NM, & Ahmad, K.(2014). Development of a scale for measuring the construct of organizational citizenship behavior from Islamic perspective, Malaysian Management Review* 49, no. 1 (2014): 55-66.
- [16] Khan, M. Fahim. "Macro consumption function in an Islamic framework." In *Contributions to Islamic Economic Theory: A Study in Social Economics*, pp. 140-165. London: Palgrave Macmillan UK, 1986.
- [17] Maulida, Sri, and Agatha Almadina. "Do E-Commerce and E-Wallets Matter for Increasing Marginalized Entrepreneurs' Income?." *International Journal of Zakat* 8, no. 2 (2023): 83-96. <https://doi.org/10.37706/ijaz.v8i2.478>
- [18] Ramayah, T., and Dzuljastri Abdul Razak. "Factors influencing intention to use diminishing partnership home financing." *International Journal of Islamic and Middle Eastern Finance and Management* 1, no. 3 (2008): 235-248. <https://doi.org/10.1108/17538390810912094>
- [19] Zabri, Mohd Zaidi Md, and Mustafa Omar Mohammed. "Examining the behavioral intention to participate in a Cash Waqf-Financial Cooperative-Musharakah Mutanaqisah home financing model." *Managerial Finance* 44, no. 6 (2018): 809-829. <https://doi.org/10.1108/MF-05-2017-0189>

- [20] Mokhtar, Muhammad Yasin Omar, Siti Marhamah Kamarul Arifain, Mohamad Firdaus Mohd Isa, Ahmad Irfan Jailani, and Wan Norhayati Wan Othman. "The concept of altruism and Ihsan as an approach towards achieving psychological well-being at the workplace: An observation at the Islamic university college of Melaka." *International Journal of Academic Research in Business and Social Science*, s 10, no. 10 (2020): 637-48. <https://doi.org/10.6007/IJARBS/v10-i10/7707>
- [21] Mokhtar, Mohammad Zulfakhairi Bin. "Level of Understanding Among Universiti Sains Malaysia (USM) Muslim Staffs About Cash Waqf." *Development (JISED)* 3, no. 8 (2017): 18-26.
- [22] ABOLFATHI MOMTAZ, Yadollah, Tengku Aizan Hamid, Rahimah Ibrahim, Nurizan Yahaya, and Siti Suhailah Abdullah. "Moderating effect of Islamic religiosity on the relationship between chronic medical conditions and psychological well-being among elderly Malays." *Psychogeriatrics* 12, no. 1 (2012): 43-53. <https://doi.org/10.1111/j.1479-8301.2011.00381.x> [tujise.org+10pmc.ncbi.nlm.nih.gov+10emerald.com+10](https://pubmed.ncbi.nlm.nih.gov/21000000/)
- [23] Muflih, Muhammad. "Altruism models in Islamic consumption system." *International Journal of Islamic Business and Economics (IJIBEC)* 1, no. 2 (2017): 63-75. <https://doi.org/10.28918/ijibec.v1i2.995>
- [24] Nordin, Nassar, Syahidawati Shahwan, Norhazlina Ibrahim, and Nurulbahiah Awang. "Using E-Wallet in Collecting and Distributing Zakat in Malaysia." *International Journal of Business and Technology Management* 5, no. 1 (2023): 175-186.
- [25] Osman, Amirul Faiz, Mustafa Omar Mohammed, and Aiman Fadzil. "Factor influencing cash waqf giving behavior: a revised theory of planned behavior." *Journal of Global Business and Social Entrepreneurship* 1, no. 2 (2016): 12-25.
- [26] Osman, Amirul Faiz, Sheila Nu Nu Htay, and Mustafa Omar Muhammad. "Determinants of cash waqf giving in Malaysia: survey of selected works." In *Workshop Antarbangsa Pembangunan Berteraskan Islam V (WAPI-5)*, vol. 10. 2012.
- [27] Haji-Othman, Yusuf, Mohd Sholeh Sheh Yusuff, and Wan Nazjmi Mohamed Fisol. "Developing a Theoretical Framework for Compliance Behavior of Income Zakat." *International Journal of Academic Research in Business and Social Sciences* 11, no. 9 (2021): 1579-1589.
- [28] Haji-Othman, Yusuf, Mohd Sholeh Sheh Yusuff, and Wan Nazjmi Mohamed Fisol. "Developing a Theoretical Framework for Compliance Behavior of Income Zakat." *International Journal of Academic Research in Business and Social Sciences* 11, no. 9 (2021): 1579-1589.
- [29] Pallant, Julie. 2007. *SPSS Survival Manual*. 3rd ed. Maidenhead, UK: McGraw-Hill Education.
- [30] Perbadanan Wakaf Negeri Sembilan. 2019. *Laporan Tahunan*. Negeri Sembilan: Perbadanan Wakaf Negeri Sembilan.
- [31] Allah Pitchay, Anwar, Ahamed Kameel Mydin Meera, and Muhammad Saleem. "Factors influencing the behavioral intentions of muslim employees to contribute to cash-waqf through salary deductions." *Journal of King Abdulaziz University: Islamic Economics* 28, no. 1 (2015).
- [32] Razak, Dzuljastri Abdul, Hanudin Amin, and Aidi Zuhaili Zuhaimi. "Factors influencing intentions on use of cash waqf as an aid in time of Covid-19 in Malaysia." *South East Asia Journal of Contemporary Business, Economics and Law* 24, no. 3 (2021): 1-8.
- [33] Rifin, Mohamad Khairul Izwan, Wan Kamal Mujani, and I. S. Arshad. "Pembangunan wakaf dalam sektor keagamaan, teknologi dan kesihatan di Negeri Sembilan." In *Proceeding of The International Conference on Masjid, Zakat and Waqf*, pp. 41-49. 2014.
- [34] Rizal, Hamid, and Hanudin Amin. "Perceived ihsan, Islamic egalitarianism and Islamic religiosity towards charitable giving of cash waqf." *Journal of Islamic Marketing* 8, no. 4 (2017): 669-685. <https://doi.org/10.1108/JIMA-05-2016-0044>
- [35] Sakti, Muhammad Rizky Prima, Hassanuddin bin Mohd Thas Thaker, Abdul Qoyum, and Ibnu Qizam. "Determinants of cash Waqf contribution in Klang Valley and Selangor: a SEM approach." *Journal of Islamic Monetary Economics and Finance* 2, no. 1 (2016): 111-144. <https://doi.org/10.21098/jimf.v2i1.548>
- [36] M Sayuti, Khadijah, and Hanudin Amin. "Integrating the effects of price fairness and Islamic altruism with the TPB modelThe case of Islamic mortgage adoption." *International Journal of Housing Markets and Analysis* 13, no. 5 (2020): 791-807. <https://doi.org/10.1108/IJHMA-07-2018-0066>
- [37] Sekaran, Uma, and Roger Bougie. *Research methods for business: A skill building approach*. John Wiley & Sons, 2016.
- [38] Sharma, Subhash, Richard M. Durand, and Oded Gur-Arie. "Identification and analysis of moderator variables." *Journal of marketing research* 18, no. 3 (1981): 291-300. <https://doi.org/10.2307/3150876>
- [39] Suzuki, Yasushi, and Mohammad Dulal Miah. "Altruism, reciprocity and Islamic equity finance." *International Journal of Islamic and Middle Eastern Finance and Management* 9, no. 2 (2016): 205-221. <https://doi.org/10.1108/IJIMEFM-07-2014-0066>

- [40] Trivers, Robert L. "The evolution of reciprocal altruism." *The Quarterly review of biology* 46, no. 1 (1971): 35-57.
<https://doi.org/10.1086/406755>
- [41] Yusoff, Ruslaina, S. A. A. Rahman, and Wan Nazihah Wan Mohamed. "Factors influencing the intention to perform cash waqf among Muslim staff at Universiti Teknologi MARA, Kelantan Campus." In *International Conference on Islam and Global Issues. Universiti Teknologi Mara Cawangan Kelantan, Bukit Ilmu, Machang Kelantan*. 2018.
- [42] Zulkiflee, Nadiyah, Hairunnizam Wahid, and Sanep Ahmad. "Kesedaran terhadap wakaf tunai: Kajian di besut, Terengganu." In *Proceeding Seminar Fiqh Semasa (SeFis)*, vol. 2, no. 2011, pp. 1-9. Negeri Sembilan: Universiti Sains Islam Malaysia, 2015.