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Mobile Banking Adoption among Asnaf for Efficiency in Zakat Management: Extended UTAUT2

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Abstract

The usage of financial technology has developed considerably in recent years. Its worldwide use in the financial sector is notable. Such as social finance, which includes *zakat* institutions. As a result, this study aims to examine factors that could influence *asnaf* in Selangor, Malaysia, using mobile banking for efficient *zakat* distribution. The Unified Theory of Acceptance and Usage of Technology (UTAUT) was employed and extended with additional components. The primary analysis used the SEM approach for principal analysis. It was found that religiosity, intention, facilitating conditions, and habit impact the use of mobile banking for *zakat* distribution.

Keywords: Fintech; Mobile Banking, Zakat Management, UTAUT, Asnaf, Malaysia

1.0 Introduction

As Muslims, we should understand that *zakat* is a fundamental principle. In Arabic, *zakat* implies purification and nurturing (Mannan, 1986). According to Shariah requirements, this property is given or paid to the *asnaf* who are entitled to it (Lembaga Zakat Selangor, 2020). Many aspects of Islam depend on *Zakat*. Morally, *zakat* will help purify the wealthy's greed. In the social component, *zakat* aids the poor. *Zakat* will help prevent wealth concentration (Abu Bakar & Abd Ghani, 2011; Hairunnizam Wahid, 2014; Saad & Foori, 2020). The global trend towards digitalization and technological innovation has impacted *zakat*. The term fintech (financial technology) has gained prominence due to its utility. "Our government would want to accelerate digitization since it would assist speed up the process for citizens and improve the efficiency of government and public sector services," said former Malaysia's Minister of Science, Technology and Innovation YB Khairy Jamaluddin (Berita Harian, 23 June 2020). However, some people would evaluate certain factors before using any financial technology in their daily life. The *asnaf* will evaluate some factors before adopting new technology, especially during pandemics like covid19. *Asnaf*'s also aid financial inclusion. The efficient dissemination of technology may help a country's poverty rate drop, boosting financial inclusion and economic growth.

1.1 Problem Statement

Azman et al. (2012) pointed out three problems: inefficient zakat distribution, keeping track of people who might pay zakat, and improving the *asnaf* system. This study looks at how well it works, especially the channels and methods of distribution that have attracted Muslims, especially zakat payers (Hafizah et al., 2016). Even though the amount of zakat collected has gone up, the distribution problem needs to be monitored and made better for the sake of the ummah (Ahmad et al., 2005; Lubis et al., 2011; Wahid et al., 2009). Most people who give zakat worry about where, how, and when their money is spent on the ummah, especially on *asnaf*. The ways to collect things change quickly. Still, the technology for giving out zakat isn't as good as the technology for collecting it. According to the study, mobile banking is best for the *asnaf*. Its adaptability, ease of use, and ability to save money could help Malaysian zakat institutions fix their inefficient and ineffective systems. Introducing mobile banking as a new way to give out zakat has both practical and financial benefits. Mobile banking increases the number of people with access to financial services (Atul Srivastava, 2013; Hinson, 2011; Klein & Mayer, 2011; Mago, 2014), which also helps the *asnaf* and the economy of the country as a whole. From a body of knowledge point of view, the relationship between religiosity and mobile banking adoption has not been studied much in the past, even though both are important (Allah Pitchay et al., 2020; Sun, Goh, Fam, Xue, et al., 2012; Thye Goh et al., 2014; Yahaya & Ahmad, 2018; Yahaya & Khaliq, 2019). In Malaysia, people buy things from many different cultures, races, and religions. So, each person follows their own set of beliefs. Some people's decisions about whether or not to use a product or service may be influenced by their religion (Thaker et al., 2019; Thaker et al., 2021; Shah Alam et al., 2011). For example, a Muslim must make sure that a product or service does not contain anything that goes against their religion before they can use it. However, this depends on how religious they are. A very religious Muslim will always follow the shariah rule, no matter how beneficial it is.

Adding mobile banking to how zakat is given out would also help figure out what will be considered necessary for *asnaf* when they have to use financial technology daily. Bank Negara Malaysia says that fewer people use mobile banking and that it has a lower penetration rate (BNM, 2019). So, when pandemics like this, it is essential to know what makes *asnaf* use mobile banking to give out zakat. Several gaps have been identified based on the previous studies' results. These include: (1) issues in the method of distributing the zakat which could be further enhanced by mobile banking; (2) there is a usage gap between internet banking and mobile banking; (3) *asnaf* still lacks awareness on what mobile banking could benefit them, (4) consumer (*asnaf*) have privacy and security concern on mobile banking or in most straightforward meaning they have trust deficit issues with mobile banking; (5) very few studies that examine the relationship between religiosity and mobile banking adoption despite its importance, especially in a country such as Malaysia that consists of various culture, religion and different lifestyle. So, this study aims to look at what could make *asnaf* more likely to use mobile banking for effective zakat distribution. This study utilizes the Unified Theory of Acceptance and Use of Technology (UTAUT2), as well as religion, attitude, and trust.

1.2 Objective
The main objective of this study is to identify and examine the significant factors that could impact the recipients of *zakat* (*asnaf*) behavioural pattern to adopt mobile banking for efficient and effective *zakat* distribution.

2.0 Literature Review

2.1 *Zakat*: Overview
The Lembaga Zakat Selangor (LZS) defines *zakat* as 'spending some particular property to be provided or paid to the *asnaf* as they are entitled to receive it' (Lembaga *Zakat* Selangor, 2020). In Malaysia, each state has its own Zakat Institution. Each state has its distinct *zakat* laws. In Selangor, the Sultan of Selangor is the top authority, followed by the State Islamic Religious Council (SIRC) of Majlis Agama Islam Selangor (MAIS). Except for Selangor, Wilayah Persekutuan, Kuala Lumpur, Pahang Pulau Pinang, Melaka and Negeri Sembilan, which privatised their *zakat* institutions for administrative reasons (Ahmad et al., 2006). This privatization guarantees that the *zakat* administration can provide excellent service and maximize customer happiness using the newest technologies while adhering to Islamic principles. Modern technology has enhanced *the zakat* collection.

Muslims may pay their *zakat* in different ways. To pay *zakat*, Lembaga *Zakat* Selangor (LZS) has offered many options (Lembaga Zakat Selangor 2020). Among the channels to pay zakat are e-*Zakat* pay, Internet Banking, Post Office, Bank Counter, Credit Card, Skim Berkat, SMS (only for BIMB account holders), Phone Banking, ATM Machine, and *Zakat* Selangor Agent. As previously said, although *zakat* collection has increased year on year, the problem of *zakat* distribution has to be addressed and improved for the benefit of the *asnaf* (Lubis et al., 2011). The Muslim community, particularly *zakat* payers, is concerned about distribution channels and methods (Hafizah et al., 2016).

2.2 *Asnaf*: Definition and Categorization
The Holy Quran categories *asnaf* into eight categories in Surah At-Taubah verse 60:

> "Alms are for the poor and the needy, and those employed to administer *zakat* (amil), for those whose hearts have been reconciled to the Truth, for those in bondage and debt, in the cause of Allah and for the wayfarer" (9:60)

Thus, from the above verse *asnaf* can be categorized into 8 types which are (1) *Masakin* (poor), (2) *Al-Fuqara* (needy) (3) *Al-gharimun* (people in debt), (4) *Ibn sabil* (traveler/wayfarer), (5) *Al-riqab* (slave), (6) *Muallaf* (convert/reconciled to Islam), (7) *Fi-sabilillah* (doing something for Islam's cause) and (8) *Amil* (has the right to collect zakat). Lembaga Zakat Selangor (2022), further elaborates the definition of the eight categories of *asnaf*, as seen in the table 1 below:

Table 1. Definition of *Asnaf*

Categories	Definition
Asnaf Fakir	Asnaf Fakir is a Muslim who has no property or income or property or income but does not reach 50 percent of the kifayah limit for himself and his dependents.
Asnaf Miskin	A poor Asnaf is a Muslim with property or income that can only cover more than 50 percent of his needs and dependents but still does not meet the kifayah limit.
Asnaf Amil	Amil is the party appointed by the Selangor Islamic Religious Council (MAIS) to represent His Majesty the Sultan to carry out zakat management tasks, including collection and distribution.
Asnaf Muallaf	A convert is someone who has just embraced Islam or whose heart has been tamed among those who have not yet embraced Islam, who needs to be drawn to Islam, or who needs to be protected for their crimes against Muslims.
Asnaf Riqab	Riqab is a person who is shackled under power or situation that is an obstacle for him to live a better life.
Asnaf Fisabilillah	Fisabilillah is a struggle, effort and activity aimed at upholding and defending the religion of God.
Asnaf Gharimin	Gharimin is a Muslim who is in debt to meet the basic needs of himself and his dependents or the interests of society and cannot pay. Muslims who are in debt to meet basic needs for their personal or dependent family problems or people who are in debt to solve community problems and needs: ● The debtor is unable to pay his debt. ● The debt must be in the matter of obedience required by Shariah. ● The debt is overdue.
Asnaf Ibnu Sabil	Ibnu Sabil is a Muslim who runs out of money when starting a journey or on a journey that brings benefits and is per Sharia law with the following conditions: ● Cut off the supply on the way. ● He is unable to use his wealth to continue the journey. ● Need basic convenience in travel problems. ● Left on the way (during traveling).

Source: Lembaga Zakat Selangor (2022). Terdapat 8 Asnaf Zakat. https://www.zakatselangor.com.my/agihan-zakat/penerima-kriteria-penerimaan-zakat/

2.3 Fintech

Financial professionals increasingly use the word Fintech, or financial technology. No one can agree on what the word Fintech implies (Schueffel, 2016). Thus, table 1 below illustrates different academics' perspectives on the word 'fintech.'

Table 2. Definition of Fintech

Author	Definition
Bettinger (1972) pg.62	"FINTECH is an acronym which stands for financial technology, combined bank expertise with modern management science technique and the computer."
Micu & Micu (2016) pg. 380	"Financial Technology, also known as Fintech, is a new sector in the finance industry that incorporates the plethora of technology used in finance to facilitate trades, corporate business or interaction, and services provided to the retail consumer."
Shim & Shin (2016) pg. 170	"Fintech is an emerging financial services sector that includes third-party payment, MMF, insurance products, risk management, authentication, and peer-to-peer (P2P) lending."
Maier (2016) pg. 143	"Driven by technological advances, a new service model has developed in the financial industry, offering customers additional opportunities. Under the common denominator Fintech, these new businesses aim to challenge existing financial institutions by using technology to deliver value to the customer in an alternative way".
Kim et al., (2016) p. 1058	"Fintech is a service sector that uses mobile-centered IT technology to enhance the efficiency of the financial system. It is a compound of 'finance' and 'technology' and collectively refers to industrial changes forged from the convergence of financial services and IT".

Source: Schueffel, P. (2016). Taming the Beast: A Scientific Definition of Fintech. Journal of Innovation Management JIM, 4(4), 32–54

As seen in Table 1, each researcher has their definition of Fintech. They all have three things in common: (1) financial sector involvement, (2) new technology or innovation, and (3) improving or enabling financial operations in general. In Malaysia, Bank Negara Malaysia (BNM) launched its Regulatory Sandbox in July 2016 to promote Fintech. BNM defines Fintech as "technological innovation

applied to financial services" in the report. So, the research will use Bank Negara Malaysia's definition of Fintech. Thus, mobile banking is considered Fintech in this research.

2.4 Mobile Banking
Amin et al. (2006) describe SMS banking as a banking transaction through mobile phones in Malaysia (Short Message Service). Amin et al. (2007) describe mobile banking as checking balances, recent transactions, and credit card transactions through mobile phones. It includes financial activities (such as checking account balances, paying bills, etc.) done through mobile phones or other devices with similar functionality (Thye Goh et al., 2014). Valentine (2011) claims that mobile banking services may be delivered through SMS, online, or mobile apps. For example, Maybank offers Maybank2u, CIMB Click, and Bank Islam offers Bank Islam i-info and TAP Mobile-banking-i. All financial service improvements have benefited consumers by lowering prices and saving time. So, in this research, mobile banking is defined as any financial transaction done through a mobile phone via various fintech channels (SMS-based, web-based, and mobile Apps). Previous research (Amin et al., 2006, 2007, 2012; Amin & Ramayah, 2010; Cheah et al., 2011; Masrek et al., 2014; Tan & Lau, 2016a; Teo et al., 2012) has shown that ease of use, performance expectation, and functional characteristics are significant variables in acceptability and adoption of mobile banking. For example, while using a bank's mobile banking app, one expects the app to offer different services such as money transfer, top-up, bill payment, credit card, etc., wherever and whenever. These characteristics will influence individuals' use of a specific technological innovation. However, confidence, security, and interface design are critical to using a new technology (Shuhidan et al., 2017; Tham et al., 2017; Vaithilingam et al., 2013). Another crucial financial activity is when a client wants to know whether the bank's technology and services are dependable. Customers are usually concerned about (1) previous hacking cases, (2) security features, and (3) compensation in the event of a breach. Interestingly, the younger generations are more concerned about these issues than the older generations.

2.5 Unified Theory of Acceptance and Usage of Technology (UTAUT2)
Venkatesh, Morris, Davis, and Davis established the Unified Theory of Acceptance and Use of Technology (UTAUT) in 2003 (Venkatesh et al., 2003). According to Venkatesh et al. (2003), an individual's use behaviour can be anticipated by intention, which has four determinants: (1) performance expectancy; (2) effort expectancy; (3) social impact; and (4) facilitating conditions.
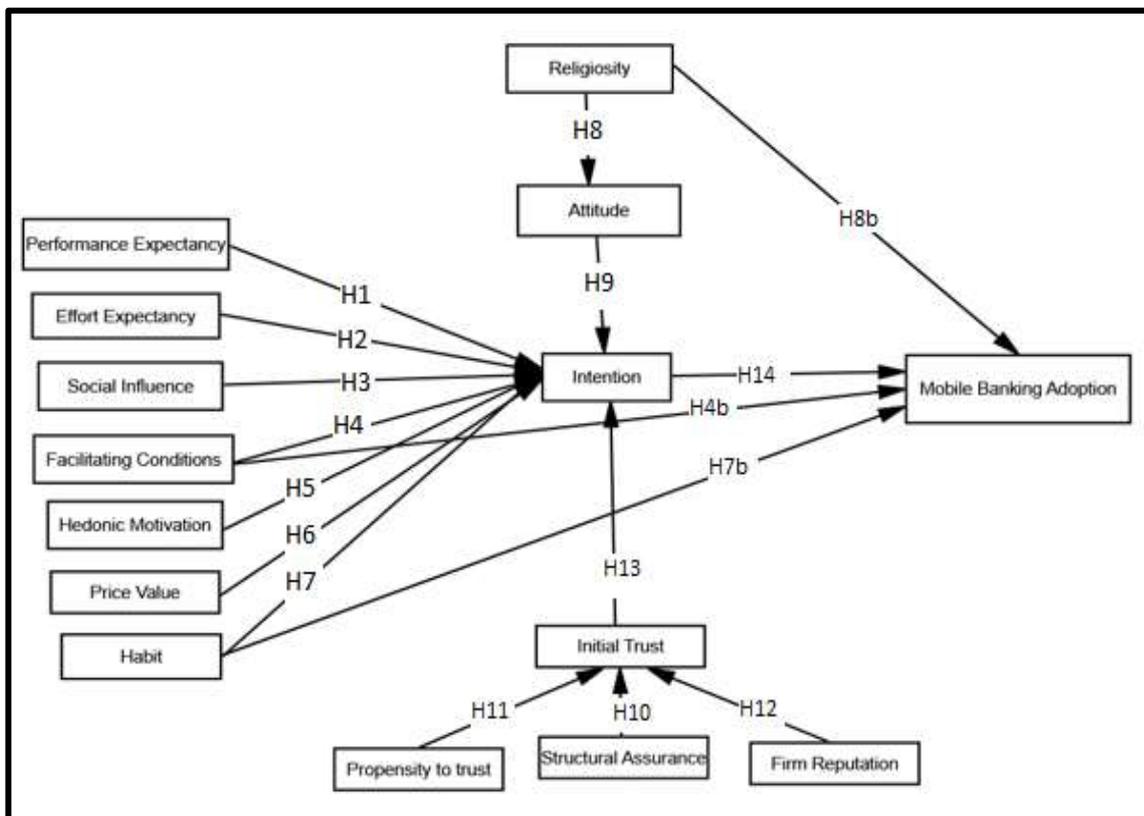
Fig. 1: Conceptual Model
Source: Author's own and adapted from other sources

Furthermore, there are four moderating constructs: gender, age, experience, and voluntariness of use. Later on, there are seven determinants of intention in UTAUT2 (expanded UTAUT): (1) performance expectancy; (2) effort expectancy; (3) social influence; (4) enabling conditions; (5) hedonic incentive; (6) pricing value; and (7) habit (Venkatesh et al., 2012). Compared to the first UTAUT by Venkatesh et al. (2003), there are three different determinants: hedonic motivation, price value, and habit. Aside from that, consider the relationship between constructs. Facilitating conditions were proposed by UTAUT (2003) as a factor that could influence the application of

technology. While in UTAUT2 (2012), facilitating conditions are proposed to influence behavioural intention and technology use. Habit follows the same pattern as facilitating conditions for the relationship between constructs. According to UTAUT (2003), four moderating characteristics exist (1) age, (2) gender, (3) experience, and (4) voluntariness of use. However, in UTAUT2 (2012), the model does not account for voluntariness of use. As a result, the model contains only three moderating constructs: (1) age, (2) gender, and (3) experience.

Therefore, the study's discussion on the problem statement section and literature analysis identified several gaps that need to be addressed to understand *asnaf* adoption of mobile banking in Malaysia. Initial trust, hedonic drive, emotional values, habit, and word of mouth were determined to represent extra values for the Malaysian setting. Despite their significance, few studies have examined how religion or religiosity influences mobile banking usage (Sun, Goh, Fam, & Xue, 2012; Thye Goh et al., 2014). The Technology Acceptance Model (TAM), extended TAM, and Diffusion of Innovation (DOI) was often used in Malaysian research (Amin et al., 2006, 2007, 2008, 2012; Amin & Ramayah, 2010; Cheah et al., 2011; Daud et al., 2011; Shanmugam et al., 2014; Shuhidan et al., 2017; Tham et al., 2017). Despite its compactness, the UTAUT and UTAUT2 were seldom utilized (Abbas et al., 2018; Afshan & Sharif, 2015; Alalwan et al., 2017; Baptista & Oliveira, 2015; Liang, 2016; Mahfuz et al., 2016). Thus, this study intends to include three new constructs into the UTAUT2: religion, attitude, and initial trust (Initial Trust Model) while excluding all the moderating constructs (age, gender, and experience). Even though mobile banking is still in its infancy in Malaysia, this study would be an excellent opportunity to evaluate the effect of religiosity on the use of mobile banking for efficient *zakat* distribution. Regarding *zakat* distribution, mobile banking may be an improved alternative channel or technique that could assist *asnaf*s in Malaysia in distributing *zakat* more efficiently. Based on all the literature, the conceptual model used for the primary analysis in this study can be seen in figure 1 below.

2.5.1 Hypotheses
Thus, based on the conceptual model that can be seen in fig. 1, the hypotheses were established are as follows:

Table 3. List of Hypotheses

Hypotheses	Supporting literatures
H1: Performance expectancy (PE) will have a positive and significant impact on behavioral intention (INT)	Performance expectancy is "the degree to which an individual feels using the system will help him or her achieve work performance gains" (Venkatesh et al., 2003). Amin et al. (2007) found that perceived usefulness (performance expectation) is critical in Labuan and Kota Kinabalu mobile banking utilisation. Mobile banking can be used to disburse zakat among the asnaf in the study. Asnaf will embrace mobile banking for zakat distribution if it streamlines and improves the process. According to previous research, performance expectancy is a crucial predictor of behavioural intention (Alalwan et al., 2017; Merhi et al., 2019; Oliveira et al., 2014; Tan & Lau, 2016b; Venkatesh et al., 2012).
H2: Effort expectancy (EE) will have a positive and significant impact on behavioral intention (INT)	The ease associated with using the system is characterized as effort expectancy (Venkatesh et al., 2003). For example, specific customers are more fluent in utilising mobile phones; thus they will find it easier to use mobile banking services (Farah et al., 2018; Koenig-Lewis et al., 2010; Thaker, et al., 2021).
H3: Social influence (SI) will have a positive and significant impact on behavioral intention (INT)	The term "social influence" refers to "the extent to which an individual believes that significant others believe he or she should adopt the new system" (Venkatesh et al., 2003). For example, an individual's use of mobile banking may be influenced by his or her surroundings. Amin et al. (2008) discovered that an individual's behavioural intention to utilise mobile banking is influenced by their immediate surroundings, such as friends and family. Previous studies in a similar context also found that social influence significantly affects intention (Akhtar et al., 2019; Khuong et al., 2022; Mahfuz et al., 2016).
H4: Facilitating conditions (FC) will have a positive and significant impact on behavioral intention (INT) H4b: Facilitating conditions (FC) will have a positive and significant impact mobile banking adoption (USE)	"The degree to which an individual feels that an organisational and technological infrastructure exists to enable system use is characterised as facilitating conditions" (Venkatesh et al., 2003). For example, for beginners to utilise mobile banking services, they will need skills such as using a smartphone, tablet, or other devices with equal functionality, installing apps, and understanding how it works. As a result, if a demo or instruction on how to use the service is offered, the individual will be more likely to utilise or directly use the mobile banking services (Baabdullah et al., 2019; Thaker, et al., 2021; Venkatesh et al., 2012).
H5: Hedonic motivation will have a positive and significant impact on the behavioral intention (INT)	The fun or pleasure of employing a technology is defined as hedonic motivation (Venkatesh et al., 2012). If using mobile banking services may bring the user joy or pleasure, they will be more likely to utilise it. Zhang et al. (2012) discovered that the bigger the fun, the greater the consumer's intention.
H6: Price value (PV) will have a positive and significant impact on the behavioral intention (INT)	Price value is the cognitive trade-off made by consumers between the perceived benefits of using mobile banking services and the monetary cost of doing so (Venkatesh et al., 2012). For example, data service costs and transaction fees are exclusively borne by the consumer. As a result, the trade-off advantage must be more prominent in terms of service rather than price (Anouze & Alamro, 2020; Merhi et al., 2019). As a result, there will be a more significant desire to use mobile banking services.

H7: Habit will positively and significantly impact behavioral intention (INT).	The term "habit" refers to the many outcomes of previous experiences (Venkatesh et al., 2012). Furthermore, the frequency of past conduct is regarded as one of the primary predictors of present behaviour (Icek Ajzen, 2002). Furthermore, recent research has demonstrated habit as a strong predictor of behavioural intention (Baabdullah et al., 2019; Baptista & Oliveira, 2015; Farah et al., 2018).
H7b: Habit will have a positive and significant impact on mobile banking adoption (USE)	
H8: Religiosity will positively and significantly impact behavioral intention (INT).	Johnson et al. (2001) define religiosity as "affection for or against some object," in line with Fishbein and Ajzen (1975:11). They say beliefs are knowledge about a thing. A person's beliefs may be directly or indirectly influenced by his or her religion (through sacred books) (because of the culture of the individual, which is impacted by religion). Religion and attitude are significantly connected. Foxall and Goldsmith (1994) agree that religion builds the knowledge base that justifies and governs an individual's views and conduct. Weaver and Agle (2002) concur that religious identity affects behaviour and attitude. In mobile banking, Muslims should ensure that the product or service is Shariah-compliant (Shah Alam et al., 2011; Sharma et al., 2017; Yousaf & Malik, 2013).
H8b: Religiosity will have a positive and significant impact on mobile banking adoption (USE)	
H9: Attitude will have a positive and significant impact on the behavioral intention (INT)	Attitude is "affect for or against something" (Fishbein & Ajzen, 1975 p. 11). Fishbein & Ajzen (1975), postulated that attitude might predict consumer behavioural intention with Theory of Reasoned Action, which eventually became Theory of Planned Behaviour. Attitude is "affect for or against something" (Fishbein & Ajzen, 1975, p. 11). Consumer behaviour literature has studied m-banking attitudes. Attitude predicts and explains consumer intention and behaviour (Ajzen, 2002). Recent research also shows that attitude affects mobile banking adoption (Akturan & Tezcan, 2012; Al Khasawneh, 2015).
H10: Structural assurance (SA) will have a positive and significant impact on initial trust (IT)	Social and business ties require trust. With e-commerce, more studies are being done on trust's conceptual structure and formation procedures (Ba & Pavlou, 2002; Gefen et al., 2003; Pavlou & Gefen, 2004). In the era of digitization, play a key role in encouraging consumer tech adoption. Mobile banking is a fresh, creative service with no precedent. Based on observable and possibly irrational influences like cognitive cues, initial trust is predicted to play a big role in mobile banking adoption (Gu et al., 2009; Shah et al., 2019; Susanto et al., 2016; Wang et al., 2019). Legal norms, regulations, policies, agreements, contracts, and others (with equal elements) affect early trust between parties (Mcknight et al., 2004; Pavlou & Gefen, 2004). Mobile banking is fast and safe, so consumers feel confident using it. So, they do not have to worry if their account is hacked or personal information is stolen.
H11: Propensity to trust (PT) will have a positive and significant impact on initial trust (IT)	Trust propensity describes a person's tendency to trust others (McKnight et al., 1998). It also indicates "the amount to which one is willing to rely on others across a wide range of situations and people" (Mcknight & Chervany, 2002, p.45). Dependence is a person's nature. Trusting users are more likely to use mobile banking (Hansen et al., 2018; Kumar et al., 2017).
H12: Firm reputation (FR) will positively and significantly impact initial trust (IT).	Without experience, it is hard to judge a service's quality. Referrals and word-of-mouth can influence perception without experience, especially when the service is complex or hard to grasp (Granovetter, 1973). With a high reputation, people will trust the firm's ability and honesty, even without experience (Kim et al., 2009; Kim & Prabhakar, 2004; Susanto et al., 2016). Malaysians have varied races, backgrounds, and perspectives. Mobile banking for zakat distribution will be from the Muslim standpoint. Some Muslims love Islamic banks and others do not.
H13: Initial trust (IT) will positively and significantly impact behavioural intention (INT).	In the framework of the mechanism of zakat distribution to asnaf, mobile banking is regarded as innovative. Kim et al. (2009) demonstrated that early trust plays a crucial influence in determining a consumer's desire to adopt a new technology innovation like mobile banking.
H14: Behavioural intention (INT) will have a positive and significant impact on mobile banking adoption (USE)	Consistent with all models based on psychological theories, which assert that individual behaviour is predictable and influenced by individual intention (Allah Pitchay et al., 2020; Khuong et al., 2022; Thaker et al., 2021; Rahi & Abd. Ghani, 2019; Yu, 2012), the Unified Theory of Acceptance and Usage of Technology (UTAUT) and the UTAUT2 support the notion that behavioural intention has a substantial impact on technology use (Venkatesh et al., 2003, 2012).

3.0 Methodology

3.1 Sampling technique and data collection

There are two types of sampling: non-probability and probability sampling techniques (Neuman, 2014). However, non-probability sampling techniques will not be adopted since creating a sample to represent a population is not recommended because the conclusion drawn from the sample cannot confidently be generalized to the population. In this study, a simple random sampling technique will be adopted where all cases have an equal probability of being selected using a purely random process (random-number table or computer program) and are the most likely to truly represent the entire population of *asnaf*.

This study looks into the factors that influence *asnaf*s' use of mobile banking for effective *zakat* distribution. In other words, this research aims to determine what variables are essential to *asnaf*s when implementing mobile banking for effective *zakat* distribution. This research will develop a model that Malaysian *Zakat* institutions and practitioners may utilize. The *asnaf*s of five mosques and five districts, namely Kuala Selangor, Hulu Selangor, Klang, Petaling, and Gombak, received 580 questionnaires. The survey was distributed during the Ihya Ramahan Program (at different locations) as the Zakat Officers suggested. This is because attending the program will make it easier to

collect the data instead of personally giving out the survey at the counter of every zakat institution branch. Of the 580 respondents, only 470 samples were proceeded for the primary analysis after the data screening process.

3.2 Research Instrument
Primary sources were utilized in most previous empirical research on consumer technology adoption (Alalwan et al., 2017; Baptista & Oliveira, 2016; Venkatesh et al., 2003, 2012). So, to gather data on *asnafs*' intention to utilize mobile banking, questionnaires will be employed. Table 4 below displays the total items of the constructs that were changed and adjusted to fit the study's setting.

Table 4. List of Constructs

No	Constructs	Adapted and modified from
1	Performance Expectancy	Venkatesh et al. (2003, 2012)
2	Effort Expectancy	Venkatesh et al. (2003, 2012)
3	Social Impact	Venkatesh et al. (2003, 2012)
4	Facilitating Condition	Venkatesh et al. (2003, 2012)
5	Hedonic Motivation	Venkatesh et al. (2012)
6	Price Value	Venkatesh et al. (2012)
7	Habit	Venkatesh et al. (2012)
8	Structural Assurance	Kim et al. (2009)
9	Propensity to Trust	Kim et al. (2009)
10	Firm reputation	Kim et al. (2009)
11	Initial Trust	Kim et al. (2009)
12	Religiosity	Worthington et al. (2003), as cited by (Mokhlis 2009)
13	Attitude	Lee (2009) as cited by (Akturan & Tezcan, 2012)
14	Behavioral Intention	Venkatesh et al. (2012)
15	Use Behaviour	Zhou et al. (2010)
	Total: 52 items	

3.3 Method of Analysis
This study will use two statistical tools. They are SPSS and SEM-AMOS. Each tool will perform a test. For the SPSS, descriptive and reliability tests were conducted for the primary analysis. The SEM-AMOS has two major stages: (1) Measurement Model and (2) Structural Model. Three components were evaluated during the Confirmatory Factor Analysis (CFA) procedure. (1) unidimensionality, (2) validity, and (3) dependability. Then the model's items were evaluated to see whether the data distribution was normal. Finally, the Structural Model used Multi-Regression Analysis to examine the relationships between the constructs**.**

4.0 Findings

4.1 Respondent Demographics and Reliability Test

Table 5. Respondent Demographics and Reliability Test

Demographic Constructs	Options	Sample size (n=470)	
		Number of Respondents	Percentage (%)
Gender	Male	194	41.3
	Female	276	58.7

Age	21 – 30 years old	43	9.1
	31 – 40 years old	31	6.6
	41 – 50 years old	213	45.4
	51 years old and above	183	38.9
District of Collection	Kuala Selangor (Puncak Alam Mosque)	152	32.3
	Kuala Selangor (Al-Hidayah Mosque)	36	7.7
	Hulu Selangor (Ar-Rahman Mosque)	29	6.2
	Petaling (Shah Alam Mosque)	219	46.6
	Klang (Al-Falah Mosque, Jalan Kebun)	7	1.5
	Gombak (IIUM Mosque)	27	5.7
Mobile Phone	Yes	470	100
Mobile Banking usage	Yes	309	65.7
	No	161	34.3

Cronbach's Alpha	N of Items	N of sample size	Study
.922	52	40	Pilot
.959	52	470	Main

As shown in table 5, there are far more female responses than males. A potential interpretation derived from the *asnaf* discussion is that the husband refuses to deal with the laborious process, compelling the wife to resolve the issue, or the *asnaf* is a divorcee. They are mostly aged 41-50 (45.8%), followed by 51+ (38.9%). Next, 15.7 percent of respondents are between the ages of 21 and 40. Accordingly, the higher number of older *asnaf* than younger *asnaf* is that most people applying for *zakat* seem to be older people facing financial difficulties, utility assistance, etc.) and are forced to seek financial assistance well non-assistance from *Zakat* Institutions.

The younger generation uses *zakat* for education, sustenance, and financial aid for housing and everyday needs. Moreover, half of *asnaf* (65.7%) agree to utilize mobile banking, while 33.3% reject it. Men use technology (computers and mobile internet) more than women, as stated by Venkatesh et al (2003; 2012). Also, most adopters are significantly younger since they are more acquainted with digital devices and technology (Alalwan et al., 2015). As demonstrated in table 5, the overall item of the questionnaire for both the pilot and the entire research is trustworthy. A high degree of consistency is shown by the Cronbach's Alpha values of 0.922 and 0.959 in the pilot and primary studies table, respectively (Deb & Lomo-David, 2014; Field, 2013; Pallant, 2016).

4.2 Measurement Model
The measuring model of latent constructs must satisfy three kinds of validity: construct, convergent, and discriminant (Awang, 2014; Awang et al., 2015; Mohamad et al., 2018; Yusof et al., 2017). Construct Validity is evaluated using the Measurement Model's Fitness Indexes, followed by Convergent Validity using the Average Variance Extracted (AVE) and Discriminant Validity using the Discriminant Validity Index Summary. This process is termed Confirmatory Factor Analysis (CFA), seen in figure 2 above. The measurement model has undergone all the validity and the essential thing, which is the fitness indexes, where all the components (RMSEA=0.069, CFI=0.886, Chisq/Df=2.341) have achieved the required level of acceptance as suggested by Hair et al (2014).
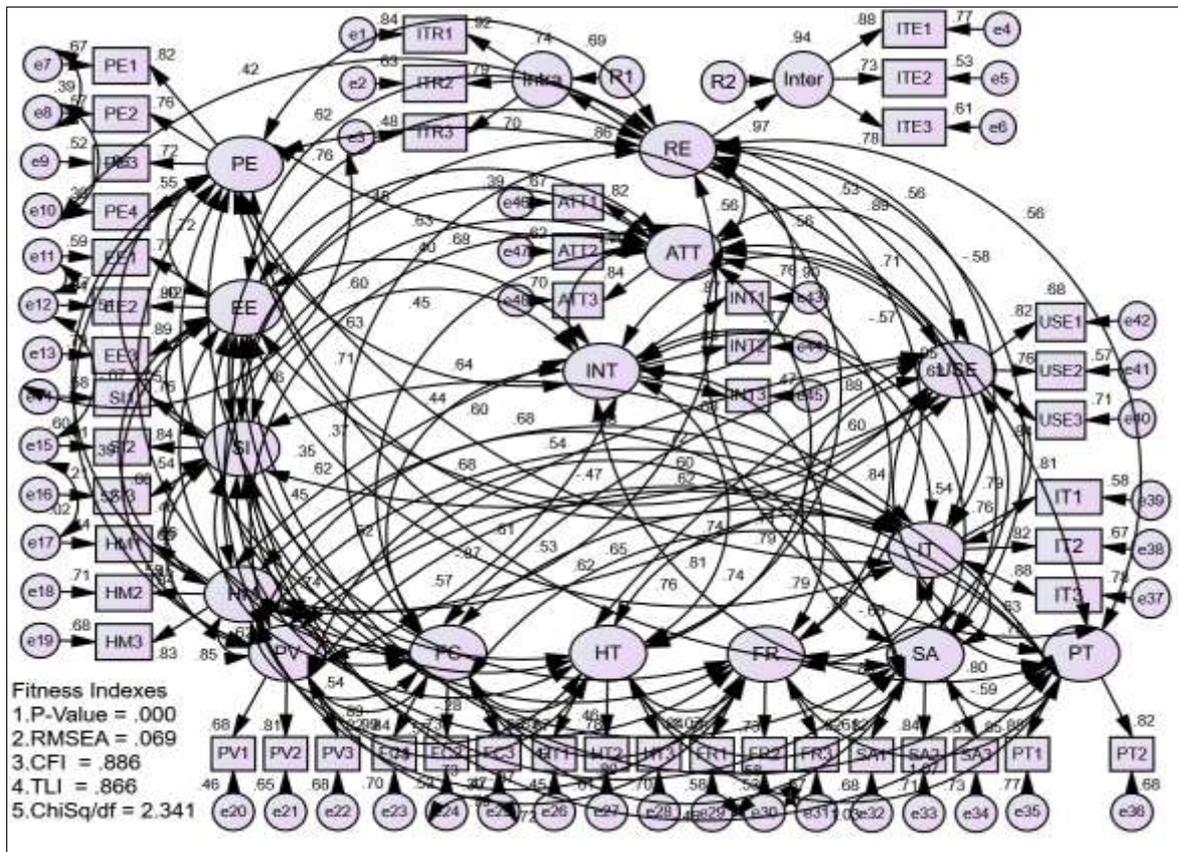
Fig 2. Measurement Model
Source: Author's own and research based on empirical data
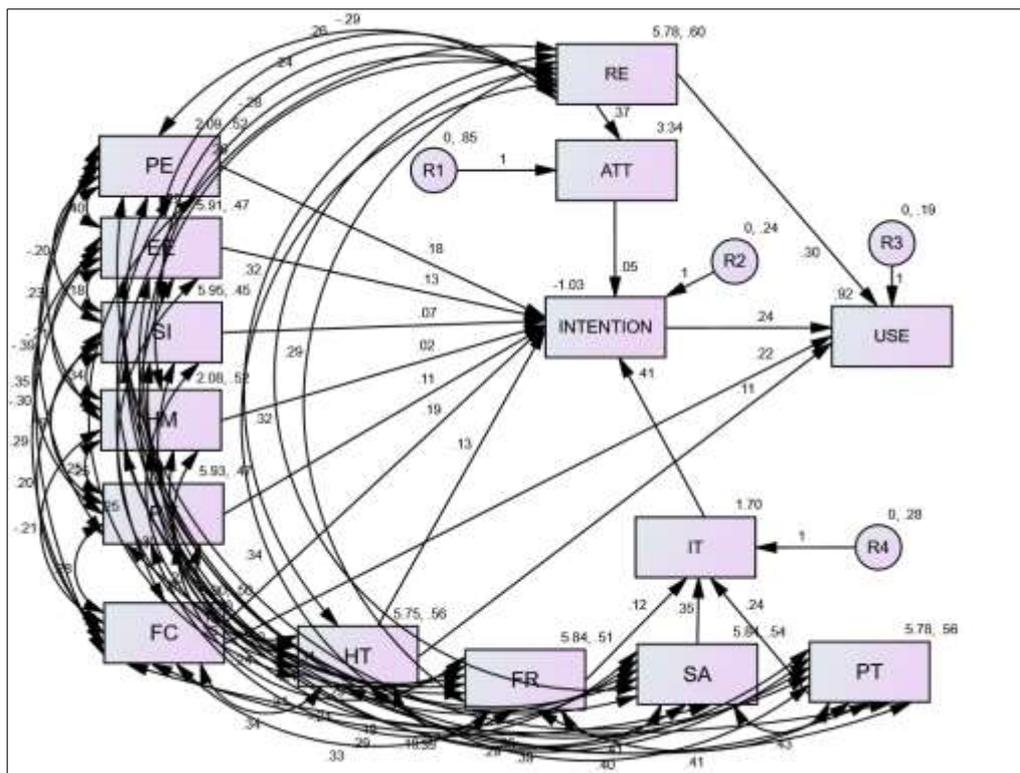
4.3 Structural Model

Fig. 3 Structural Model – Regression Path
Source: Author's own and research based on empirical data analysis

Endogenous Construct		Exogenous Construct	Estimate	S.E.	C.R.	P-value	Results	Hypotheses
IT	<---	FR	.121	.066	1.832	.067	Not Significant	H12
IT	<---	SA	.349	.064	5.446	***	Significant	H10
IT	<---	PT	.239	.061	3.895	***	Significant	H11
ATT	<---	RE	.372	.059	6.317	***	Significant	H8
INTENTION	<---	PE	.184	.065	2.815	.005	Significant	H1
INTENTION	<---	EE	.129	.064	2.022	.043	Significant	H2
INTENTION	<---	SI	.073	.052	1.424	.154	Not significant	H3
INTENTION	<---	HM	.016	.051	.302	.763	Not significant	H5
INTENTION	<---	PV	.114	.064	1.776	.076	Not significant	H6
INTENTION	<---	FC	.190	.051	3.726	***	Significant	H4
INTENTION	<---	HT	.127	.046	2.730	.006	Significant	H7
INTENTION	<---	ATT	.049	.026	1.896	.058	Not significant	H9
INTENTION	<---	IT	.410	.041	9.885	***	Significant	H13
USE	<---	FC	.220	.042	5.196	***	Significant	H4b
USE	<---	HT	.107	.040	2.649	.008	Significant	H7b
USE	<---	RE	.298	.035	8.622	***	Significant	H8b
USE	<---	INTENTION	.240	.038	6.292	***	Significant	H14

Fig. 4 Regression Path Coefficient
(Source: Author's own)

Note: Three asterisk symbols (***) indicate a highly significant at < 0.001, IT = Initial Trust, FR= Firm Reputation, SA= Structural Assurance, PT= Propensity to Trust, ATT= Attitude, RE= Religiosity, INT= Intention, PE= Performance Expectancy, EE= Effort Expectancy, SI= Social Influence, HM= Hedonic Motivation, PV= Price Value, FC= Facilitating Conditions, HT= Habit, USE= Adoption/Usage Behaviour

The current research chose to simplify all constructs and use the mean score of the validated items measuring each construct due to the complexity of the model, as indicated in figure 3 above. However, Awang et al (2018) advise that this method should only be used after all the constructs in the model have been validated. As shown in figure 4, only four paths are insignificant, while others are positive and significant. Besides that, as can be seen in fig. 3 the structural model that has been simplified is a formative construct where mobile banking adoption is impacted by the other latent construct (Awang et al., 2018).

5.0 Discussion
Figure 4 shows that performance expectancy, effort expectancy, facilitating condition, and habit have a positive and significant impact on *asnaf* on adopting mobile banking. This is expected and in line with the UTAUT model because when the *asnaf* believes that the technology can get the job done efficiently, it does not require much effort to be used and have a sound support environment. They will be more willing to adopt mobile banking for efficient *zakat* distribution purposes with a similar technology that has been used before. A similar result has been obtained in other contexts and countries such as Jordan, Lebanon, China, and others (Alalwan et al., 2017; Koksal, 2016; Venkatesh et al., 2012; Zhou et al., 2010). Besides that, it was found that trust also significantly impacts *asnaf*. Especially when matters involving financial assistance (*zakat*), trust will always be an essential element for any individual in order to adopt the technology for daily usage, especially when matters involving financial assistance (zakat) (Baptista & Oliveira, 2016; G. Kim et al., 2009; Koksal, 2016). However, in the present study, structural assurance and propensity to trust will be imperative in enhancing *asnaf*'s trust in mobile banking. This situation occurs because when the technology provides good security feature, consequently, *asnaf* will have a higher propensity to trust mobile banking, and this result are anonymously agreed upon globally (Kim et al., 2009).

On top of that, facilitating condition, habit, intention, and religiosity were also proven to be significant. The good supportive environment, the technology is similar to the previously used technology, and a high willingness to adopt the technology can guarantee the asnaf to adopt mobile banking pragmatically (Alalwan et al., 2017; Koksal, 2016; Venkatesh et al., 2012). On top of that, religiosity plays a vital role in impacting *asnaf* to adopt mobile banking. As a Muslim, everything is done according to the shariah principle. Thus, as long as the technology does not contradict Shariah and provides benefits, *asnaf* will adopt the technology (Abd Rahman et al., 2015; Amin et al., 2009; Souiden & Rani, 2015).
Last but not least, a unique finding that can also be considered unfamiliar from the output is that there are more female *asnaf* than male *asnaf*. In the public eye, it may be assumed that it is normal because there are more females than males in terms of population. However, based on the direct survey procedure, it was found that, in the case of a married couple. The wife is the one who goes to apply for *zakat* assistance on behalf of the husband (the one who is eligible for the assistance). The reason is that psychologically male asnaf is quite shy and less proactive compared to female *asnaf* in getting *zakat* assistance. Thus, that is why there are more females in this study compared to male *asnaf*.

6.0 Conclusion & Recommendations
In conclusion, facilitating condition, habit, intention, and religiosity are the impacting factors that could influence the *asnaf* to adopt mobile banking for efficient *zakat* distribution purposes. However, it is also notable that performance expectancy, effort expectancy, facilitating conditions, attitude, and trust could also enhance the intention or willingness of an *asnaf* to adopt mobile banking. Besides that, there is

the limitation that occurred during the study, such as (1) zakat institutions have confidentiality act concerning *asnaf*; thus, the data that can be outsourced from asnaf is limited and can only be achieved through the direct survey; (2) without the involvement of authorities bodies such as Bank Negara Malaysia (BNM), Jabatan Wakaf, Zakat dan Haji (JAWHAR) and a representative from each state zakat institutions, it is hard to implement the innovation to be standardized through the whole country; and lastly (3) the output of this study are more suitable towards developing countries with a social and economic sphere that is quite similar to Malaysia. Thus, this may limit the findings' generalizability to other countries that are not similar to Malaysia. Therefore, for future research, it is recommended that the conceptual model be tested for cross-country assessments such as Libya, Pakistan, Indonesia, Saudi Arabia, and other Islamic countries. Furthermore, for the Malaysian context, to obtain robust research findings, it is also suggested to include feedback from other stakeholders such as JAWHAR, the current government, and regulatory authorities, which, one way or another, could provide an insight towards the adoption of mobile banking in Malaysia.

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References

Abbas, S. K., Hassan, H. A., Asif, J., Ahmed, B., Hassan, F., & Haider, S. S. (2018). Integration of TTF, UTAUT, and ITM for mobile Banking Adoption. *International Journal of Advanced Engineering, Management and Science*, *4*(5), 375–379. https://doi.org/10.22161/ijaems.4.5.6

Abd Rahman, A., Asrarhaghighi, E., & Ab Rahman, S. (2015). Consumers and halal cosmetic products: Knowledge, religiosity, attitude and intention. *Journal of Islamic Marketing*, *6*(1), 148–163. https://doi.org/10.1108/JIMA-09-2013-0068

Abu Bakar, M., & Abd Ghani, A. (2011). Towards Achieving the Quality of Life in the Management of Zakat Distribution to the Rightful Recipients (The Poor and Needy). *International Journal of Business and Social Science*.

Afshan, S., & Sharif, A. (2015). Acceptance of Mobile Banking Framework in Pakistan. *Telematics and Informatics*, *33*(2), 370–387. https://doi.org/10.1016/j.tele.2015.09.005

Ahmad, S., Wahid, H., & Mohamad, A. (2006). Penswastaan Institusi Zakat dan Kesannya Terhadap Pembayaran Secara Formal Di Malaysia. *International Journal of Management Studies (IJMS)*, *13*(2), 175–196.

Ahmad, S., Wahid, H., & Noor, M. A. M. (2005). Kesedaran Membayar Zakat: Apakah Faktor Penentunya? *International Journal of Management Studies (IJMS)*, *12*(2), 171–189. http://repo.uum.edu.my/732/

Akhtar, S., Irfan, M., Sarwar, A., Asma, & Rashid, Q. U. A. (2019). Factors influencing individuals' intention to adopt mobile banking in China and Pakistan: The moderating role of cultural values. *Journal of Public Affairs*, *19*(1). https://doi.org/10.1002/pa.1884

Akturan, U., & Tezcan, N. (2012). Mobile banking adoption of the youth market: Perceptions and intentions. *Marketing Intelligence & Planning*, *30*(4), 444–459. https://doi.org/10.1108/02634501211231928

Al Khasawneh, M. H. (2015). An Empirical Examination of Consumer Adoption of Mobile Banking (M-Banking) in Jordan. *Journal of Internet Commerce*, *14*(3), 341–362. https://doi.org/10.1080/15332861.2015.1045288

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, *37*(3), 99–110. https://doi.org/10.1016/j.ijinfomgt.2017.01.002

Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., Lal, B., & Williams, M. D. (2015). Adoption of mobile banking in Jordan: Exploring demographic differences on customers' perceptions. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. https://doi.org/10.1007/978-3-319-25013-7_2

Allah Pitchay, A. Bin, Mohd Thas Thaker, M. A. Bin, Azhar, Z., Mydin, A. A., & Mohd Thas Thaker, H. Bin. (2020). Factors persuade individuals' behavioral intention to opt for Islamic bank services: Malaysian depositors' perspective. *Journal of Islamic Marketing*, *11*(1). https://doi.org/10.1108/JIMA-02-2018-0029

Amin, H., Baba, R., & Muhammad, M. Z. (2007). An Analysis of Mobile Banking Acceptance by Malaysian Customers. *Sunway Academic Journal*, *4*, 1–12.

Amin, H., Hamid, M. R. A., Lada, S., & Anis, Z. (2008). The adoption of mobile banking in Malaysia: The case of Bank Islam Malaysia (BIMB). *International Journal of Business and Society*, *9*(2), 43–53.

Amin, H., Lada, S., Rizal, M., Hamid, A., & Geoffrey, H. (2006). Undergraduates ' Perception of Sms Banking in Labuan : an Empirical Analysis. *International Journal of Business and Society*, *7*(2), 21–39.

Amin, H., & Ramayah, T. (2010). Sms Banking: Explaining The Effect of Attitude, Social Norms and Perceived Security and Privacy. *Electronic Journal on Information Systems in Developing Countries*, *41*(2), 1–15.

Amin, H., Rizal Abdul Hamid, M., Lada, S., & Baba, R. (2009). Cluster analysis for bank customers' selection of Islamic mortgages in Eastern Malaysia: An empirical investigation. *International Journal of Islamic and Middle Eastern Finance and Management*. https://doi.org/10.1108/17538390910986344

Amin, H., Supinah, R., Aris, M. M., & Baba, R. (2012). Receptiveness of Mobile Banking by Malaysian Local Customers in Sabah: An Empirical Investigation. *Journal of Internet Banking and Commerce*, *17*(1), 1–11. https://doi.org/10.1007/978-3-531-92534-9_12

Anouze, A. L. M., & Alamro, A. S. (2020). Factors affecting intention to use e-banking in Jordan. *International Journal of Bank Marketing*, *38*(1). https://doi.org/10.1108/IJBM-10-2018-0271

Atul Srivastava. (2013). Mobile Banking and Sustainable Growth. *American Journal of Economics and Business Administration*, *5*(3), 89–94. https://doi.org/10.3844/ajebasp.2013.89.94

Awang, Z. (2014). *A handbook on SEM for academicians and practitioners: the step by step practical guides for the beginners*. MPWS Rich Resources.

Awang, Z., Afthanorhan, A., Mohamad, M., & Asri, M. A. M. (2015). An evaluation of measurement model for medical tourism research: the confirmatory factor analysis approach. *International Journal of Tourism Policy*. https://doi.org/10.1504/IJTP.2015.075141

Awang, Z., Hui, L. S., & Zainudin, N. F. S. (2018). *Pendekatan Mudah: SEM (Structural Equation Modelling)*. MPWS Rich Resources.

Azman, A. R., Mohammad, A., & Syed Mohd Najib, S. O. (2012). Zakat institution in Malaysia: Problems and issues. *Global Journal of Al-Thalaqah (GJAT)*, *2*(1), 35–42.

Ba, S., & Pavlou, P. A. (2002). Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior. *MIS Quarterly*, *26*(3), 243–268. https://doi.org/10.2307/4132332

Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Kizgin, H., & Patil, P. (2019). Consumer use of mobile banking (M-Banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*, *44*. https://doi.org/10.1016/j.ijinfomgt.2018.09.002

Baptista, G., & Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators. *Computers in Human Behavior*, *50*, 418–430. https://doi.org/10.1016/j.chb.2015.04.024

Baptista, G., & Oliveira, T. (2016). A weight and a meta-analysis on mobile banking acceptance research. *Computers in Human Behavior*, *63*, 480–489. https://doi.org/10.1016/j.chb.2016.05.074

Bettinger, A. (1972). *FINTECH : A Series of 40 Time Shared Models Used at Manufacturers Hanover Trust Company Author (s): Abraham Bettinger Published by : INFORMS Stable URL : http://www.jstor.org/stable/25058931 Accessed : 22-07-2016 09 : 25 UTC FINTECH ? A Series of 40 Tim*. *2*(4), 62–63.

BNM. (2019). Internet Banking and Mobile Banking Subscribers (end of period). *Bank Negara Malaysia*, 1. http://www.bnm.gov.my/payment/statistics/pdf/04_internet_banking.pdf

Cheah, C. M., Teo, A. C., Sim, J. J., Oon, K. H., & Tan, B. I. (2011). Factors Affecting Malaysian Mobile Banking Adoption: An Emperical Analysis. *International Journal of Network and Mobile Technologies*, *2*(3), 149–160.

Daud, N. M., Kassim, N. E. M., Said, W. S. R. W. M., & Noor, M. M. M. (2011). Determining critical success factors of mobile banking adoption in Malaysia. *Australian Journal of Basic and Applied Sciences*, *5*(9), 252–265.

Deb, M., & Lomo-David, E. (2014). An empirical examination of customers' adoption of m-banking in India. *Marketing Intelligence & Planning*, *32*(4), 475–494. https://doi.org/10.1108/MIP-07-2013-0119

Farah, M. F., Hasni, M. J. S., & Abbas, A. K. (2018). Mobile-banking adoption: empirical evidence from the banking sector in Pakistan. *International Journal of Bank Marketing*, *36*(7). https://doi.org/10.1108/IJBM-10-2017-0215

Field, A. (2013). Discovering Statistics using IBM SPSS Statistics. *Discovering Statistics Using IBM SPSS Statistics*, 297–321. https://doi.org/10.1016/B978-012691360-6/50012-4

Fishbein, M. & Ajzen, I. (1975). Belief, attitude, attitude, intention and behavior: An introduction to theory of research. *Reading, MA : Addison-Wesley Addison-Wesley*, 578.

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: an iintegrated model. *MIS Quarterly*, 51–90.

Granovetter, M. (1973). The Strength of Weak Ties. *The American Journal of Sociology*, *78*(6), 1360–1380. https://doi.org/10.1086/225469

Gu, J. C., Lee, S. C., & Suh, Y. H. (2009). Determinants of behavioral intention to mobile banking. *Expert Systems with Applications*, *36*(9), 11605–11616. https://doi.org/10.1016/j.eswa.2009.03.024

Hafizah, Z., Siti Khalilah, B., Rahayu, M. Y., & Siti Nur Zahirah, O. (2016). Managing zakat fund in malaysia. *Journal of Global Business and Social Entrepreneurship*, *1*(2), 46–53.

Hair, J. F. J., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis* (Seventh Ed). Pearson Education Limited. https://doi.org/10.1038/259433b0
HAIRUNNIZAM WAHID. (2014). *LOCALIZATION OF MALAYSIAN ZAKAT DISTRIBUTION: PERCEPTIONS OF AMILS AND ZAKAT RECIPIENTS*. UNIVERSITY OF MALAYA.

Hansen, J. M., Saridakis, G., & Benson, V. (2018). Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers' use of social media for transactions. *Computers in Human Behavior*, *80*. https://doi.org/10.1016/j.chb.2017.11.010

Harian, B. (2020). Teknologi asas pemulihan ekonomi pasca COVID-19. *Selasa, 23 June*. https://www.bharian.com.my/berita/nasional/2020/06/703217/teknologi-asas-pemulihan-ekonomi-pasca-covid-19

Hinson, R. E. (2011). Banking the poor: The role of mobiles. *Journal of Financial Services Marketing*, *15*(4), 320–333. https://doi.org/10.1057/fsm.2010.29

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Khuong, N. V., Phuong, N. T. T., Liem, N. T., Thuy, C. T. M., & Son, T. H. (2022). Factors Affecting the Intention to Use Financial Technology among Vietnamese Youth: Research in the Time of COVID-19 and Beyond. *Economies*, *10*(3). https://doi.org/10.3390/economies10030057

Kim, G., Shin, B., & Lee, H. G. (2009). Understanding dynamics between initial trust and usage intentions of mobile banking. *Information Systems Journal*, *19*(3), 283–311. https://doi.org/10.1111/j.1365-2575.2007.00269.x

Kim, K. K., & Prabhakar, B. (2004). Initial Trust and the Adoption of B2C e-Commerce: The Case of Internet Banking. *ACM SIGMIS Database*, *35*(2), 50–64. https://doi.org/10.1145/1007965.1007970

Kim, Y., Choi, J., Park, Y. J., & Yeon, J. (2016). The adoption of mobile payment services for "fintech." *International Journal of Applied Engineering Research*, *11*(2), 1058–1061.

Klein, M. U., & Mayer, C. (2011). Mobile banking and financial inclusion: The regulatory lessons. *World Bank Policy Research Working Paper …, May*, 1–21.

Koenig-Lewis, N., Palmer, A., & Moll, A. (2010). Predicting young consumers' take up of mobile banking services. *International Journal of Bank Marketing*, *28*(5), 410–432. https://doi.org/10.1108/02652321011064917

Koksal, M. H. (2016). The intentions of Lebanese consumers to adopt mobile banking. *International Journal of Bank Marketing*, *34*(3), 327–346. https://doi.org/10.1108/IJBM-03-2015-0025

Kumar, V. V. R., Lall, A., & Mane, T. (2017). Extending the TAM Model: Intention of Management Students to Use Mobile Banking: Evidence from India. *Global Business Review*, *18*(1), 238–249. https://doi.org/10.1177/0972150916666991

Lembaga Zakat Selangor. (2022). *Terdapat 8 Asnaf Zakat*. https://www.zakatselangor.com.my/agihan-zakat/penerima-kriteria-penerimaan-zakat/

Liang, C. C. (2016). Subjective norms and customer adoption of mobile banking: Taiwan and Vietnam. *Proceedings of the Annual 49th Hawaii International Conference on System Sciences*, 1577–1585. https://doi.org/10.1109/HICSS.2016.199

Lubis, M., Bilal, M., Lumpur, K., Yaacob, N. I., Omar, Y., & Dahlan, A. a. (2011). ENHANCEMENT OF ZAKAT DISTRIBUTION MANAGEMENT SYSTEM : Kulliyyah of Information and Communication Technology (ICT) Enhancement of Zakat Distribution Management System : Case Study in. *International Management Conference 2011 Proceedings University Sultan Zainal Abidin.*, 1–10.

Mago, S. (2014). The Impact of Mobile Banking on Financial Inclusion In Zimbabwe: A Case for Masvingo Province. *Mediterranean Journal of Social Sciences*, *5*(9), 221–230. https://doi.org/10.5901/mjss.2014.v5n9p221

Mahfuz, M. A., Khanam, L., & Hu, W. (2016). The Influence of Culture on M-banking Technology Adoption: An Integrative Approaches of UTAUT2 and ITM. *Proceedings of PICMET '16: Technology Management for Social Innovation*, 824–835.

Maier, E. (2016). Supply and demand on crowdlending platforms: connecting small and medium-sized enterprise borrowers and consumer investors. *Journal of Retailing and Consumer Services*, *33*, 143–153. https://doi.org/10.1016/j.jretconser.2016.08.004

Mannan, M. A. (1986). *Islamic economics: foundations of Islamic economics: theory and practice*. Hodder and Stoughton.

Masrek, M. N., Mohamed, I. S., Daud, N. M., & Omar, N. (2014). Technology Trust and Mobile Banking Satisfaction: A Case of Malaysian Consumers. *Procedia - Social and Behavioral Sciences*, *129*, 53–58. https://doi.org/10.1016/j.sbspro.2014.03.647

Mcknight, D. H., & Chervany, N. L. (2002). What Trust Means in E-Commerce Customer Relationships: An Interdisciplinary Conceptual Typology. *International Journal of Electronic Commerce*, *6*(2), 35–59. https://doi.org/Article

McKnight, D. H. D., Cummings, L. L. L. L. L., & Chervany, N. L. N. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, *23*(1), 1–18. http://www.jstor.org/stable/10.2307/259290%5Cnhttp://amr.aom.org/content/23/3/473.short

Mcknight, D. H., Kacmar, C. J., & Choudhury, V. (2004). Shifting Factors and the Ineffectiveness of Third Party Assurance Seals: A Two-Stage Model of Initial Trust in a Web Business. *Electronic Markets*, *14*(3), 252–266. https://doi.org/10.1080/1019678042000245263

Merhi, M., Hone, K., & Tarhini, A. (2019). A cross-cultural study of the intention to use mobile banking between Lebanese and British consumers: Extending UTAUT2 with security, privacy and trust. *Technology in Society*, *59*. https://doi.org/10.1016/j.techsoc.2019.101151

Micu, I., & Micu, A. (2016). Financial Technology (FINTECH) and Its Implementation On the Romanian Non-Banking Capital Market. *SEA - Practical Application of Science*, *XVIII*(1), 47–54.

Mohamad, M., Awang, Z., & Ali, N. A. M. (2017). Validating the Maqasid Shariah Prison Quality of Life (MSPQoL) among drug-abuse inmates using confirmatory factor analysis. *International Journal of Applied Business and Economic Research*, *15*(24), 91–103. https://doi.org/10.1016/j.visres.2016.06.012

Mohamad, M., Mohammad, M., Mat Ali, N. A., & Awang, Z. (2016). Measuring Positive Youth Development: Confirmatory Factor Analysis. *IJABER*, *14*(13), 9441–9451.

Mohamad, M., Mohammad, M., Mat Ali, N. A., & Awang, Z. (2018). The impact of life satisfaction on substance abuse: delinquency as a mediator. *International Journal of Adolescence and Youth*, *23*(1), 25–35. https://doi.org/10.1080/02673843.2016.1267021

Mohd Thas Thaker, M. A. Bin, Allah Pitchay, A. Bin, Mohd Thas Thaker, H. Bin, & Amin, M. F. Bin. (2019). Factors influencing consumers' adoption of Islamic mobile banking services in Malaysia: An approach of partial least squares (PLS). *Journal of Islamic Marketing*, *10*(4). https://doi.org/10.1108/JIMA-04-2018-0065

Mohd Thas Thaker, H., Khaliq, A., Ah Mand, A., Iqbal Hussain, H., Mohd Thas Thaker, M. A. Bin, & Allah Pitchay, A. Bin. (2021). Exploring the drivers of social media marketing in Malaysian Islamic banks: An analysis via smart PLS approach. *Journal of Islamic Marketing*, *12*(1). https://doi.org/10.1108/JIMA-05-2019-0095

Mohd Thas Thaker, H., Mohd Thas Thaker, M. A., Khaliq, A., Allah Pitchay, A., & Iqbal Hussain, H. (2021). Behavioural intention and adoption of internet banking among clients' of Islamic banks in Malaysia: an analysis using UTAUT2. *Journal of Islamic Marketing*. https://doi.org/10.1108/JIMA-11-2019-0228

Oliveira, T., Faria, M., Thomas, M. A., & Popovič, A. (2014). Extending the understanding of mobile banking adoption: When UTAUT meets TTF and ITM. *International Journal of Information Management*, *34*(5), 689–703. https://doi.org/10.1016/j.ijinfomgt.2014.06.004

Pallant, J. (2016). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS* (6th Editio). McGraw Hill Education.

Pavlou, P. A., & Gefen, D. (2004). Building effective online marketplaces with institution-based trust. *Information Systems Research*, *15*(1). https://doi.org/10.1287/isre.1040.0015

Rahi, S., & Abd. Ghani, M. (2019). Integration of expectation confirmation theory and self-determination theory in internet banking continuance intention. *Journal of Science and Technology Policy Management*, *10*(3). https://doi.org/10.1108/JSTPM-06-2018-0057

Rouibah, K., Lowry, P. B., & Hwang, Y. (2016). The effects of perceived enjoyment and perceived risks on trust formation and intentions to use online payment systems: New perspectives from an Arab country. *Electronic Commerce Research and Applications*. https://doi.org/10.1016/j.elerap.2016.07.001

Saad, A. Y. Q., & Foori, A. M. Al. (2020). Zakat and Tax: A Comparative Study in Malaysia. *International Journal of Innovation, Creativity and Change*, *10*(12), 140–151.

Schueffel, P. (2016). Taming the Beast: A Scientific Definition of Fintech. *Journal of Innovation Management Schueffel JIM*, *4*(4), 32–54. http://hdl.handle.net/10216/102610%0Ahttp://www.open-jim.org%0Ahttp://creativecommons.org/licenses/by/3.0

Selangor, L. Z. (2020a). *Cara Pembayaran Zakat*. https://www.zakatselangor.com.my/cara-pembayaran-zakat/

Selangor, L. Z. (2020b). *Pengertian Zakat*. Lembaga Zakat Selangor. https://www.zakatselangor.com.my/info-zakat/zakat-kewajipan-berzakat/pengertian-zakat/

Shah, A. A. B. A. H., Mohamed, A. S. B. B., Ali, R. M., & Yusof, R. N. B. R. (2019). The role of technology acceptance model on rhb mobile banking. *International Journal of Scientific and Technology Research*, *8*(11).

Shah Alam, S., Mohd, R., & Hisham, B. (2011). Is religiosity an important determinant on Muslim consumer behaviour in Malaysia? *Journal of Islamic Marketing*, *2*(1), 83–96. https://doi.org/10.1108/17590831111115268

Shanmugam, A., Savarimuthu, M. T., & Wen, T. C. (2014). Factors affecting Malaysian behavioral intention to use mobile banking with mediating effects of attitude. *Academic Research International*, *5*(2), 236–253.

Sharma, R. R., Newaz, F. T., & Fam, K. S. (2017). Muslim religiosity, generational cohorts and buying behaviour of Islamic financial products. *Australian Journal of Management*. https://doi.org/10.1177/0312896216659530

Shim, Y., & Shin, D. H. (2016). Analyzing China's Fintech Industry from the Perspective of Actor-Network Theory. *Telecommunications Policy*, *40*(2–3), 168–181. https://doi.org/10.1016/j.telpol.2015.11.005

Shuhidan, S. M., Hamidi, S. R., & Saleh, I. S. (2017). Perceived Risk towards Mobile Banking: A case study of Malaysia Young Adulthood. *IOP Conference Series: Materials Science and Engineering*, *226*(1). https://doi.org/10.1088/1757-899X/226/1/012115

Souiden, N., & Rani, M. (2015). Consumer Attitudes and Purchase Intention towards islamic Banks: The Influence of Religiosity. *International Journal of Bank Marketing*, *33*(2). https://doi.org/http://dx.doi.org/10.1108/MRR-09-2015-0216

Sun, S., Goh, T., Fam, K.-S., Xue, Y. X., & Xue, Y. (2012). The influence of religion on Islamic mobile phone banking services adoption. *Journal of Islamic Marketing Iss Journal of Islamic Marketing Iss Journal of Islamic Accounting and Business Research Iss*, *3*(4), 81–98. https://doi.org/10.1108/17590831211206617

Sun, S., Goh, T., Fam, K., & Xue, Y. (2012). The influence of religion on Islamic mobile phone banking services adoption. *Journal of Islamic Marketing*, *3*(1), 81–98. https://doi.org/10.1108/17590831211206617

Susanto, A., Chang, Y., & Ha, Y. (2016). Determinants of continuance intention to use the smartphone banking services. *Industrial Management & Data Systems*, *116*(3), 508–525. https://doi.org/10.1108/IMDS-05-2015-0195

Tan, E., & Lau, J. L. (2016a). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, *17*(1), 18–31. https://doi.org/10.1108/YC-07-2015-00537

Tan, E., & Lau, J. L. (2016b). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, *17*(1), 18–31. https://doi.org/10.1108/YC-07-2015-00537

Teo, A.-C., Tan, G. W.-H., Cheah, C.-M., Ooi, K.-B., & Yew, K.-T. (2012). Can the demographic and subjective norms influence the adoption of mobile banking? *International Journal of Mobile Communications*, *10*(6), 578–597. https://doi.org/10.1504/IJMC.2012.049757

Tham, J., Ab Yazid, M. S., Khatibi, A. A., & Azam, S. M. F. (2017). Internet and Data Security – Understanding Customer Perception on Trusting Virtual Banking Security in Malaysia. *European Journal of Social Sciences Studies*, *2*(7), 186–207. https://doi.org/10.5281/zenodo.898999

Thye Goh, T., Mohd Suki, N., & Fam, K. (2014). Exploring a consumption value model for Islamic mobile banking adoption. *Journal of Islamic Marketing*, *5*(3), 344–365. https://doi.org/10.1108/JIMA-08-2013-0056

Vaithilingam, S., Nair, M., & Guru, B. K. (2013). Do Trust and Security Matter for the Development of M-banking? Evidence from a Developing Country. *Journal of Asia-Pacific Business*, *14*, 4–24. https://doi.org/10.1080/10599231.2013.728402

Valentine, L. (2011). Smart Phones Alter Banking Landscape. *American Bankers Association Banking Journal*, *May*, 32–46. https://docs.google.com/file/d/0B4JSf-

B6SETBZ1F3bERhOHZTdmM/edit?usp=sharing

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Towards a Unified View. *MIS Quarterly*, *27*(September), 425–478. https://doi.org/10.1017/CBO9781107415324.004

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, *36*(1), 157–178.

Wahid, H., Ahmad, S., & Kader, R. A. (2009). Pengagihan zakat oleh institusi zakat di Malaysia: mengapa masyarakat Islam tidak berpuas hati? *Jurnal Syariah. Akademi Pengajian Islam, Universiti Malaya, Kuala Lumpur*, *17*(1), 89–112.

Wang, Z., GUAN, Z., Hou, F., Li, B., & Zhou, W. (2019). What determines customers' continuance intention of FinTech? Evidence from YuEbao. *Industrial Management and Data Systems*, *119*(8), 1625–1637. https://doi.org/10.1108/IMDS-01-2019-0011

Yahaya, M. H., & Ahamd, K. (2018). Financial Inclusion through Efficient Zakat Distribution for Poverty Alleviation in Malaysia: Using FinTech & Mobile Banking. *Proceeding of the 5th International Conference on Management and Muamalah*.

Yahaya, M. H., & Khaliq, A. (2019). Factors Affecting the Acceptance of Financial Technology among Asnaf for the Distribution of Zakat in Selangor - A Study Using UTAUT. *Journal of Islamic Finance*, *8*(Special Issue), 035–046.

Yousaf, S., & Malik, M. S. (2013). Evaluating the influences of religiosity and product involvement level on the consumers. *Journal of Islamic Marketing*, *4*(2), 163–186. https://doi.org/10.1108/17590831311329296

Yu, C.-S. (2012). Factors Affecting Individuals to Adopt Mobile Banking: Empirical Evidence from the UTAUT Model. *Journal of Electronic Commerce Research*, *13*(2), 104–121.

Yusof, Y., Jusoff, K., Ibrahim, Y., & Awang, Z. (2017). The influence of green practices by non-green hotels on customer satisfaction and loyalty in hotel and tourism industry. *International Journal of Green Economics*. https://doi.org/10.1504/IJGE.2017.10003675

Zhang, L., Zhu, J., & Liu, Q. (2012). A meta-analysis of mobile commerce adoption and the moderating effect of culture. *Computers in Human Behavior*, *28*(5), 1902–1911. https://doi.org/10.1016/j.chb.2012.05.008

Zhou, T., Lu, Y., & Wang, B. (2010a). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, *26*(4), 760–767. https://doi.org/10.1016/j.chb.2010.01.013

Zhou, T., Lu, Y., & Wang, B. (2010b). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, *26*(4), 760–767. https://doi.org/10.1016/j.chb.2010.01.013