Impact of digital Sharia banking systems on cash-waqf among Indonesian Muslim youth

Impact of digital Sharia banking systems

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Abstract

Purpose — Cash-waqf is one of the transformative models of waqf assets submission to optimize the receipt of waqf of money in Indonesia. Currently, cash-waqf can be paid through the platforms that are integrated with digital sharia banking systems (DSBS) such as Jadiberkah.Id (Bank Syariah Mandiri), Digital Wakaf Hasanah (Bank Negara Indonesia Syariah) and other waqf online services provided by Bank Syariah Bukopin, Bank Commerce International Merchant Bankers Niaga and Bank Rakyat Indonesia Syariah. This study aims to investigate the role of DSBS in stimulating Muslim youth's decision to endow cash-waqf in Indonesia.

Design/methodology/approach – This research involved 225 Muslim youth from several universities across the Special Province of Yogyakarta and Central Java as the research respondents. The analysis was conducted using partial least square structural equation modeling with WarpPLS 7.0.

Findings – The result of the structural model indicates that the research model is structurally good since it meets all model criteria. Perceived ease of use (PEU) is found as the most significant predictor of perceived usefulness (PU). Both generate a significant effect on Muslim youths' attitudes toward DSBS. Overall, subjective norm (SN), perceived behavioral control (PBC), PU and attitudes are important determinants that lead individual decisions to use the online cash-waqf payment through DSBS. Finally, the research findings conclude that DSBS plays a significant role in encouraging the interest of young Muslim generations to participate in cash-waqf transactions.

Originality/value — This study seeks to contribute to the existing literature by enriching the discussion on DSBS's service, especially in the context of optimizing the collection of Islamic Philanthropy through cash-waqf transaction. Also, this study integrates theory of planned behavior (TPB) and the technology acceptance model (TAM) into a single research model to explore the determinants of cash-waqf participation in digital era.

Keywords Technology acceptance model, Theory of planned behavior, Cash-waqf, Digital sharia banking systems

Paper type Research paper

Introduction

Islam has been recognizing waqf as one of its philanthropic tools since the time of the Prophet Muhammad – peace be upon him – and his companions. At that time, waqf was

Journal of Islamic Marketing © Emerald Publishing Limited 1759-0833 OI 10.1108/JIMA-11-2020-0337 exemplified by donating part of the land for mosque construction (Rohmaningtyas, 2017). It was also practiced by Umar bin Khattab, who allowed the utility of his land in Khaibar, and the money earned was used to feed the poor, slaves and those in needs (Hamat, 2014). The waqf endowment concept, which was exemplified in the form of land, has been developed into cash form or known as cash-waqf. In cash-waqf, a person is allowed to donate his/her excess of wealth in a form of cash or money (Kresnowati and Berakon, 2017). It is seen as an alternative solution to optimize and encourage waqf transactions (Berakon *et al.*, 2017).

The legality of cash-waqf in the lens of Islamic law has also been questioned. The opponents claimed that the way waqf is transacted should exactly comply with the practice done by Prophet Muhammad – peace be upon him and his disciples. However, the proponents argued that the objective of Islamic law (Maqashid Ash-Sharia) should consider situational context. Considering the complexity of current asset management as well as the urgent need for enhancing socioeconomic welfare, some groups of Muslim scholars allowed cash-waqf transactions. The Indonesian Ulema Council (MUI) (2002) reasoned that cash-waqf is allowed since the use of Dinar for waqf has been recommended by Imam Az-Zuhri. This fatwa is followed by several scholars within Shafi' iyah school of thought. The cash-waqf transaction was also popular among the Turks during the authority of the Ottoman Empire around the 15th century (Ismal et al., 2015). In Indonesia, the cash-waqf transaction has been officially accepted by the MUI and governed under government Regulation Number 42/2006 concerning procedures for the implementation of waqf by the regulatory mandate.

The Indonesian Government has appointed Indonesian *Waqf* Board (IWB) to collect cash-waqf funds. Operationally, cash-waqf is implemented by collecting some amount of money to be invested in government strategic business units with the purpose of earning profits. The profits are then distributed for public benefits. The presence of cash-waqf gives a new prospect to develop the waqf transaction in Indonesia as it is believed that the waqf implementation is far from optimal, more specifically among Muslim millennials. To solve this problem, the IWB partnered with Islamic banks and began to take advantage of financial technology (FinTech). This partnership led to the launch of Digital Sharia Banking System (DSBS) to facilitate the online cash-waqf transaction. The system is predicted to increase people's willingness to participate in cash-waqf due to the ease of transaction. Besides, there is no specific amount required for cash-waqf payment. Currently, there have been several operating DSBS, such as Jadiberkah.Id (owned Bank Syariah Mandiri), Digital Wakaf Hasanah (owned by Bank Negara Indonesia Syariah) and other online waqf services facilitated by Bank Syariah Bukopin, Bank Commerce International Merchant Bankers Niaga and Bank Rakyat Indonesia Syariah.

Over the past decade, there have been many studies to explore the factors that determine individual intentions and behavior in contributing to cash-waqf (Amin et al., 2014; Ahmad et al., 2014; Osman, 2014 Pitchay et al., 2014; Kashif and Run, 2015; Yusoff et al., 2018; Osman and Muhammed, 2017; Shukor et al., 2017; Yusoff et al., 2018; Musa and Salleh, 2018; Zabri and Mohammed, 2018; Shukor et al., 2019). However, all of the aforementioned studies mostly focused on a single theory or model. For instance, the study of (Ahmad et al., 2014; Amin et al., 2014) investigated cash-waqf transactions in Malaysia using the technology acceptance model (TAM). Therefore, the current study seeks to combine TAM and theory of planned behavior (TPB), which serves as the main contribution of this paper to the literature.

The need for treating TPB and TAM as a unified integrative model connected to one another has been highlighted by the previous studies in other different contexts (Rouibah *et al.*, 2009; Hansen *et al.*, 2018; Hansen *et al.*, 2018; Hansen *et al.*, 2018; Hansen *et al.*, 2018; Ariffin and Lim, 2019; Ha, 2020). This research was conducted in Indonesia for several reasons and considerations. First, Indonesia is one of the countries that has implemented

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and facilitated the community to channel waqf assets through cash-waqf. Second, demographically, Indonesia is a country with the largest Muslim population in the world with 85% of Indonesia's 260 million total population identifying themselves as Muslims (Putraa, 2020). Third, Indonesia has the highest potential of waqf compared to other countries at \$14bn per year, followed by Malaysia at \$1.4bn, Egypt at \$6.5bn and Pakistan at \$8bn (Mohsin, 2007). As reported, the value of cash-waqf transactions in Indonesia amounted to IDR 180tn (Fadhilah and Aminah, 2018). Furthermore, a study by Bank Indonesia also stated that the potential for Indonesian waqf reached IDR 217tn or equivalent to 3.4% of Indonesia's GDP (KNEKS, 2019). Fourth, cash-waqf payments are integrated with DSBS, which is facilitated by the Islamic banking industry in Indonesia. Fifth, a report from the Charities Aid Foundation (CAF) of the World Giving Index as of October 2018 stated that Indonesia was ranked first as the most generous country based on a survey conducted by the CAF of 144 countries (Nurfadilah, 2018).

Literature review

Theory of planned behavior and technology acceptance model

TPB and TAM have a central role to see and predict the factors that can encourage one's intention to take action. Ajzen (1991) developed the theory of reasoned action (TRA) model into a TPB by adding perceived behavioral control (PBC). TPB explains that the intention is to determine individual's decision to take the desired action. Sahni (1994) confirmed that no individual's intention is strong enough to serve as a predictor or determinant of behavior without supporting behavioral control. The previous studies also emphasized that PBC was one of the constructs to influence the individual's intention to take action (Kang *et al.*, 2006; Osman and Muhammed, 2017; Hansen *et al.*, 2018; Tommasetti *et al.*, 2018).

TAM was initially introduced and developed by Davis (1985). TAM is a model adapted from the TRA specifically and designed to develop usage models for users of technology (Fishbein and Ajzen, 1975). The main purpose of TAM is to explore the influence of external factors on internal beliefs, attitudes and intentions (Davis *et al.*, 1989). TAM is the most widely used model as a reference and the most influential model in understanding and explaining the use of information systems (Wang and Liu, 2005). Three determinants will influence decisions in the use and operation of the technology, namely, perceived usefulness (PU), perceived ease of use (PEU), and attitude toward the use of the system. Generally, TAM explains what factors lead to the receipt of technology and be able to explain individuals' behavior in a broader scope when receiving and adopting the technology. Based on empirical findings, PEU and PU are two antecedents that shape a person's positive attitude to adopt the technology (Hong, 2018). In addition, people's intention in using electronic money is greatly determined by their attitudes (Filona and Misdiyono, 2019).

Cash-waqf concept and implementation

Cash-waqf is one of the Islamic social finance instruments to assist the government in economic development (Sanusi and Shafiai, 2015; Musa and Salleh, 2018), such as poverty alleviation (Ahmad and Hassan, 2015; Mahamood and Rahman, 2015; Kachkar, 2017; Hasan *et al.*, 2018; Saiti *et al.*, 2019), improving community welfare (Cizakca, 2009; Medias, 2017; Khamis and Che Mohd Salleh, 2018), providing capital assistance for entrepreneurs (Thaker, 2018) and addressing budget deficits and social inequalities (Nasiri *et al.*, 2019). Besides, cash-waqf can also be distributed to support socio-religious programs (Othman, 2015), renovate school buildings (Razak, 2020) and provide health-care facilities. According to Hasan *et al.* (2019), the concept of cash-waqf was first put forward by Imam Zufar in the 8th century. Imam Zufar defined cash-waqf as a form of money investment in which the profits earned are then

distributed for social interests. Based on MUI Fatwa (2002), money endowment for waqf is permissible. One of the aspects that became the basis for the consideration was the opinion of Imam Az-Zuhri (d. 124 H) who allowed dinars and dirhams to be used as waqf assets for da'wah purposes and social interests (Priantina, 2019). Technically, the cash-waqf is used as a business capital, then the profits are channeled for da'wah, social welfare, education and health (Rusydiana and Devi, 2014; Medias, 2017; Nasiri et al., 2019).

Waqf is not only limited to fixed assets such as land, buildings or vehicles but also can be in the form of cash or money. The cash-waqf allows everyone regardless of the amount of wealth possessed to participate and contribute to waqf activities according to their financial abilities (Hasan *et al.*, 2018, 2019). For example, the Somali perceives cash-waqf as an extra friendly form of donation because it provides space and opportunity for the community who specifically does not have assets, such as land and buildings to be used as waqf assets (Saiti *et al.*, 2019).

The implementation of cash-waqf management in Indonesia is regulated by the Law of the Republic of Indonesia No.42 of 2006. In this regulation, cash-waqf is categorized as a movable waqf object, as also applied in Malaysia (Anwar et al., 2019; Hafiz et al., 2019). The payments can be deposited through some Islamic financial institutions that have collaborated with the Ministry of Religious Affairs of the Republic of Indonesia. This scenario increases the professionalism and accountability of the Indonesian Waqf Board (IWB) as the manager of the cash-waqf in Indonesia. Currently, people can pay cash-waqf to banks through two mechanisms, either directly by visiting the banks or making payment online by using DSBS.

Furthermore, the cash-waqf funds are invested in Islamic financial products and the profits are distributed to people in need (Hasan *et al.*, 2018; Jalil *et al.*, 2019). In principle, the collected cash-waqf funds must be allocated in advance to productive assets (Siswantoro *et al.*, 2018) and profitable investment portfolios. Unlike other forms of Islamic philanthropy, there is an obligation to maintain and preserve the main value of waqf, not to be sold, gifted and inherited (MUI, 2002; Iqbal *et al.*, 2019). Thus, cash-waqf can be understood as a productive waqf instrument to optimize waqf revenue in Indonesia.

Previous studies on cash-waqf

Researchers reviewed some previous empirical studies that focus on the factors that influence individual intentions and behavior to contribute on cash-waqf programs. The time span used as a reference in tracing the existence of empirical articles on the implementation of cash-waqf is from 2014–2020 (seven years) as presented in Table 1. Of the 17 empirical studies, there are only two studies that have tried examining the impact of technology on the intention to participate in cash-waqf using the TAM framework (Ahmad et al., 2014; Amin et al., 2014). The two studies were conducted in Malaysia by targeting Malaysian Bank customers and Muslim staff at Universiti Utara Malaysia as research respondents. The results of this review also indicated that only two empirical studies adopted TRA as a theoretical framework in explaining individual beliefs, attitudes, intentions and behaviors to endow cash-waqf application (Pitchay et al., 2015; Al-Harethi, 2019). Not much different from the previous findings, the two studies were also conducted in Malaysia by involving workers and students as the research respondents. Furthermore, the result of the review reveals that the factors to determine an individual's decision to contribute to the cash-wagf program are dominated by the elaborate TPB (Osman, 2014; Kashif and Run, 2015; Darus et al., 2017; Osman and Muhammed, 2017; Musa and Salleh, 2018; Yusoff et al., 2018; Zabri and Mohammed, 2018; Shukor et al., 2019; Putraa, 2020). Those TPB's studies no longer targeted only on workers and students as the research respondents but have also started to involve the Muslim community and entrepreneurs at large.

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Author (s)	Building theory and constructs	Respondents	Country
Osman (2014) Amin et al. (2014) Ahmad et al. (2014)	Extending the theory of planned behavior (TPB) Technology acceptance model (TAM) Online Wagfacceptance, perceived usefulness (PU), perceived ease of use (PEU), perceived religiosity, perceived self-efficacy and amount of	Young intellectuals Malaysian bank customers Muslim staffs among Universiti Utara Malaysia	Malaysia Malaysia Malaysia
Pitchay <i>et al.</i> (2015) Kashif and Run (2015) Johari <i>et al.</i> (2015)	Theory of reasoned action (TRA) Extending the theory of planned behavior (TPB) Internal/pull factors consist of religious, trust to waqf institution,	Muslim employees Pakistan Muslim donors	Malaysia Pakistan Malaysia
Adeyemi et al. (2016) Osman and Muhammed	Deneyorence, rannuarry with wath institution, access to casti-wath. Awareness, understanding, promotion and social culture. Theory of planned behavior (TPB)	Muslim donors Muslim donors	Malaysia Malaysia
Yusoff <i>et al.</i> (2018)	Theory of planned behavior (TPB)	Students	Malaysia and
Shukor <i>et al.</i> (2017)	Antecedent and consequence: religiosity, knowledge about waqf, convenience, informative influence and trust in waqf institutions, intention	Individuals in the Klang valley	nananu Malaysia
Musa and Salleh (2018) Zabri and Mohammed (2018)	and attitudes Extending the theory of planned behavior (TPB) Extending the theory of planned behavior (TPB)	Entrepreneur Academic and supporting staff, postgraduate and undergraduate	Nigeria Malaysia
Yusoff et al. (2018)	Theory of planned behavior (TPB)	Students Staffs at Thirogaist Polynologi MADA	Malaysia
Shukor <i>et al.</i> (2019)	Theory of planned behavior (TPB) and integrity, reputation and trust on	Omvesicu realiologi waxa Muslim donors	Malaysia
Al-Harethi (2019)	wath institution Religiosity, subjective norm, attitude, cash-waqf participation (TRA)	Students at Kolej Insaniah Universiti in	Malaysia
Iqbal <i>et al.</i> (2019)	Promotion, social environment, understanding, awareness, intention and	People in Jakarta, West Java, and Bonton	Indonesia
Putraa (2020)	recision Theory of planned behavior (TPB)	Muslim community	Indonesia

Table 1.
Previous empirical studies on cash-waqf giving behavior

Furthermore, the previous empirical studies on the giving behavior of cash-waqf serve as an important tool for researchers in mapping the suggestions and limitations of previous researche. Also, it could be a significant step to demonstrate the novelty and main contributions of this study. The need to investigate the impact of using DSBS on cash-waqf among Indonesian Muslim youth is underpinned by two main reasons. First, no studies have ever strived to explore the factors that influence the intention of the Muslim millennials to conduct cash-waqf by integrating TAM with TPB in a single research framework. Second, most of the empirical studies are mainly conducted in Malaysia and several other countries, such as Pakistan, Thailand and Nigeria. Thus, based on a complete and comprehensive mapping of the previous studies, this study seeks to provide new insights on the same topic by raising the issue of digital cash-waqf development in Indonesia.

Digital shariah banking systems

The implementation of digital technology is a strategic issue in improving business performance and profitability of the banking industry (Chiu et al., 2017; Wirdiyanti, 2018). Digitalization is the process of using digital or computer technology, including mobile applications that are adopted by organizations, companies and the public (Larsson and Viitaoja, 2017). Thus, digital banking can be defined as a banking service application that can be accessed by using technology and information systems without any distance and time restrictions. Similarly, DSBS also provided digital banking services to meet the needs of customers' financial transactions through electronic devices such as smartphones, tablets, laptops and personal computers connected to the internet network served by Islamic banks. In addition to the availability of commercial features, DSBS innovates by providing Islamic philanthropic service features that allow customers to pay cash-waqf more easily and efficiently.

The decision of the Islamic banking industry to adopt digital technology is responsible for reducing operational costs so that it can linearly boost bank profitability (Chiu et al., 2017; Sharma, 2017; Mbama and Ezepue, 2018; Yaseen and Qirem, 2018). In fact, the wave of digital technology transformation has not only changed the way people perceive how to communicate, apply business and conduct financial transactions but also bring and shape positive trends in designing donation mechanisms and social activities in which payment transactions are made in digital mode (Boersma and Burgers, 2013; Jalil et al., 2019). Jalil et al. (2019) revealed that the number of cash-waqf transactions significantly increased after collaborating with Bank Muamalat Malaysia Berhad by adopting online payment methods in cash-waqf participation.

Hypotheses development

Subjective norm, perceived usefulness, perceived ease of use and behavioral intention Venkatesh and Davis (2000) inserted SN in the modified TAM or also known as TAM 2. The main purpose of modifying TAM is to examine the external factor on internal beliefs and individual intentions when adopting the technology. The previous TAM has not explained concretely the external variables that might influence individual beliefs and intentions. The disclosure of SN as one of the variables representing an external variable is explained in TAM 2 (Venkatesh and Davis, 2000). SN plays an essential role in developing the TRA framework and is a significant factor influencing an individual's intention to take action.

In his research, Abbas (2016) assumed that the attitude and behavior of smartphone users in Arabic are determined by a very influential person in their lives. He concluded that SN has a positive association with PU. Also, Schepers and Wetzels (2007) found that SN effect on PU and BI was positive and significant. Venkatesh and Davis (2000) argued that

when employees assess a system that can provide more benefits, related employees will have a good assessment of the system. People will tend to follow what others do in using technology although they are not convinced of the use of technology (Teo, 2009). He further showed the positive influence of SN toward PU and PEU in the use of computers by teachers who were at the National Institute of Education Singapore.

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SN becomes an important construct in predicting an individual's intention to act (Venkatesh and Davis, 2000; Osman and Muhammed, 2017; Yaseen and Qirem, 2018; Filona and Misdiyono, 2019). This concept was reinforced by Ramayah and Malhotra (2007), who explained that the intentions of both private and government sector workers in Penang (Malaysia) when using internet banking services were influenced by people who they felt were influential in their communities and lives. In the context of waqf behavior, Pitchay et al. (2014) explained that SN plays an important role in encouraging employees' intention to contribute to cash-waqf through salary deduction schemes. Hence, SN has a significant role in influencing an individual's intention to do a job or not. In this study, the intention of individuals participating in the number of conveniences of the DSBS, which offers cash-waqf transactions is determined by influential people in their lives (Osman and Muhammed, 2017; Yaseen and Qirem, 2018; Filona and Misdiyono, 2019). Therefore, the research hypotheses can be formulated as follows:

- H1. SN has a positive effect on PU.
- H2. SN has a positive effect on PEOU.
- H3. SN has a positive effect on BI.

Perceived behavioral control, perceived usefulness and perceived ease of use and behavioral intention

PBC is an individual perception that explains the ability of individuals in performing action or job. The ability of individuals is influenced or controlled by beliefs derived from several factors, such as knowledge, skills, experience and availability of time and facilities (Ramdhani, 2016). A study by Kang et al. (2006) mentioned that the use of coupons is determined by the costs and benefits of using these coupons. It is emphasized that expertise in operating a computer and individual-owned facilities would distinguish costs incurred when buying electronic coupons. In other words, ordering electronic coupons can be done easily and efficiently if someone has the perceived capacity and ability to operate a computer.

In the context of electronic learning, Altawallbeh *et al.* (2015) developed three dimensions of PBC consisting of individual expertise in using the internet, easy access to reach websites and institutional support in providing support facilities such as technicians, computers, internet network and training programs. These three dimensions are a collection of resources, abilities, infrastructures and individual expertise representing individual control in the use of information technology systems. In addition, the intention of individuals to participate in waqf transactions is also determined by their abilities (Osman and Muhammed, 2017). These capabilities have a very broad scope, including the availability of time, energy, financial resources and access to the information, which would be converted into intentions and lead to concrete actions (Kashif and Run, 2015; Hasan *et al.*, 2018; Hong, 2018; Musa and Salleh, 2018; Prihantoro *et al.*, 2018; Tommasetti *et al.*, 2018; Yu *et al.*, 2018; Ariffin and Lim, 2019). The focus in this study is on cash-waqf transactions, which are believed to be largely determined by the control of individual behavior. Therefore, the next hypotheses are arranged as follows:

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- H4. PBC has a positive effect on PU.
- H5. PBC has a positive effect on PEOU.
- H6. PBC has a positive effect on BI.

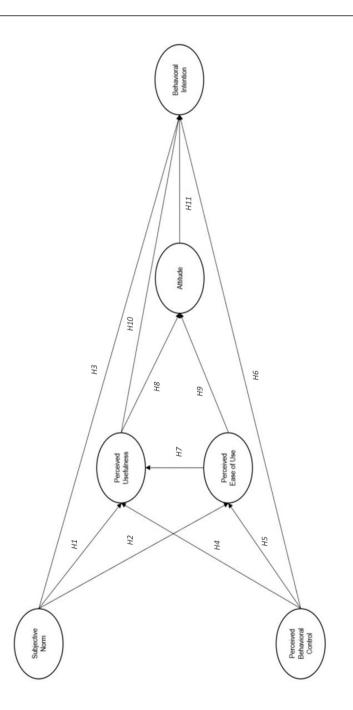
Perceived ease of use, perceived usefulness, attitude and behavioral intention

TAM was first modified by Davis et al. (1989). This model places two individual beliefs, PU and PEOU. PU is understood as a user belief on the ability of the technology used to improve his/her performance in an organizational context. Meanwhile, PEOU is defined as user confidence on the perception that using technology does not require heavy effort (Davis et al., 1989). In other words, the perceived ease of use will increase if the operation of technology can be learned easily. A technology that is used without expending extra energy is possible to increase an individual's performance (Davis et al., 1989; Venkatesh and Davis, 2000; Amin et al., 2014; Tubaishat, 2017; Coskunçay et al., 2018). Then, this statement is proven by several studies that showed a significant effect of PEOU on PU and that continually PU has a positive impact on users' intention to adopt a technology (Venkatesh and Bala, 2008; Sharma, 2017; Tubaishat, 2017; Tommasetti et al., 2018). Besides, Hsieh and Liao (2011) revealed that PU and PEOU have a positive influence on students' attitudes when purchasing products through an online system in Taiwan. According to Budi et al. (2013), the more confident the users in the ability of technology to provide more benefits, the greater the desire of individuals to accept the technology. The existence of DSBS that provide cash-wagf payment transactions is expected to encourage individuals to donate their wealth through cash-waqf because it can be accessed easily, quickly and safely. Therefore, the research hypotheses can be formulated as follows:

- H7. PEOU has a positive effect on PU.
- H8. PU has a positive effect on ATT.
- H9. PEOU has a positive effect on ATT.
- H10. PU has a positive effect on BI.

Attitude and behavioral intention

Based on the TPB, individuals' behavior is influenced by two determinants, one of which is attitude. Ajzen (1991) argued that attitude is an individual's assessment of behavior that can either be positive or negative. According to Ramdhani (2016), attitudes are formed based on individuals' beliefs about behavior. An individual tends to respond positively if he/she has a good perception on the behavior to be performed. Empirically, it is evident that a positive attitude influences an individual intention to use Islamic products (Muslichah and Sanusi, 2019), and more specifically, to participate in cash-waqf transactions in Malaysia (Pitchay et al., 2015; Shukor et al., 2017). The transformation of digital cash-waqf payments is predicted to increase cash-waqf receipts because it can be easily done without any restrictions of time and space. This condition will increasingly shape a positive attitude and good feeling toward the intention to participate in cash-waqf through DSBS. Thus, based on previous research references, the final hypothesis can be proposed as follows Figure 1:



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Figure 1.
Research model
based on the
integration of TPB
and TAM

Methodology

Generally, this study uses a quantitative research approach where the data are collected by distributing questionnaires. The population in this study is the Muslim youths in the Special Province of Yogyakarta and Central Java as the areas with the largest number of students in Indonesia. Muslim youths were chosen as respondents, given their familiarity and responsiveness to the current trends in information technology disruption and their everyday life and habits related to the use of electronic devices, especially concerning cashwaqf transactions.

Non-probability sampling was selected as a sampling design, which means that each component or element within a population does not have probabilities and opportunities to be chosen as a sample subject (Sekaran and Bougie, 2016). Hair *et al.* (2017) explained that non-probability sampling is designed for highly specific analysis eliminating the random sample pattern. Furthermore, the research uses a purposive sampling technique representing non-probability design to obtain the desired and specific information from a certain group. In other words, some provisions are specifically defined to categorize a research sample. The sample provisions related to the study are Muslims, aged under 30 years and have good knowledge and insight about the waqf derived from formal education, books, newspaper or social media. Thus, population elements that do not comply with predetermined specific provisions cannot be included in the research sample.

The questionnaire consists of six constructs with a total indicator of 21 items using a Likert scale of points 1 (strongly disagree) to 5 (strongly agree). Moreover, the questionnaire was distributed by an online survey supported by Google Form. Neuman (2006) asserted that survey methods are considered appropriate for a research design that leads to questions to measure a person's beliefs or behavior. On this basis, researchers have adapted the question indicators of each construct by referring to several previous studies with proven validity and reliability Table 2.

The PLS-SEM approach is used to test the research model using WarpPLS 7.0. PLS-SEM is commonly used in social science research, especially in the fields of marketing, strategic management, management information systems, accounting, hospitality and tourism (Sarstedt *et al.*, 2019). It is more suitable to test complex relationships, when the sample is relatively small, and when the purpose is to identify key "driver" constructs (Hair *et al.*, 2017). PLS-SEM has also been commonly used by several studies to predict behavioral intention such as Burhanudin (2020), Nurrachmi *et al.* (2020), Darmansyah *et al.* (2020), Muflih and Juliana (2020), Marmaya *et al.* (2019) and Ayo *et al.* (2016).

Constructs	Items	References
Subjective norm	3	Rouibah <i>et al.</i> (2009)
Perceived behavior control	2	` '
Perceived ease of use	5	Venkatesh and Davis (2000)
Perceived usefulness	5	
Attitudes	3	Rouibah <i>et al.</i> (2009)
Behavioral intention	3	Johari <i>et al.</i> (2015)
Number of items	21	3 (,

Table 2.Summary of construct measurements

The two main testings in PLS-SEM are the outer model and inner model. The outer model is intended to test measurement models that include validity and reliability tests through convergent validity, discriminant validity, average variance extracted (AVE) and composite reliability (CR). On the one hand, reliability is related to the consistency of the measuring instrument used, while validity simply refers to the question of how well a social reality is measured using question indicators that reflect the construct of research (Neuman, 2006). However, the inner model is focused on measuring and proving the suitability of the structural model simultaneously by calculating the results of the average path coefficient (APC), average R-squared (ARS), average adjusted R-squared (AARS), average block variance inflation factor (VIF), average full collinearity VIF (AFVIF) and path coefficient. Guidelines for determining the acceptance criteria of the outer model and inner model results are briefly explained below in Table 3.

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Result and discussion

Respondent background information

This study has successfully collected 254 responses. However, 29 response samples were eliminated by the screening questions because the respondents did not have any knowledge and insight about waqf, and thus leaving only 225 usable data used for further analysis. This sample is considered more than adequate based on Bartlett *et al.* (2010), which required a minimum sample of 118 people for a research using continuous data (data intervals and ratios). Besides, it has fulfilled Hinkin's (1995) procedure, which explained that the indicators-to-response ratio range from as low as 1:4 to as high as 1:10. On this basis, the required number of respondents in this study ranges from 85 to 210.

In terms of gender, female respondents outnumbered male respondents with a percentage of 76% and 24%, respectively. The respondents aged 18–21 years old were the most dominant with 89%, followed by the respondents aged 22–25 years old with 10% and the remaining 1% were those respondents aged 26–29 years. In terms of educational background, all respondents were active students taking the diploma level (2%), bachelor level (98%) and master level (2%).

Testing model	Measurements of model attribute	Measurements of output	Cut-off points	
Outer model (Measurement model)	Convergent validity Discriminant validity		Factor loading must be greater than 0.70 and it is significantly less than 0.05 (Hair <i>et al.</i> , 2017)	
,	Composite reliability	Latent variable coefficient	The result must be greater than 0.70 (Nunnally, 1978)	
	Average variance extracted (AVE)		The result must be greater than 0.50 (Fornell and Lacker, 1981)	
Inner model (Structural model)	Average path coefficient (APC) Average R-squared (ARS) Average adjusted R- squared (AARS)	Model fit indices and probability value	Significance level (P < 0.001)	
	Average block VIF Average full		Ideally less than 3.3	
	collinearity VIF (AFVIF)			Table 3. Rule of thumb of
	Path coefficient	Path coefficient and P Values	Significance level ($p < 1\%$, 5% and 10%)	outer models and inner models

Regarding the classification of allowance, respondents gave variations of answers. A total of 80% claimed to have an allowance of less than IDR 1,000,000, 20% of respondents had an allowance with an interval ranging from IDR 1,000,000 to IDR 4,999,999 and only 1% of respondents had an allowance above IDR 5,000,000. In terms of knowledge on waqf, 53% of respondents have learned about waqf and remaining 47% had only a little understanding of waqf. The complete listing of respondent profile is presented in Table 4.

Tests on measurement model

The model validity is assessed by AVE, loading factor (convergent validity), and square root AVE scores (discriminant validity), while the reliability is tested by considering Cronbach's alpha and CR score. To free from the convergence validity issue, all the indicators must have at least 0.50 loading scores that converge in a specific factor confirming the theory. In addition, the AVE score should be greater than 0.50. As can be seen in Table 6, the loading factor for all items is above 0.70, and the AVE scores for each

Demography	Frequency	(%)	
Gender • Male • Female	- 55 170	- 24 76	
Age • 18–21 • 22–25 • 26–29		- 89 10 1	
Education • Diploma • Bachelor • Master		- 1 98 1	
Allowance • Less than IDR 1,000.000 • IDR 1,000.000—IDR 2,999.999 • IDR 3,000.000—IDR 4,999.999 • More than IDR 5,000.000	- 179 40 4 2	- 80 18 2 1	
Have you learned about <i>Waqf</i> ? • Yes • No	_ 120 105	- 53 47	

Table 4. Respondent profile

	SN	PBC	PU	PEOU	AT	BI
SN	(0.943)	_	_	_	_	
PBC	0.495	(0.837)	_	-	_	_
PU	0.572	0.590	(0.835)	_	_	_
PEOU	0.345	0.539	0.702	(0.814)	_	_
AT	0.349	0.486	0.671	0.804	(0.868)	_
BI	0.451	0.559	0.591	0.556	0.517	(0.837)

Table 5. Results of discriminant validity

discriminant validity Note: Diagonal scores are square roots of the AVE

factor are above 0.50. Therefore, it can be said that the model is free from convergent validity issues. Meanwhile, as can be seen in Table 5, the model is also free from the discriminant validity issue since the square root AVE scores are greater than the correlation scores below the diagonal.

The reliability of a construct in using the PLS-SEM model can be determined from the resulting CR values (Table 6). The constructs are stated to be reliable if the obtained value of CR is 0.70 or better (Nunnally, 1978). The reliability test results inform that all CR in each

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Constructs	Items	Questions	Factor loading	AVE	Composite reliability	
Subjective norm	SN1	The people closest to me encouraged me to participate in digital cash-waqf	0.949	0.889	0.960	
	SN2	My family encouraged me to participate in digital cash-waqf	0.954			
	SN3	My friends encouraged me to participate in digital cash-waqf	0.926			
Perceived behavior control	PBC1 PBC2	I can participate in digital cash-waqf I have enough knowledge to participate in	0.837 0.837	0.701	0.824	
		digital cash-waqf				
Perceived ease of use	PEOU1	The features of the digital cash-waqf service are easy to operate based on my needs	0.794	0.698	0.920	
	PEOU2	I find it easy to understand the use of digital cash-waqf service	0.876			
	PEOU3	I feel that digital cash-waqf is flexible to use	0.807			
	PEOU4	It is easy for me to operate the overall steps of digital cash-waqf	0.874			
	PEOU5	In general, digital cash-waqf is easy to use	0.823			
Perceived usefulness	PU1	Digital cash-waqf allowed me to quickly participate in cash-waqf	0.867	0.663	0.908	
	PU2	Digital cash-waqf allowed an easier and more efficient payment process because it can be done anytime and anywhere	0.838			
	PU3	Digital cash-waqf increased the effectiveness of my financial transactions	0.810			
	PU4	Digital cash-waqf enabled me to optimize cash-waqf transactions	0.760			
	PU5	Overall, digital cash-waqf is very useful for me to participate in cash-waqf	0.792			
Attitudes	AT1	The service of digital cash-waqf is an innovative idea	0.845	0.753	0.901	
	AT2	The service of digital cash-waqf is a wise and appropriate step	0.889			
	AT3	I like the digital cash-waqf service because it is more practical	0.868			
Behavioural intention	BI1	I am interested in and intend to participate in digital cash-waqf	0.816	0.700	0.875	77. 1.1
	BI2	I would choose digital cash-waqf rather than conventional cash-waqf	0.858			Table Results of converge
	BI3	I plan to participate in digital cash-waqf at least once a month	0.836			validity a reliabil

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construct produce values above 0.70. Therefore, the proposed measurement model fulfills all the criteria and reliability requirements, meaning that all instruments are reliable.

The PLS-SEM output used to test the structural goodness of fit model was obtained from the model fit and quality indices (MFQI). The results of MFQI conclude that the research model is structurally good and meets the model's suitability criteria (Table 7). This can be seen from the APC, ARS and AARS values that are significantly less than 0.001. The average block variance inflation factor and AFVIF indicators also show very great results. since the values of 1.784 and 2.482 are lower than the ideal value limit of 3.30.

Structural model: hypothesis testing

After conducting a structural model test, it is found that only one hypothesis is not supported, while the other 10 hypotheses are supported (Table 8). The results showed that SN and PU relationship is not significant ($\beta = 0.041$, p-value = 0.268). Therefore, H1 is not supported. Meanwhile, H2, which states the relationship between SN and PEOU is supported since the β score is 0.430 significant at (p-value < 0.00). SN is also found to significantly affect individual intentions to make online want transactions. thus H3 is supported ($\beta = 0.237$, p-value = < 0.001). The results also reveal that PBC has a positive and significant impact on PU ($\beta = 0.198$, p-value = 0.001) and PEOU ($\beta =$ 0.382, b-value = < 0.001); therefore, it can be confirmed that H4 and H5 are supported. Moreover, PBC also has a positive and significant effect on individual intentions to pay cash-waqf through DSBS, so it can be stated that H6 is supported ($\beta = 0.267$, p-value = < 0.001).

Indicators	Scores	Results
Average path coefficient (APC)	0.306***	Confirmed
Average R-squared (ARS)	0.549***	Confirmed
Average adjusted R-squared (AARS)	0.543***	Confirmed
Average block VIF (ABVIF)	1.784	Confirmed
Average full collinearity VIF (AFVIF)	2.482	Confirmed

Table 7. Result of simultaneous structural model test Notes: ***Significance level at p-values < 0.01

Hypotheses	Path effect	β	Result
———— Н1	Subjective norm (SN) → Perceived usefulness (PU)	0.041	Not supported
H2	Subjective norm (SN) → Perceived ease of use (PEOU)	0.430***	Supported
Н3	Subjective norm (SN) → Behavioral intention (BI)	0.237***	Supported
H4	Perceived behavior control (PBC) → Perceived usefulness (PU)	0.198***	Supported
H5	Perceived behavior control (PBC) → Perceived ease of use (PEOU)	0.382***	Supported
Н6	Perceived behavioral control (PBC) → Behavioral intention (BI)	0.267***	Supported
H7	Perceived ease of use (PEOU) → Perceived usefulness (PU)	0.617***	Supported
H8	Perceived usefulness (PU) → Attitude (ATT)	0.656***	Supported
Н9	Perceived ease of use (PEOU) → Attitude (ATT)	0.211***	Supported
H10	Perceived usefulness (PU) → Behavioral intention (BI)	0.237***	Supported
H11	Attitude (ATT) \rightarrow Behavioral intention (BI)	0.097**	Supported

Table 8. Hypothesis testing

Notes: ***Significance level at p-values < 0.01; **significance level at p-values p < 0.1

Furthermore, H7, which states the relationship between PEOU on PU is supported ($\beta=0.617$, p-value = <0.001). Similarly, the effect of PEOU and PU on Attitude is also significant, and thus, it can be expressed that H8 ($\beta=0.656$, p-value = <0.001) and H9 ($\beta=0.211$, p-value = <0.001) are supported. Besides, the results of hypothesis testing show that PU has a positive and significant effect on individual intentions to use DSBS for cash-waqf transactions so that it can be ascertained that H10 is supported ($\beta=0.237$, p-value = <0.001). In the final section, the authors found a positive and significant direct relationship between individual attitudes and intentions to use DSBS for cash-waqf transactions ($\beta=0.097$, p-value = 0.071). Even though the p-value is above 0.05 (5%), this value is still lower than 0.10 (significant at the 10% level); therefore, H11 is still supported.

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Discussion

Overall, the statistical results provide an insight that Indonesian Muslim youths have the intention to adopt DSBS for cash-waqf based on the support of their closest circles and the reliability of the system.

The insignificant result between SN and PU is consistent with the finding of Abdullah *et al.* (2016). They found that SN has no positive implications on PU of e-portfolios as a learning medium for students. However, the result is not in line with Aji *et al.* (2020) in the context of e-money. There are two possible reasons for the insignificant relationship between these two. First, it is because of the Muslim youths' lack of knowledge about DSBS usage for cash-waqf payment, which is relatively new in Indonesia. Most young Muslims usually use the DSBS only for transferring funds between bank accounts, the replenishment of electronic money balances and e-commerce transactions. Second, the insignificant relationship may be attributed to the fact that the use of DSBS is not urged by personal motivation but is driven by the influential closest circles in their lives, such as family and close friends. Therefore, they are only interested in the program and decided to participate in it without knowing the true benefits of the cash-waqf application.

The results disclosed the significant effect of SN on PEOU, which confirms to the finding of Teo (2009) and Huang *et al.* (2019). It is proven that the social environment plays an important role in influencing Muslim youths' PEOU in the context of online cash-waqf payments. The finding contradicts Merhi *et al.* (2019) but it supports Osman and Muhammed (2017), Filona and Misdiyono (2019) and Yaseen and Qirem (2018) in the connection between SN and intention. The results provide insight that the social environment determines individual intentions to use technology, especially in the context of cash-waqf.

This study also revealed the significant effect of PBC on PEOU, PU, and intention to make an online cash-waqf transaction through the DSBS. These findings are supported by Rouibah *et al.* (2009), Kashif and Run (2015), and Musa and Salleh (2018). The results of this study are reinforced by several previous studies which affirm that PBC is one of the predictors that stimulates individual intention to use and operate technology (Hasan *et al.*, 2018; Hong, 2018; Prihantoro *et al.*, 2018; Tommasetti *et al.*, 2018; Yu *et al.*, 2018; Ariffin and Lim, 2019). Furthermore, PBC, which is formed through the accumulation of abilities, knowledge, and experience has been proven to play an important role in increasing PEOU and PU. Besides, it has also become an important predictor for determining individual intentions in accessing cash-waqf services through the facilities provided in the DSBS.

The results show a significant effect of PEOU on PU. In other words, if the Muslim youths perceive the easiness of making cash-waqf transactions through DSBS, it will eventually increase their perception that such a system is beneficial. This finding is

consistent with Davis *et al.* (1989), Amin *et al.* (2014); Tubaishat (2017); Coşkunçay *et al.* (2018); Prihantoro *et al.* (2018); and To and Tang (2018). The significant effect of PEOU on PU supports Gbongli *et al.* (2019) and Hajiyev and Chang (2017). Logically, it can be concluded that PEOU and PU are two very important predictors for increasing positive feelings to make a digital cash-waqf transaction (Teo, 2009; Leiva *et al.*, 2017; Hong, 2018; Yu *et al.*, 2018).

No less importantly, the results of this study revealed that PU has a positive and significant effect on the intention to use DSBS for online cash-waqf payments. This finding supports Amin *et al.* (2014), who explain that PU is one of the important variables that caused individuals to be interested in adopting the online cash-waqf system in Malaysia. Based on the results, this study argues that young Muslims perceive DSBS as a helpful application for them to increase effectiveness and efficiency in making cash-waqf payments. In summary, it can be claimed that PU is a predictor that largely determines individual decisions to adopt the technology (Venkatesh and Davis, 2000; Venkatesh and Bala, 2008; Sharma, 2017; Tubaishat, 2017; Tommasetti *et al.*, 2018).

Finally, it was found that the effect of attitude on the intention to use DSBS to make cashwaqf transactions is positive and significant. This means that the more positive the attitude of the Muslim youths toward the DSBS, the greater their intention to use it. This explanation is also confirmed by Pitchay *et al.* (2015), who explained that attitudes have a significant effect on the intention of Muslim workers in both public and private institutions to contribute to cash-waqf through wage cuts or salary schemes. Furthermore, it also supports Leiva *et al.* (2017), who stated that attitude is the main determinant that influences an individual intention to use mobile apps.

Managerial implications

This study provides several implications. First, Islamic Banking Institution must launch an easy-to-operate and user-friendly cash-waqf service feature, especially in terms of the interface design, for Muslim youths as potential customers. Second, Islamic Banking Institution should develop a more convenient, comfortable and secure digital cash-waqf system. The use of quick response (QR) code technology is highly encouraged, since this technology is very relevant for the Muslim youths who prioritize speed and practicality in transactions. Third, the Islamic Banking Institution is suggested to build a strong collaboration with the Indonesian Waqf Board (IWB), the Ministry of Religious Affairs, Productive Waqf Institutions and any other related stakeholders to develop educational and promotional programs for the young Muslim generation. This educational program can be conducted under the theme "Waqf Goes to School" or "Waqf Goes to Campus." The program should involve students at senior high school level and university level to increase waqf literacy.

Conclusion

Generally, the empirical testing proves that TPB and TAM can explain Muslim youths' decisions to adopt the DSBS for cash-waqf transactions. This research emphasizes that the intention of the young Muslim generation in accepting or rejecting technology is not only determined by the aspect of convenience and benefits but also by social influence. The closeness of the young Muslim to technology is a strong asset and becomes the main reason for improving the performance of cash-waqf in Indonesia. Finally, this research also confirms that the escalation of cash-waqf acceptance can be actualized by adopting a digital service. Perhaps, it can be a good signal for cash-waqf future development in Indonesia.

Limitations and future research agenda

Further research correlates with cash-waqf and other financial products launched by the Islamic Banking Institution, such as *Mudharabah*, *Musharakah* and *Murabahah*. Future

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PROOFREADER STATEMENT

The information appearing herein has been read and evaluated in grammar and punctuation without changing the meaning and information from the original document by Center for International language and Cultural Studies of Islamic University of Indonesia CILACS UII

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research can also attempt broadening the respondent scope by analyzing and comparing age and generational cohorts. A deeper methodology by involving strategic stakeholders into the focus group discussion will give more fruitful insights to develop a policy to improve cash-waqf transactions.

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