Technology Adoption of Sharia Mobile Payment: The Role of Perceived Usefulness, Celebrity Endorsers, and Religiosity

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Abstract

This study measures the impact of celebrity endorser, perceived usefulness, and religiosity on usage intention and actual use of sharia mobile payment. In this study, we employ Paytren, a brand name of a sharia payment application that targets Muslim users in Indonesia. This mobile payment system is owned by a well-known Ulama in Indonesia who serves as an endorser for such payment service. An online instrument was designed and distributed conveniently to the Paytren Instagram followers. In total, 338 participants completed the instrument consisting of 225 males and 113 females. Data were analysed using exploratory and confirmatory factor analyses as well as structural equation model. The study found that perceived usefulness had a significant impact on purchase intention and purchase intention had a significant effect on actual usage. In contrast, perceived usefulness, and celebrity endorser insignificantly affected usage intention. Thus, this study helps to bridge the lacuna in studies exploring payment application employing religious Ulama as an endorser. There is a paucity of studies measuring consumer behaviour in the context of sharia payment application usage.

Keywords: Sharia mobile payment, religious endorser, religiosity, technology adoption

1. Introduction

As the country has the most diverse Muslim population in the world, many companies in Indonesia offer products with sharia gimmicks, including food and beverage, restaurants, hotels, salons, banking, insurance, and refrigerators. In 2013, a sharia-compliant electronic payment (app) was introduced, and it is owned, and endorsed by an ulama (Islamic guru). In general, online payment apps provide various types of payment services, including bills for electricity, water, telephone, parking, tolls, and shopping. Online payment applications in Indonesia are available as Philosophical Readings XIII.4 (2021), pp. 1685-1696. 1685
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mobile banking, SMS banking, internet banking, and e-money (Dikdik, 2019). For the e-money format, there are several brand names that are widely known by consumers, including Go-Pay, OVO, LinkAja, Mandiri Online, DANA digital wallet, i.Saku, Sakuku, Doku, Paytren, and True Money. This study focuses on the usage of a sharia-based online payment app under the brand name Paytren. So far, Paytren is the only brand name that uses positioning as a sharia online payment application, in accordance with Islamic law. Furthermore, Kurniawan, Zulkarnaen, and Setiawan (2016) and Widyastuti (2018) argue that Paytren is considered a medium of preaching for Muslims. This study focuses on the use of a sharia-based online payment application under the brand name Paytren.

Paytren producers recruit users using a multilevel marketing system (Kholifah, 2018; Rifda, 2018), personal selling (Septiana & Firdaus, 2018), and direct selling (Rostyanta, 2019) by calling their members ‘partners’. These partners include students from universities (Masithoh, 2018). According to Masithoh (2018), these students joined Paytren as partners because they were influenced by products, prices, and promotions carried out by the producers. In addition to various payments, this sharia payment application is also used by the community to raise alms (Malazizi, Alipour, & Olya, 2018).

In this study, the authors employed perceived usefulness, religiosity, and endorsers to predict usage intention and actual usage of sharia-based payment applications. So far, there has been much research on payment applications. However, this study offers innovations. Firstly, most studies focussed on celebrity and athletes as an endorser (Boyd & Shank, 2004; O’Mahony & Meenaghan, 1997) while this study looks at an ulama. Secondly, prior studies chose mobile payment systems in general (Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva, 2014; Oliveira, Thomas, Baptista, & Campos, 2016); in this study, the main focus is on mobile payment system with a sharia approach. Therefore, this study aims to measure factors influencing behavioural intention and actual use of sharia mobile payments by employing perceived usefulness, religiosity, religious endorser, and as predictors.

2. Literature Review

a. Religiosity
Religiosity has been explored in prior studies in the field of marketing study. Understanding religiosity is important for practitioners in general, it can influence innovativeness, purchase intention and consumers’ behaviour. In this study, religiosity is linked to use intention and consumers’ actual use.

Involving employees at a university in Malaysia, Abdullah and Wahab (2015) investigate the influence of attitude, social influence, perceived behavioural control, religious obligation and religiosity towards the intention to use Islamic personal financing. Based on their investigation, only social influence had no effect on Islamic personal financing usage intention. Furthermore, Newaz, Fam, and Sharma (2016) focussed on the consumers’ intention to choose Islamic deposit products and credit products and selected religiosity and attitude as predictor variables. They demonstrated that there was a significant impact of religiosity on intention, both directly and indirectly.

Another study conducted by Mukhtar and Butt (2012) was applied theory of reasoned action to predict intention of Pakistani consumers to purchase halal products. They add inter-personal and intra-personal religiosity variables in their model. They mention that attitude, subjective norm, and intra-personal religiosity has a significant impact on intention whereas inter-personal religiosity is insignificant. Bellu and Fiume (2004) study on the behaviour of Muslim consumers in Malaysia Philosophical Readings XIII.4 (2021), pp. 1685-1696. 1686
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relating to halal food and cosmetic products. Although knowledge and religiosity significantly affect consumers’ behaviour, religiosity is more influential rather than knowledge. Besides, according to them, consumers’ behaviour towards halal food products and cosmetic product is different.

Based upon the previous studies, the following hypothesis has been formulated.

\[ H_1 – Religiosity \text{ will have a significant impact on usage intention} \]

b. Celebrity endorser

Attractiveness, expertise, and credibility are important factors to be possessed by an endorser (Lafferty & Goldsmith, 1999; Till & Busler, 1998). Prior studies reported that endorser has a significant impact on perceived value, attitude, and purchase intention (Chi, Yeh, & Tsai, 2011; Till & Busler, 1998) while endorser credibility can affect consumers’ attitude towards the advertisement (Goldsmith, Lafferty, & Newell, 2000). Further, the right endorsement will have an effective result.

In this study, endorser is designed to have a direct impact on perceived value and purchase intention. Some studies support this idea, for example, Chi et al. (2011) studied the impact of advertising endorser on perceived value and purchase intention. By applying a regression analysis, they found that advertising endorser and perceived value had a significant effect on purchase intention, while perceived value had a significant effect on whether or not an advertising endorser was added.

Rafique and Zafar (2012) measured the influence of endorser on attitude and purchase intention. In their study, endorsement was represented by physical attractiveness, source credibility, and celebrity/brand congruity. Applying a regression analysis, these scholars found that physical attractiveness, source credibility, and celebrity/brand congruity significantly affected consumers’ attitude and purchase intention. Furthermore, attractiveness of endorsers and match-up were included by Lui, Huang, and Minghua (2007) to investigate the intention of Chinese consumers to purchase products. The products included sport shoes, sport drinks, sport car, mobile phone, men’s perfume, contact lens, laptop, fashion lamp, toilet, and electric plug. They found that attractiveness of endorsers and match-up significantly influence consumers’ purchase intention.

The second hypothesis is formulated as follows:

\[ H_2 – Celebrity \text{ endorser will have a significant impact on usage intention} \]

c. Perceived usefulness

Perceived usefulness is defined as “the degree to which a person believes that using a particular system would enhance his/her job performance” (Davis, 1989, p. 320). Existing studies reported a significant impact of perceived usefulness on attitude towards use, use context, and purchase intention (Kim, Mirusmonov, & Lee, 2010; Mallat, Rossi, Tuunainen, & Öörni, 2009; Nysveen, Pedersen, & Thorbjørgensen, 2005; Schierz, Schilke, & Wirtz, 2010). In this study, perceived usefulness is linked to purchase intention.

A Korean’s study was conducted by Kim et al. (2010) was applied theory of acceptance model (TAM) to investigate people’s intention to use mobile payment involving a wide range of participants including students, employees, and public in general. In their study, perceived ease of use was linked to perceived usefulness and intention to use mobile payment, while perceived usefulness was linked to intention to use mobile payment. Guided by structural equation model analysis, perceived ease of use significantly influenced perceived usefulness and intention to use mobile payment.
mobile money (an electronic wallet service). Further, they also found that perceived usefulness significantly influenced intention to use mobile money.

Mallat et al. (2009) studied the intention of Helsinki citizens to use mobile services. In total, they examined six hypotheses. In their study, they found that perceived ease of use, perceived usefulness, compatibility, mobility, and use context significantly impacted use intention. A large portion of their study Participants were females (62%). A study conducted by Upadhyay and Jahanyan (2016) examined antecedents influencing a mobile-based transfer payment. Two of their hypotheses were the impact of perceived ease of use and perceived usefulness on usage intention. This study dominated by female participants (77%). By applying structural equation model, these scholars found that perceived ease of use and perceived usefulness significantly influence usage intention. Furthermore, Liébana-Cabanillas, Muñoz-Leiva, and Sánchez-Fernández (2018) studied users’ behavioural intention to use mobile payment system. They found that the use intention was significantly affected by perceived risk, attitude, and perceived usefulness.

Wu, Liu, and Huang (2016) examine users’ acceptance of mobile payment service in China. They chose perceived risk, perceived emotion, and perceived usefulness to predict use intention. These scholars differentiated participants into two groups based on their diffusion stage: introduction and growth. The findings involved participants in the introduction stage were that perceived risk, perceived emotion, and perceived usefulness significantly influenced use intention. In contrast, the findings involved participants in the growth stage were that only perceived usefulness that significantly influenced use intention.

Based on the above discussion, the following hypothesis is constructed:

\[ H3 - \text{Perceived usefulness will have a significant impact on usage intention} \]

d. Usage intention and actual usage

In a Mbogo (2010)’s study, perceived ease of use was linked to perceived usefulness and behavioural intention while perceived usefulness was linked to behavioural intention. Additionally, behavioural intention was linked to actual use and actual use was linked to success and growth. They found that intention to use significantly affected actual use. A case of Dutch elderly is chosen by Heerink, Kröse, Wielinga, and Evers (2008) in testing actual use of a conversational robot. For this purpose, they employ intention to use as one of the predictor variables. As a result, intention to use the technology significantly influenced actual use.

Based on the studies discussed above, the following model was formulated. More specifically, in this model, endorser, perceived usefulness, and religiosity serve as independent variables. Behavioural intention is treated as a mediator variable and actual use is a variable to be measured.

Another hypothesis is provided as follows:

\[ H4 - \text{Usage intention will have a significant impact on usage intention} \]

Figure 1 shows the proposed theoretical framework for testing. This framework builds on the results of previous research discussed above.
3. Methods

a. Sample
The authors ensured that all participants of the current study were Paytren mobile payment users. Participants were approached conveniently those who followed the official Instagram account of Paytren. Participants were asked to fill in an online instrument. This instrument consisted of questions of demographic profile, behaviour relating to Paytren mobile system, and level of agreement or disagreement relating to endorser, religiosity, perceived of usefulness, use intention, and consumers’ actual use.

b. Measures
To measure all variables, the authors adapted indicators that have been validated by prior studies. Indicators from Hunter (2009) were adapted to measure endorser, while religiosity was measured using indicators from Alam, Janor, Zanariah, and Ahsan (2012). Furthermore, indicators from Davis (1989) were adapted to measure perceived usefulness, from Newaz (2014) to measure behavioural intention. A 7-point Likert’ scale was applied for all variable ranging from 1 (strongly disagree) to 7 (strongly agree). For data collection purpose, all items were translated and adapted into Bahasa Indonesia.

c. Data Analysis
There were four steps applied to analyse the data. Firstly, exploratory factor analysis (EFA) was conducted to seek dimensions of each variable and select indicators to represent variables or dimensions. Only indicators with factor loadings of 0.4 or greater that would be retained (Hair, Black, Babin, & Anderson, 2019).

Secondly, assessing reliability tests for each dimension produced by EFA. In this study, only constructs with a score of 0.7 and greater were included for further analysis. However, factors with a Cronbach’s alpha score of 0.7 and greater would be included for further analysis.

Thirdly, the data were analysed using confirmatory factor analysis (CFA) to measure fitness of all constructs. The last step was conducting structural equation model (SEM) for measuring the theoretical framework. A fitted model requires four important criteria including a probability score of 0.05 or more (Schermelleh-Engel, Moosbrugger, & Müller, 2003) and a CMIN/DF score of ≤ 2 (Tabachnick, Fidell, & Ullman, 2007). Another two criteria are a CFI score of ≥ 0.97 (Li-tze Hu & Bentler, 1995), and a RMSEA score of ≤ 0.05 (Li-tze Hu & Bentler, 1999).
4. Results

a. Participants

In total, 338 participants took part in this study consisting of 225 males (66.6%) and 113 females (33.4%). Most participants were aged between 30 and 34 years (140 participants; 41.4%), followed by those were aged 21—30 years (102 participants; 30.2%), 45—50 years (51 participants; 15.1%), 17—20 years (37 participants; 10.9%), 51 years and older (8 participants; 2.4%).

Regarding their level of education, 109 participants (32.2%) had a bachelor degree, 203 participants (60.1%) had a high school degree and less, whilst 26 participants (7.7%) had a master degree. Also, 330 participants indicated that they had a smartphone. Through this device, participants said that they could access an e-bank services, pay bills (water, electricity, telephone, insurance, TV cable), and shopping (tickets, internet, other products).

The respondents were asked to identify the source of information used to gain information about Paytren, revealing that 121 of them (35.7%) had used social media platforms (Twitter, Facebook, and Instagram), friends (122 participants; 36.1%), family members (59 participants; 17.5%), and other sources (36 participants; 10.7%).

b. Validity and Reliability Tests

Overall, five indicators survive and form two dimensions. First dimension consisted of three items with factor loadings ranging from 0.844 to 0.940 and a Cronbach’s alpha score of 0.857. Second dimension consisted of two dimensions with factor loadings of 0.883 and 0.903 and a Cronbach’s alpha score of 0.714. These two dimensions were considered reliable (Hair et al., 2019).

Based on the EFA result (Table 1), five items survived to measure perceived usefulness with a Cronbach’s alpha score of 0.901. This construct had factor loadings ranging from 0.759 to 0.922. Furthermore, five indicators of religiosity retained with a Cronbach’s alpha score of 0.862. This construct was reliable. It had factor loadings ranging from 0.793 to 0.827. Results of EFA showed four items of behavioural intention retain. This construct had a Cronbach’s alpha of 0.926, which indicates significance. It had factor loadings ranging from 0.865 to 0.947. Additionally, two dimensions of actual use were developed. The first dimension had four items with a Cronbach’s alpha score of 0.862 with factor loadings ranging from 0.802 to 0.852. The second dimension had two items with a Cronbach’s alpha score of 0.656 and factor loading of 0.690 and 0.897.

<table>
<thead>
<tr>
<th>Table 1. Results of exploratory factor analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables and indicators</td>
</tr>
<tr>
<td>Celebrity endorser 1</td>
</tr>
<tr>
<td>EN</td>
</tr>
<tr>
<td>D4</td>
</tr>
<tr>
<td>D5</td>
</tr>
<tr>
<td>Celebrity endorser 2</td>
</tr>
<tr>
<td>EN</td>
</tr>
<tr>
<td>D2</td>
</tr>
<tr>
<td>Perceived of usefulness</td>
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</tbody>
</table>

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Using Paytren would make it easier to do my job 0.922
I would find Paytren very useful in my job 0.918
Using Paytren in my job would enable me to accomplish tasks more quickly 0.843
Using Paytren increases my income 0.802
I think that the advantages using Paytren outweighs the disadvantages 0.759
Religiosity 0.862
I always keep myself away from earning through haram (prohibited) means 0.827
I give zakat 0.816
I fast in the month of Ramadhan 0.807
I always try to avoid minor and major sins 0.805
I read the Quran 0.793
Purchase intention 0.926
I am interested to keep using Paytren 0.947
I am eager to learn more about Paytren relating to sedekah (giving to unfortunate people) 0.943
I intend to be a heavy user of Paytren 0.876
I intent to check news on Paytren application frequently 0.865
Actual use 1 0.862
I pay for shopping online using Paytren 0.852
I pay the water bill using Paytren 0.825
I pay the insurance bill using Paytren 0.817
I transfer money using Paytren 0.802
Actual use 2 0.656
I bought cellular phone credits using Paytren 0.897
I pay the electricity bill using Paytren 0.760
I bought tickets using Paytren 0.680

Figure 2 shows structural model of the proposed research model. This model achieved a fitness with a probability score of 0.248, CFI score of 1.165, CMIN/DF score of 0.996, and RMSEA score of 0.022.

c. Hypotheses Testing

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Figure 2. Structural model of the proposed model tested

Table 2 presents summary of hypotheses resting results. Paths of perceived usefulness and intention, and intention and actual usage gained critical ratio (CR) scores of 10.923 and 7.157 respectively indicating significances. In contrast, paths of religiosity and intention, and endorser and intention obtained CR scores of -0.283 and 0.543 respectively showing insignificances. In other words, H1 and H4 were accepted and H2 and H3 were rejected.

Table 2. Results of hypotheses testing

<table>
<thead>
<tr>
<th>Paths</th>
<th>Critical Ration (C.R.)</th>
<th>Probability (P)</th>
<th>Resu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived usefulness</td>
<td>Intention</td>
<td>10.923</td>
<td>***</td>
</tr>
<tr>
<td>Religiosity</td>
<td>Intention</td>
<td>-0.283</td>
<td>0.777</td>
</tr>
<tr>
<td>Endorser</td>
<td>Intention</td>
<td>0.542</td>
<td>0.588</td>
</tr>
<tr>
<td>Usage intention</td>
<td>Actual usage</td>
<td>7.157</td>
<td>***</td>
</tr>
</tbody>
</table>

5. Discussion

In general, the research model tested was a good example for an installation of consumer behaviour theories relating to mobile money. This study examined five hypotheses and all of them were significant. However, as a gender perspective was inspected, different results could be observed.

The first hypothesis predicted the impact of endorser on usage intention. In this case, endorser gave a significant impact on usage intention. This finding supports prior studies (Chi et al., 2011; Rafique & Zafar, 2012). In the case of male participants, endorser had an insignificant impact. Practically, in the case shifted by this current study, Yusuf Mansur was more relevant to endorse this mobile money services for female target market instead of males. It can be assumed that this ulama was perceived by male participants as having no expertise at any payment systems.
The second hypothesis predicted the impact of perceived usefulness on usage intention. This path is supported by existing studies (Mallat, Rossi, Tuunainen, & Öörni, 2009; Upadhyay & Jahanyan, 2016). Participants looked at Paytren as a mobile money service was usefulness and it raised their intention to use it. As promoted, the service would help users to pay various billings as well as to donate money for orphanages, mosques, and other destinations as listed.

The third hypothesis predicted the impact of religiosity on usage intention. For male participants, their religiosity had a significant impact on their intention to use Paytren. This finding is supported by previous studies (Abdullah & Wahab, 2015; Bellu & Fiume, 2004; Newaz, Fam, & Sharma, 2016). Conversely, in the case of female participants, religiosity had an insignificant impact on usage intention. For females, having Paytren service might be influenced by a hedonic value, whereas for males, this can be influenced by a utilitarian value. Besides, in relation to the C.R. score, males had a higher score on the path of perceived usefulness and usage intention than females. These paths can have an interplay connection that influence one and another. A study conducted by Haque, Anwar, and Sarwar (2015) revealed that religiosity might negatively affected purchase intention. Imported products had an attention. These scholars selected three predictor variables including country of origin image, ethnocentrism, and religiosity to be linked to purchase intention. They found that country of origin image had a positive impact on purchase intention, whereas ethnocentrism and religiosity had a negative impact on purchase intention.

The fourth hypothesis predicted the impact of religiosity on actual use. In the model of all participants, the path was significant. This findings support prior studies (Heerink, Kröse, Wielinga, & Evers, 2008; Mbogo, 2010). However, in the male and female models, the paths were rejected. Religiosity could not stimulate actual use. It should be mediated by usage intention to have an impact of actual use.

Lastly, religiosity significantly influenced usage intention as predicted by previous scholars (Alam, Mohd, & Hisham, 2011). In the model of all participants, the path was significant. In contrast, in the case of male and female participants, the path was insignificant. In general, usage intention affects actual use is in line with the theory of reasoned action, theory of planned behaviour, technology acceptance model, and UTAUT (Ajzen, 1991; Davis, 1989; El-Gayar & Moran, 2006; Fishbein & Ajzen, 1975). The more positive the intention of one to act a certain behaviour, the more certain he or she does the action.

6. Concluding Remarks
To date little attention has been paid to the implementation of mobile payment application in accordance with the sharia-compliance. Therefore, this study aimed to measure factors that influenced Paytren use intention and actual use. Participants were Paytren users. Paytren is a mobile payment application that is claimed to be sharia-compliance. In total, there were three models tested and each of them represented males, female, and all participants.

The findings indicated that usage intention for all participants, was significantly affected by endorser, perceived usefulness, and religiosity. Further, actual use was significantly affected by usage intention and religiosity. In the case of male participants, usage intention was significantly affected by perceived usefulness and religiosity. In addition, actual usage was significantly affected by usage intention. In the case of female participants, usage intention was significantly affected by endorser and perceived usefulness. Additionally, actual usage was significantly affected by usage intention.

This study makes significant theoretical contributions to the existing literature on consumer behaviour in the context of mobile money applications. Thus, the findings enhance our
understanding for sharia mobile payment. The findings might help managers to provide different types of endorsers, either based on gender or religious affiliation or school of thoughts. It is obvious that in Indonesia, there are several schools of thoughts that are followed by fans. As Paytren is a business, there should be considered breaking all barricades to gain more users. So far, there is a paucity of research measuring sharia mobile money services and employing endorsing as one of the predictor variables. Further research should be undertaken to test the findings of this study. Future study might include other variables or theories to explore this kind of service. They might also select different groups of samples, such as those who are engaged with religious groups and cohorts.

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