The Role of Islamic Religiosity on the Relationship Between Risk, Trust, and Intention to Use Digital Payments During the COVID-19 Pandemic

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Abstract

There has been limited study on risk perception faced by digital payment customers, particularly during the COVID-19 pandemic, motivating this study to analyze the role of risk and trust on the intention and use of digital payments and confirm the moderating role of Islamic religiosity in the model. This study used the Partial Least Squares - Structural Equation Model (PLS-SEM) method, including a survey of 270 customers of three digital payment service providers: OVO, Gopay, and Dana. The key finding revealed that security and operational risks significantly impacted trust, even though they did not affect the intention to continue. Another significant result uncovered that Islamic religiosity moderated the effect of operational risk on trust. In this case, customers with a lesser religiosity level were more sensitive to the risk's impact. The significant contribution of this study is an expanding theory on the relationship between perceived risk, trust, and the use of digital payments. The study also offers recommendations to practitioners on managing risk and trust to increase the likelihood of using digital payment in the future. Furthermore, practitioners must consider religiosity regarding risk management, trust, and consumer protection.

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I. Introduction

During the COVID-19 pandemic, the role of Islamic religiosity has shown its impact on the Muslim business world. The functions can be seen in small and medium-sized business studies, where religiosity positively affects firm survival (Utomo, 2020). During the pandemic period, religiosity also increases direct worship of Allah. This direct worship is reflected by activities such as reading the Qur'an, doing sunnah prayers, fasting sunnah, performing *fardu* prayers on time, and avoiding immorality (Syahrir, Rahem & Prayoga, 2020). These activities indicate the role of religiosity in daily business life.

Specifically, the marketing phenomenon during the COVID-19 pandemic shows various dynamics. In this regard, the coronavirus has changed people's lives, so empathy is essential for customers: focus on caring and giving attention, serve where customers are, pay attention in the post-COVID-19 era, and agile buildability (Diebner, Silliman, Ungerman & Vancauwenberghe, 2020). In addition, the emergence of social distance directly impacts people's lifestyles, including baby boomers and Gen X (Santosa, Taufik, Prabowo & Rahmawati, 2021). At its simplest, tourism, for example, showed that perceived risk impacted attitudes towards harmful world activities (Sánchez-Cañizares, Cabesa-Ramirez, Munoz-Fernandez & Fuentes-Garcia, 2020). Also, in other tourism, fear arousal negatively moderated the relationship between trust and intensity to fly (Hassan & Soliman, 2020). These things denote that the COVID-19 pandemic has increased risks in business.

Moreover, Fintech (financial technology) in digital payments provides opportunities for business activities, workers, employers, and the overall economy, to face the crisis while encouraging small, medium, and informal enterprises to digitize and formalize their business (Smeets & Zeisberger, 2020). Based on mobile app data from 71 countries, it was estimated that the spread of COVID-19 and government lockdowns led to an increase of between 33.1 to 36.6 percent daily download rate of fintech apps during the peak of the pandemic (Ramelli, Wagner, Zeckhouser & Ziegler, 2020).

Digital payments substitute conventional transactions (via paper money) and avoid direct contact in transactions. The increasing use and several developments indicate the development of digital payments. However, poor cellular networks, security issues, service fees, and complaint resolution are the biggest obstacles to adopting and using digital payment (Tonuchi, 2020). Also, critical issues in digital payment adoption in previous studies consist of agency credibility issues (Odoom & Kosiba, 2020), fraud (Akomea-Frimpong, Andoh, Akomea-Frimpong & Dwomoh-Okudzeto, 2019), anti-money laundering or counter-terrorist financing threats (Whisker & Lokanan, 2019), consumer protection (Bongomin & Ntayi, 2020), trust (Bongomin & Ntayi, 2019), income and education (Amoah, Korle, & Asiama, 2020; Myeni, Makate

& Mahonye, 2020), and past-experience with online fraud (Shree, Pratap, Saroy & Dhal, 2021). These obstacles indicate that risk and trust in digital payments are still a concern. In Indonesia, the potential risks of digital payments are related to consumer data security (security risk) and transaction errors (operational risk) (Napitupulu, Rubani, Khasanah & Rachmawati, 2017).

The study's gap to be answered is the limited research on digital payments related to risk during the COVID-19 pandemic, primarily associated with Islamic religiosity and trust. The main research problem is how security and operational risks affect trust, intention, and use of digital payments. Moreover, how Islamic religiosity affects this relationship. The theoretical contribution generated from this research explains the role of the risk aspect and its effect on trust, intention to use, and use of digital payments, especially during a pandemic. Likewise, this study is expected to provide a practical explanation regarding the role of religiosity in the relationship between risk and trust. The managerial implication of this research is to guide practitioners in managing risk, especially in increasing trust, intention, and use of digital payments. Also, it is hoped that practitioners can see the difference in user religiosity in advancing trust in digital payments.

Further, this paper is divided into five-section; the first describes the study background, covering the phenomenon of religiosity in the COVID-19 pandemic, digital payment, and identification of the research gap. The second section elaborates on relevant previous research findings in the literature and theory to support the phenomena and research model. The third section explains the methodological aspect of the study. The fourth elucidates the statistical analytical techniques utilized in this study and analysis of the results, and the final section presents the study conclusion and recommendations.

II. Literature Review

2.1. Digital payment risks and the impact of COVID-19

Studies in the tourism context have shown the types and impacts of customer risk during the COVID-19 pandemic. The risk of getting COVID-19, which consists of affective and cognitive risks, negatively influences the intention to do tourism, minimizing personal contact (Bae & Chang, 2021). Another study on food delivery apps (food delivery apps) showed that task-technology fit positively impacted service-use intentions (Zhao & Bacao, 2020).

Several previous studies can trace the relationship between perceived risk and trust. Studies on mobile Money revealed that risk (economic, functional, security, privacy, time, service, psychological, and social) had a negative effect on user trust in service providers. However, it did not affect economic-based trust (Abdul-Hamid, Shaikh, Boateng & Hinson, 2019). The same thing

happened to online services in China, where the total perceived risk (economic, functional, security, time, privacy, and psychological risk) negatively affected trust (Yang, Pang, Liu, Yen & Tarn, 2015). Studies on mobile shopping also showed that perceived risk was influenced by financial, psychological, performance, and time risks and negatively affected trust in terms of service, vendor, device, and disposition (Marriott & Williams, 2018). Trust also moderated the relationship between risk and intention to use online banking services (Kaur & Arora, 2020). Moreover, studies on green products uncovered that risk negatively affected trust (Marriott & Williams, 2018). Several other studies have also previously indicated the same (D'Alessandro, Girardi & Tiangsoongnern, 2012), although other studies have confirmed the relationship between trust and risk (Kaur & Arora, 2020; Pavlou, 2003; Zhang & Li, 2019). These findings signify that the higher the perceived risk, the lower the user's trust in digital payments.

Furthermore, several studies indicate the risk effect on the intention to use a service. Studies on e-marketplaces showed increased risk would reduce consumer intentions to transact (Wei, Li, Zha & Ma, 2019). Internet banking services also confirm the role of risk on intention to use with moderated confidence and acceptance of risk (Marafon, Basso, Espartel, de Barcellos & Rech, 2018). However, in online purchasing services, financial, product, security, time, and psychological risks negatively affect the intention to use (Ariffin, Mohan & Goh, 2018). Meanwhile, perceived risk affected the usage of digital currency electronic payment (Wu, An, Wang & Shin, 2022). These findings indicate that the higher the risk, the lower the intention to use digital payments again.

Hypothesis 1. The higher a) security risk and b) operational risk, the lower the trust of digital payment users during the COVID-19 pandemic.

Hypothesis 2. The higher a) security risk and b) operational risk, the lower the intention to re-use digital payments during the COVID-19 pandemic.

2.2. Trust, Intention, and Use of Digital Payments

COVID-19 has influenced trust in banks' payment services (Bijlsma, Cruijsen & Koldijk, 2022). Trust is crucial in financial technology (Dawood, Liew & Lau, 2022). The relationship between trust and intention to use can be seen in several studies, including studies conducted on mobile wallet services showing the role of trust in increasing intention to use (Singh & Sinha, 2020). Similarly, previous studies on mobile banking services comparative studies between two countries revealed the consistency that trust is an antecedent of intention to use (Merhi, Hone & Tarhini, 2019). In non-adopters, it has been confirmed that trust determined the intention to use mobile banking in the

Philippines (Chiu, Ball & Chiu, 2017). These findings indicate that the higher the trust, the higher the intention to use digital payments. In addition, trust in its relationship with use shows the same argument: the higher the trust, the higher the use of digital payments.

Moreover, the effect of intention to use on usage can be traced from several studies, including a study in Vietnam on mobile commerce, which showed that intention to use had a positive effect (Han, Thao Nguyen & Anh Nguyen, 2016). Likewise, electronic health record services confirm the role of intention to use (Venugopal et al., 2018). Based on this, hypotheses related to trust, intention, and use could be formulated below.

Hypothesis 3: The higher the trust, the higher a) the intention to use and b) the use of digital payments during the COVID-19 pandemic.

Hypothesis 4: The higher the intention to use, the higher the use of digital payments during the COVID-19 pandemic.

2.3. The Moderating Role of Religiosity

The role of Islamic religiosity has been identified in previous studies related to this study. Religiosity moderated the relationship between value and satisfaction, especially in Islamic attributes, both physical and non-physical (Eid & El-Gohary, 2015). Religiosity is a factor in life satisfaction (Krok, Zarsycka & Telka, 2021). Likewise, Islamic religiosity had a moderating role in the relationship between intention and the use of internet banking products (Soomro, 2019). In addition, the role of perceived behavioral control on the intention to behave ethically differed between those with high and low religiosity. The influence was significant on highly religious people (Kashif, Zarkada & Thurasamy, 2017). These findings indicate that religiosity encourages people to behave more ethically.

Furthermore, the relationship between religiosity and risk has been identified in previous studies. High religiosity was associated with risk-averse and vice versa with risk-taking (Miller & Hoffmann, 1995). Risk-averse used traditional methods to deal with stress, while risk-takers utilized innovative ways (Ferguson & Valenti, 1991). Religiosity is also related to trust, where trust in others is related to religious activities so that a person will believe more in those who practice religious activities (Catholic) (Brañas-Garza, Rossi & Zaclicever, 2009). In another study, inter-personal religiosity was positively related to customer trust. However, intra-personal religiosity was inversely associated with trust (Alhazmi, 2019). Thus, the moderating role of religiosity could be hypothesized as follows.

Hypothesis 5: Religiosity moderates the relationship between a) security risk and b) operational risk and trust in digital payment users during the COVID-19 pandemic.

Figure 1 describes the research model relating digital payment use behavior with its antecedents: trust, intention, and risk. This model also includes the moderating role of Islamic religiosity on the relationship between risk and trust and intention.
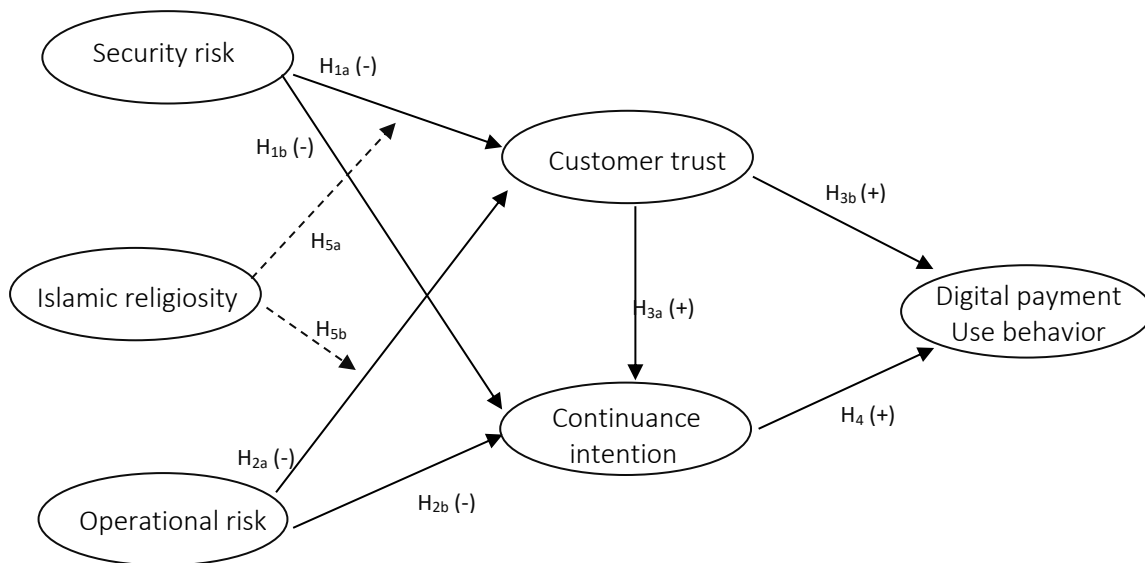

Figure 1. Research Framework

III. Methodology

3.1. Method

This study used the PLS-SEM method as a data analysis tool because the data were not normally distributed. The research data utilizing the normality test using the Kolmogorov-Smirnova and Shapiro-Wilk techniques showed that the data were not normally distributed. In the marketing and strategic management literature, the not normally distributed data is the main reason for using PLS-SEM (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). In PLS-SEM, there are five main stages of data analysis, including 1) opening or creating work files, 2) raw data reading, 3) data pre-processing, 4) defining variables and their relationships in the SEM model, and 5) performing SEM analysis and seeing the results (Kock, 2010).

3.2. Data

The researcher used the context of financial technology (Fintech) in Indonesia's digital payment (OVO, Gopay, and Dana). The researcher also used

a sampling technique with a purposive method, namely an unrestricted non-probabilistic sampling method (Cooper & Schindler, 2014; Trochim & Donnelly, 2008), selecting a number of the sample because they had criteria that were under the set. The criteria to choose sample consisted of digital payment users with the following criteria: Muslim; the primary user of mobile payment of OVO, Gopay, or Dana; aged 17 years and over; and used a car payment at least once in the last month. The description of this research sample is as in the following Table 1. Based on reviews of studies in different research areas, the median sample size may be about 200 cases (Shah & Goldstein, 2006), or minimum sample sizes for factor analysis models range from 30 to 460 cases (Kline, 2016); therefore, 270 sample was sufficient for this study.

Table 1. Sample Description

Category	Subcategory	Frequency	Percent	Cumulative
Gender	Male	63	23	23
	Female	207	77	100.0
Ages (years)	17-20	102	37.8	37.8
	21-30	164	60.7	98.5
	31-40	2	0.7	99.4
	41<	2	0.7	100.0
Occupation	Employees	28	10.4	10.4
	Entrepreneurs	6	2.2	12.6
	Students	219	81.1	93.7
	Others	17	6.3	100.0
Frequency of use in one month (times)	1	81	30.0	30.0
	2-3	72	26.7	56.7
	4-5	63	23.3	80.0
	6-7	16	5.9	85.9
	8-9	10	3.7	89.6
	10≤	28	10.4	100.0
Digital payment	Ovo	122	45.2	45.2
	Gopay	70	25.9	71.1
	Dana	78	28.9	100.0
Total		270	100.0	100.0

3.3. Model Development

The research instrument is the most crucial element in survey research and determines the success of the research. Good instrumentation will ensure the collection of the necessary data. This study employed three stages in instrument development (Malhotra, 2015). The first stage was the literature study stage, searching for literature related to the research topics: religiosity, risk perception, belief, intention, and use related to theory, their concept, and

measurement. The second was a preliminary survey. After the theoretical overview was obtained, the researcher conducted initial interviews with users of digital payments as potential respondents. Therefore, the theoretical basis obtained in the previous stage could be conformed to the research setting. Then, a research instrument was made as an initial questionnaire and discussed with experts or colleagues. The third was the test phase of the questionnaire. In the final stage of instrumentation, the researcher tested thirty respondents and then revised the items so that the research instrument could meet the qualifications of statistically sufficient validity and reliability. The revised instrument results were then used as a final questionnaire and distributed to respondents electronically. This stage was carried out to obtain measurements that met the quality of construct validity, face validity, content validity, and reliability (Trochim & Donnelly, 2008).

The operationalization of constructs (Trochim & Donnelly, 2008) or operational definitions (Zikmund, Babin, Carr & Griffin, 2010) used in this study were based on the previous study. The measurement constructs in this study used statement items adopted from previous research: security risk (Lee, 2009; Lim, Kim, Hur & Park, 2019; H. S. Ryu, 2018), operational risk (Lee, 2009; Ryu, 2018), trust, intention to use (Cao, Yu, Liu, Gong & Adel, 2018), use (Im, Hong & Kang, 2011), and religiosity (Agag & El-Masry, 2016; Rahman, Asrarhaghighi & Rahman, 2015). The overall construct was measured by a Likert scale that ranged from "strongly disagree" with a score of one to "strongly agree" with seven. The higher the score, the higher the construct's value level. A 6-point interval scale was used (1,2-3,4-5,6-7,8-9 and 10) for usage. In total, the measurement items for each construct are shown in Table 2.

IV. Results and Analysis

4.1. Results

4.1.1. Measurement model (Outer model)

Before testing the research hypothesis, the researcher examined the measurement model using validity and reliability tests to see its quality. Convergent validity and discriminant validity were used to improve the validity. The objective of the convergent validity test is to ensure that items in constructs are integrated. The integration were showed by criteria of the loading factor > 0.6 ($p < 0.05$) and the average variances extracted (AVE) value > 0.5 (Hair, Anderson, Tatham & Black, 2018). The results showed that the minimum loading factor was 0.64 (Table 3), and the smallest AVE value was 0.52 (Table 3). It indicates that the evidence satisfied the parameters or that the statement items in each construct converge.

Table 2. Construct and Items

Constructs/items	Mean	SD	Loading
Security risk			
There is a potential risk in payments using the DP application.	3.4	1.5	0.85***
There is a potential risk in processing payment transactions with the DP application.	3.4	1.6	0.77***
Proof of authenticity of DP application users is not safe.	2.9	1.3	0.77***
Proof of authenticity of transactions in the DP application is not secure.	2.9	1.3	0.82***
I am worried about misusing my financial information when using the DP application.	3.6	1.7	0.82***
I am worried that someone can access my financial information using the DP application.	4.0	1.8	0.82***
Operational risk			
The DP application provider does not want to solve the problem if I experience a financial loss.	3.4	1.5	0.82***
The response of DP application providers is prolonged when financial losses occur.	3.4	1.2	0.84***
If a financial loss occurs, I am worried about how the DP application provider will resolve it.	3.8	1.4	0.85***
Trust			
DP application is competent in providing services.	5.3	1.1	0.82***
DP application pays attention to user interests.	5.3	1.3	0.88***
DP application fulfills what it promises.	5.4	1.2	0.89***
DP application can be trusted.	5.6	1.1	0.84***
DP application does not deliver as promised. ®	4.7	1.5	0.82***
Intention to use			
I will continue to use the DP app for the next month.	5.3	1.5	0.94***
I will continue to use the DP app for the next year.	5.2	1.5	0.97***
I will continue to use the DP app in the future.	5.2	1.4	0.92***
Religiosity			
I pay zakat on time.	6.1	1.1	0.65***
I enjoy being with other people in religious relationships.	5.8	1.2	0.69***
I often attend recitations at the mosque.	4.9	1.4	0.64***
I often read religious things.	5.3	1.1	0.80***
I often see religious programs on TV.	5.4	1.2	0.80***
I need to take time to pray.	6.3	1.0	0.67***
I make time to improve my religious knowledge.	5.9	1.1	0.78***

Note: DP = *digital payment*; ***=p<0.001

Nevertheless, the amount to which items in one construct differed from others could be determined using a discriminant validity test. The value of the square root AVE > correlation with other components in the model was used

as a statistical test to demonstrate its validity (Hair et al., 2018). The square root value of AVE (diagonal score) and the correlation of each construct with other constructs are shown in Table 3, with the diagonal score being higher than the correlation score with other constructs. As a result, it implies that the items satisfied the criteria or demonstrated disparities between the model's components.

Table 3. Validity and Reliability

Construct	Code	SR	OR	TR	IR	RG
1. Security risk	SR	**0.806**	0.223	-0.314	-0.152	-0.267
2. Operational risk	OR	0.223	**0.835**	-0.156	-0.137	-0.094
3. Trust	TR	-0.314	-0.156	**0.858**	0.599	0.365
4. Intention to reuse	IR	-0.152	-0.137	0.599	**0.941**	0.372
5. Religiosity	RG	-0.267	-0.094	0.365	0.372	**0.721**
Composite reliability	CR	0.918	0.874	0.918	0.958	0.883
Cronbach alpha	α	0.892	0.783	0.880	0.935	0.844
Average variances extracted	AVE	0.650	0.698	0.737	0.885	0.520
FC VIF'S	VIF	1.236	1.092	1.809	1.703	1.391
Items	-	6	3	5	3	7

The degree to which an instrument could deliver consistent data was measured by its reliability. The composite reliability and Cronbach alpha values were used in statistical testing, with the cut-off values for these two indicators being 0.7 and 0.6, respectively (Hair et al., 2010). Table 3 demonstrates that the instrument or statement item met the criteria for composite reliability and Cronbach's alpha, indicating that it could produce consistent results. After completing statistical validity and reliability tests, it could be determined that the instrument would likely yield reliable data, allowing hypothesis testing to proceed.

4.1.2. Structural model (Inner model)

Structural models test hypotheses in one framework simultaneously. In the structural test, control variables were included to reduce the impact of these variables in the structural model. Table 4 shows the effect of these variables in the model: gender (-0.12*), occupation (-0.06ns), age (0.09ns), and type of digital payment (0.12*). Variance Inflation Factor (VIF) has also been estimated to avoid collinearity between predictor variables, and the results are as in Table 3, revealing a value that met the cut-off-value (VIF <3.3) (Kock, 2015). Figure 2 and Table 3 depict this study's hypothesis testing estimation results.

Multiple hypotheses were combined into a single framework for testing in structural models. Control factors were included in the structural test to restrict the impact of these variables on the structural model. Gender (-0.12*), occupation (-0.06ns), occupation (0.09ns), and kind of digital payment (0.12*) affected the model, as shown in Table 4. Then, the Variance Inflation Factor (VIF) was calculated to avoid collinearity across predictor variables, and the results are presented in Table 3, showing a value that met the cut-off value (VIF 3.3) (Kock, 2015). In this case, estimation results of hypothesis testing are shown in Figure 2 and Table 4.
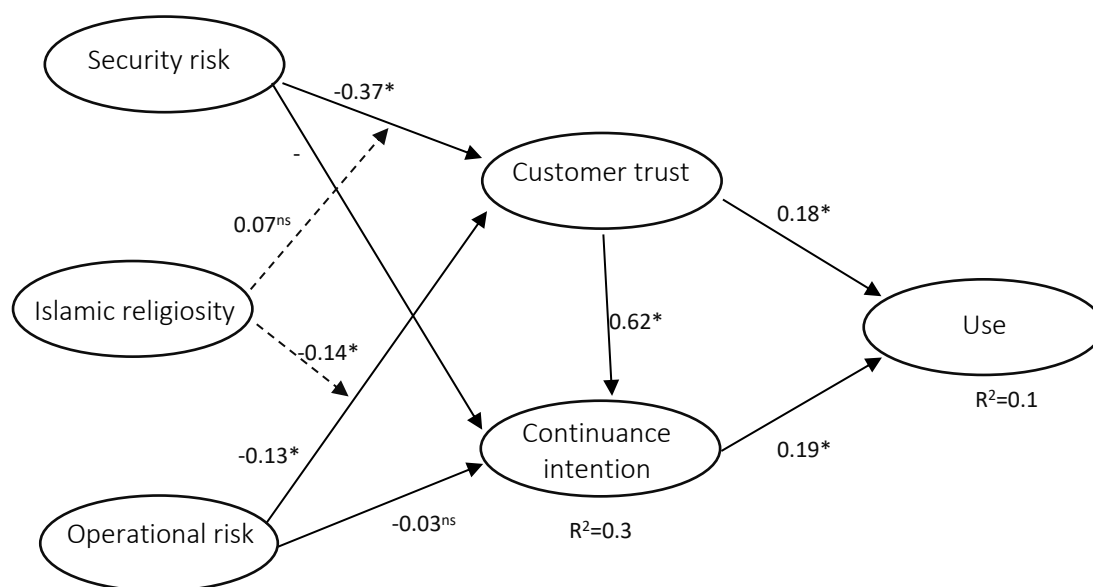

Figure 2. Hypothesis Test Results

In this study, the hypothesis testing results in the structural model revealed interesting findings, with most hypotheses being confirmed. It is confirmed that security risk had a negative effect on trust (β = -0.37, p <0.05) but did not affect the intention to use (β = 0.04, p>0.05), meaning that H1a was supported, while H1b was not supported. Then, operational risk also had a negative effect on trust (β = -0.13, p <0.05), but it was not confirmed that it had a negative effect on re-use intention (β = -0.03, p > 0.05 or not significant). Thus, H2a was supported, but H2b was not supported. The positive effect of trust on intention to use (β = 0.62, p <0.05) and use (β = -0.18, p <0.05) was also confirmed so that H3a and H3b were supported. Meanwhile, the intention to use was also confirmed to have a positive effect on use (β = 0.19, p <0.05); in other words, H4 was supported. Moreover, hypothesis testing was also carried out on the moderating role of religiosity.

Tests on the moderating role of religiosity did not confirm the relationship between security risk and trust (β = 0.07, p>0.05) but confirmed the relationship between operational risk and trust (β = -0.13, p<0.05). This result

indicates that H5a was not supported, whereas H5b was supported. Illustratively, this moderating role is shown in Figure 3. The figure depicts that the operational risk's effect on trust was higher for those with lower religiosity than for higher ones.

Table 4. Summary of Hypothesis Test Results

H	Hypothesis and path	VIF	Beta, p-value	Conclusion
H1a	Security risk → trust	1.026	-0.37^{**}	Supported
H1b	Security risk → intention to use	1.193	-0.04^{ns}	Not Supported
H2a	Operational risk → trust	1.050	-0.13^{*}	Supported
H2b	Operational risk → intention to use	1.038	-0.03^{ns}	Not Supported
H3a	Trust → intention to use	1.513	0.62^{**}	Supported
H3b	Trust → use	1.229	0.17^{**}	Supported
H4	Intention to use → usage	1.482	0.17^{*}	Supported
H5a	Religiosity*security risk → trust	1.123	0.07^{ns}	Not Supported
H5b	Religiosity*operational risk → intention to use	1.116	-0.14^{**}	Supported
	Control variable			
	Gender	1.104	-0.12^{*}	n.a
	Occupation	1.128	-0.06^{ns}	n.a
	Age	1.044	0.09^{ns}	n.a
	Digital payments	1.053	0.12^{**}	n.a

Note: H= Hypothesis; ns= not significant; n.a= not available; VIF= variance inflation factors; * = p<.05; **=p<0.01.
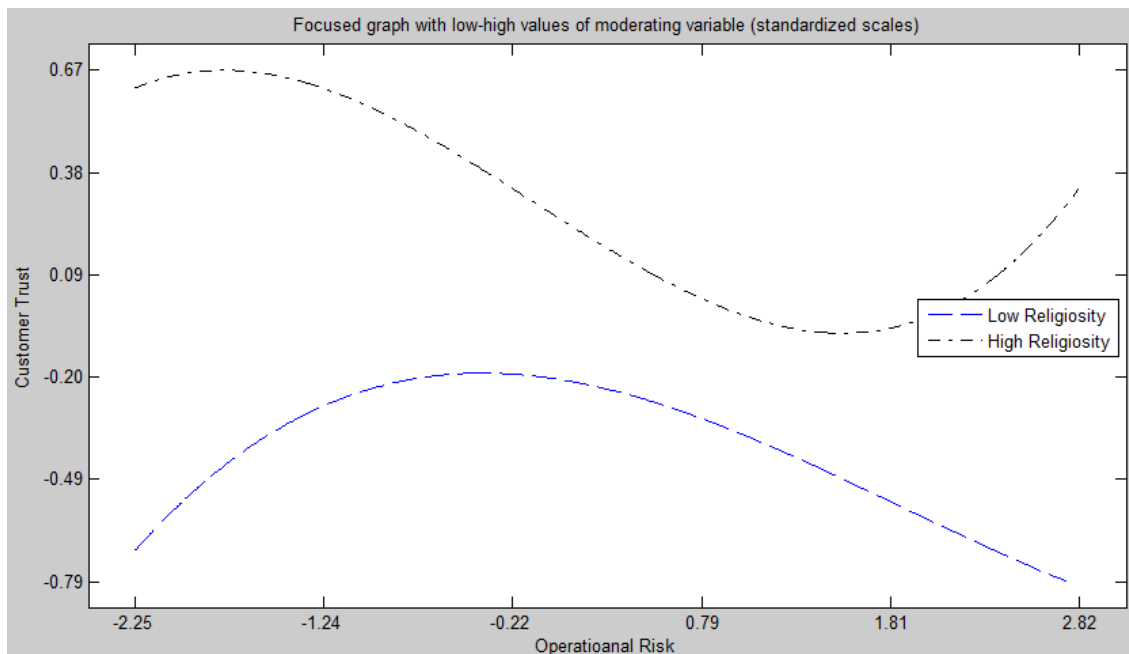

Figure 3. The Effect of Operational Risk on Trust: The Moderating Role of Religiosity

4.2. Analysis

4.2.1. The Impact of Digital Payment Risks

The fundamental question of this research is how the role of security and operational risk in digital payment marketing is related to trust and repurchase intention. This study's main findings revealed that, first, security risk had a negative effect on trust (H1a). This finding indicates that the higher the level of security risk, the lower the trust of digital payment users. In this case, the customer felt this risk in the form of risk during payment, transaction processing, authentication of users and transactions, misuse of information, and risk of abuse of access. Customers were most concerned about the risk of unauthorized access to customer financial information and irresponsible misuse of customer financial information. The results of this study confirm previous studies, stating that there was a strong relationship between quality, including security, and trust in online banking (Aboobucker & Bao, 2018; Stewart & Jürjens, 2018) and m-wallet (Hidayat-Ur-Rehman, Alzahrani, Reham & Akhter, 2022). This study also verifies the study of Abdul-Hamid et al. (2019) on mobile Money, where providers needed to protect customers' Money and personal information to maintain trust.

Second, the different findings of this study uncovered that the security risk was not confirmed to affect the intention to use (H1b), indicating that the higher the security risk did not increase or decrease the customer's intention. The higher risk in payments, transaction processing, and the possibility of misuse of information and access would potentially harm customers, but this potential loss did not affect the desire to re-use digital payment services. This finding is inconsistent with findings on technology services in Germany (Stewart & Jürjens, 2018) and in other contexts, for example, online services (Yang et al., 2015), mobile shopping (Marriott & Williams, 2018), and online banking (Kaur & Arora, 2020), and m-wallet (Hidayat-Ur-Rehman et al., 2022), although it is consistent with previous studies (Rouibah, Lowry & Hwang, 2016), especially in those with high self-confidence (Marafon et al., 2018). In addition, these findings do not confirm the principle that uncertainty to the detriment of customers reduces customer confidence. This confirmation is possible because the security risks faced by digital payment services were still in customers' hands, where the service did not involve large funds, and the use of this service was more of a habitual purchase, so customer involvement was relatively low.

Third, operational risk had a negative effect on trust (H2a), denoting that the higher the operational risk, the lower the customer confidence. In this regard, operational risks are the uncertainty of how to resolve the problem if a loss occurs and the provider's low willingness and slowness to resolve if a problem

occurs. This finding verifies the findings of previous studies (Aboobucker & Bao, 2018; Ryu, 2018). It is possible because the risk will cause losses.

However, unconfirmed operational risk reducing customer intentions to re-use services (H2b) indicates that this high or low risk did not decrease or increase customer intentions to continue using digital payment services. This result is inconsistent with the study (Ryu, 2017), stating that operational risks include barriers to the intention to use Fintech (mobile payment, mobile remittance, peer-to-peer lending, and crowdfunding). Also, this result contradicts studies asserting that operational risk (performance risk) is a barrier to the intention to re-use online banking services (Kaur & Arora, 2020). However, it is consistent with other studies in the context of Arab countries, where risk had no impact on intentions (Rouibah et al., 2016). These findings are possible because various operational uncertainties were still within customers' tolerance of digital payments and did not cause significant losses. In this case, Indonesia's top-up funds for digital payments for standard accounts (unverified member/non-upgraded accounts) are two million rupiahs.

4.2.2. The Role of Trust and Intention to Use

Regarding the role of trust, this study confirms that trust positively affected the intention to re-use (H3a), where the higher the trust, the higher the intention to use digital payments. This result means that, for customers, the extent to which the application is competent, pays attention to user interests, fulfills what is promised, and can be trusted, will be the primary determinant of the intention to re-use the service. It is because these four things will guarantee customers' benefits. This finding is similar to previous results (Chiu et al., 2017; Liébana-Cabanillas , Muñoz-Leiva, Molinillo, & Higueras-Castillo , 2022; Merhi et al., 2019; Singh & Sinha, 2020). The intention to re-use is also confirmed to increase the use of digital payments (H3b), where the higher the intention to re-use, the higher the usage of digital payments. This finding is also consistent with findings in previous studies (Han et al., 2016; Qu, Wei & Zang, 2022; Venugopal et al., 2018).

4.3.3. The Moderating Role of Religiosity

In this study, the moderating role of religiosity was not confirmed to impact the relationship between security risk and trust (H5a). This finding showed no difference in the effect of security risk on trust in customers with high and low religiosity. However, religiosity moderated the relationship between operational risk and trust (H5b). The level of religiosity (high and low) distinguished the effect of operational risk on the intention to re-use digital payment. Also, it has been shown that the impact of operational risk on

intention to use was lower for customers with higher religiosity. These findings indicate that customers with low religiosity were more sensitive to operational risk.

4.3. Implication

4.3.1. Digital Payment Risk Management

Risk management is essential to maintain and increase trust and intention to re-use digital payment customers. Things that can be done for security risk are reducing the potential risk of payment, being concerned about financial information that unauthorized persons can access and reducing customer concerns over misuse of financial information for irresponsible interests. These three things need management attention because they are the most important for customers, but the risk is still relatively high. Another important thing is that management needs to reduce risk in the transaction process, which can be done by providing guarantees and confirmations through various communications to customers. Even if customers feel the risk is not high enough for user authentication and transaction authenticity, these two things are crucial for management attention.

Operational risk reduction can be made by paying attention to aspects of solving operational problems, showing a desire and commitment to solving problems in the event of a financial loss and providing a quick response when there is a customer loss. In addition, the most important thing customers consider is how the provider solves the problem regarding operational risk, while this risk is the highest perceived risk. Management also needs to communicate on clearer, more detailed, and intensive problem-solving methods so that this aspect reduces the perception of operational risk. Further, an essential factor that needs to be communicated is management's desire and commitment to solving problems if customers experience difficulties and problems. Quick response is also a necessary concern for customers, where management needs to maintain a fast response, especially when customers experience problems.

4.3.2. Trust Management

Trust is also a concern for digital payment management because it is directly related to the intention to re-use, which is then at the level of digital payment usage. Efforts to maintain and increase trust are recommended by fulfilling the promises and commitments that have been delivered, paying attention to users' interests and increasing the competence of the service. This effort must be pursued with consistent implementation of these aspects and intensive customer communication.

4.3.3. Managing Customers Based on Religiosity

The level of customer religiosity, which is Muslim, is essential in managing the intention and use of digital payments. Regarding security risks, management does not need to differentiate the treatment of customers based on religiosity. Customers with high or low Islamic religiosity make no difference in the impact of this risk. However, management needs to provide different treatment regarding operational risk, where those with low Islamic religiosity are more sensitive to operational risk. Thus, management needs to pay more attention to managing operational risk. Identification of customers with this level of Islamic religiosity can be made by knowing through indicators of several customer activities. For example, they often see religious programs on TV, read spiritual matters, provide time to increase religious knowledge, have fun with other people in religious activities, participate in recitations at the mosque, pray, and pay zakat. More often, those who do these show a lower effect of operational risk in influencing trust.

4.3.4. Consumer Protection Implications

Consumer protection is crucial so customers feel safe and comfortable and increase financial inclusion (Bongomin & Ntayi, 2020). From a consumer protection perspective, this study recommends that security and operational risks are essential to be considered and protected by providers and policymakers in Indonesia, especially for users of digital payment services. Important aspects that need to be done related to security risks are the payment aspect, concerns about the misuse of financial information, authenticating transactions, and user authentication. Operational risk is also crucial to pay attention to, especially to solve, respond to, and solve customer problems. The principle of consumer protection must be implemented, especially in reliability, confidentiality, and security of consumer data/information and handling consumer complaints quickly (Otoritas Jasa Keuangan [OJK] 2013).

V. Conclusion and Recommendations

5.1. Conclusion

The main objective of this study is to identify the effect of security and operational risks on trust and re-use intention, which in turn on the use of digital payments. The main findings of this study confirm the negative influence of security and operational risks on trust in digital payments. However, this risk was not guaranteed to have a negative impact on the intention to re-use. In this case, trust is essential in increasing the intention to re-use and, simultaneously, determining the use of digital payments. In

addition, intention to use positively impacted the re-use of digital payments confirming previous findings in the literature. The difference in religiosity level verifies operational risk's distinguishing effects on trust. Customers with a low level of religiosity were more sensitive to the impact of this risk. For this reason, the management of digital payment providers needs to pay attention to efforts to reduce risk, increase trust, and consider aspects of religiosity in managing digital payment customers.

This study is subject to several limitations. First: the sampling technique using purposive sampling reduced the generalizability of the study results. Second, the risk in this study ignored the types of social, financial, and other risks. Third, the types of services in digital payments and collection during the COVID-19 period limited the risk selection in this study. Third, situational factors in this study were limited to using religiosity factors only. Fourth, the role of gender and the impact of digital payments companies were ignored in this study, so further research needs to test the role of this aspect.

5.2. Recommendations

For risk, practitioners need to pay attention to and reduce the negative effects of the most security concern by a customer, such as payment, access, misuse, transaction process, and authenticity. Operational risk needs to be handled, including attention and commitment to solving problems and responding. Customer trust must also be maintained by fulfilling customer expectations, commitment, interest, and service competence. In addition, religiosity is vital to be considered, specifically for those with low Islamic religiosity having more sensitive to the risk. Hence, practitioners need to promote operational aspects, and how to reduce them is essential for this type of customer.

For regulations, the government must ensure that customers are protected from mobile payment security and operational risks. In addition, some issues need to be regulated by the government, such as provider obligation to protect the customer, problem-solving protocol to mitigate risk, and providers' commitment to fulfilling customer rights.

There are four recommendations for further research. First, to increase the generality of findings, the study recommends using random sampling and a sample from customers above 30 years old. Second, this study suggests examining the role of other risks, such as economic, functional, privacy, time, psychological, social, and financial risks (Abdul-Hamid et al., 2019). Third, further studies can use other factors, such as self-confidence and level of risk acceptance (Marafon et al., 2018). Finally, further research needs to test the role of gender and digital payments difference.

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