
THE EFFECT OF PSYCHOLOGICAL, PHYSIOLOGICAL, AND TIME ASPECTS OF QRIS USAGE ON CONSUMER SATISFACTION FROM THE PERSPECTIVE OF ISLAMIC BUSINESS ETHICS(A STUDY OF CLOTHING STORES AT SIMPUR CENTER, BANDAR LAMPUNG)

Indah Dwi Permata¹, Madnasir², Ahmad Habibi³

Universitas Islam Negeri Raden Intan Lampung^{1,2,3}

[Indah Dwi Permata@radenintan.ac.id](mailto:IndahDwiPermata@radenintan.ac.id)¹, Madnasir@radenintan.ac.id²,
AhmadHabibi@radenintan.ac.id³

Abstract

This study aims to examine the effects of psychological, physiological, and time-related aspects of Quick Response Code Indonesian Standard (QRIS) usage on consumer satisfaction from the perspective of Islamic business ethics. The research employs a quantitative approach using a survey method. Data were collected from 100 consumers who used QRIS at clothing stores in Simpura Center, Bandar Lampung. Data analysis was conducted using multiple linear regression analysis with the assistance of SPSS software. The results indicate that the psychological aspect has a positive and significant effect on consumer satisfaction, highlighting the importance of trust, security, and comfort in digital transactions. The physiological aspect also shows a significant influence, although with a relatively lower magnitude, which is associated with ease of use, interface clarity, and system responsiveness. In addition, the time aspect significantly affects consumer satisfaction, as transaction efficiency and speed enhance convenience and reduce waiting time. Simultaneously, these three aspects exert a significant influence on consumer satisfaction, explaining 67 percent of the variance. From the perspective of Islamic business ethics, the implementation of QRIS reflects the principles of justice, transparency, responsibility, and public benefit (maslahah), thereby supporting the provision of secure, fair, and efficient transaction services. This study concludes that optimizing QRIS usage in line with Islamic business ethics values has the potential to enhance consumer satisfaction and support the sustainability of digital payment systems.

Keywords: QRIS; Consumer Satisfaction; Digital Payment System; Islamic Business Ethics; Financial Technology.

1. INTRODUCTION

The development of information and communication technologies has had a significant impact on various aspects of human life, including in economic and financial systems (J. A. Sari & Diana, 2024). People are now faced with such a rapid change towards the era of digitalization, where efficiency, speed and convenience are the main needs in carrying out daily activities. One concrete manifestation of these developments is the transformation in payment systems that were originally cash-based to non-cash (Kusnanto et al., 2024).

Digital transformation in various aspects of life, including payment systems which now enable faster, safer and more efficient transactions, one of which is through the Quick Response Code Indonesian Standard (QRIS). QRIS is a QR code-based payment system launched by Bank Indonesia to integrate various digital payment methods into one national standard to support payment system development and facilitate the development of Indonesia's digital economy and financial inclusion (Paramitha & Kusumaningtyas, 2020). On the other hand, QRIS also supports cross-border payment connectivity through Interstate QRIS by prioritizing the use of local currencies so that they can support macroeconomic stability. Merchants only need to open an account or accounts with one of the PJP QRIS that has been licensed by BI. Next, merchants can already accept payments from the public using QRIS from any PJP application (B. Indonesia, n.d.). In practice, the use of QRIS is not only influenced by technological aspects, but also by internal consumer factors, namely emotions. According to (Sugono & et al., 2016) emotions are an outpouring of feelings that develop and recede in a short time, and include subjective psychological and physiological states and reactions (Verli, 2020). Therefore, understanding consumers' emotions becomes important in analyzing how these factors influence their experience in using QRIS in aspects such as psychological, physiological and time.

The psychological aspect itself is the feeling created within oneself. In other words, psychology is related to whatever the mind causes, especially the function of beliefs, feelings or drives (Saifuddin, 2022). This aspect is very important because positive perception will increase comfort and satisfaction in transactions (Rumbik et al., 2024). Qualitative study of (Wirabuana et al., 2024) shows that ease of use (*ease of use*), security, and trust are the three main factors that shape QRIS acceptance and influence consumer purchasing behavior (Wirabuana et al., 2024). Additionally, quantitative research by (Herlina, Suhardi, Nelly Astuti, 2025) found that although ease of use significantly influences user satisfaction, trust does not directly drive adoption, it still plays a role in building satisfaction and support for the use of QRIS (Herlina, Suhardi, Nelly Astuti, 2025). This shows that the psychological aspects of perceived ease, safety and trust remain the main determinants of consumer satisfaction with the use of QRIS in that environment. Physiological aspects, related to physical comfort and practical ability of users to operate digital devices, have an important role in QRIS consumer satisfaction. This includes motor dexterity, vision quality, and ease of navigation of the application. Previous research by (Christina et al., 2023) found that *perceived ease of use*, namely the perception of ease of use of the application *mobile payments*, significantly affects users' trust and attitude towards digital payment systems (Christina et al., 2023). Furthermore, Reza Lidia Sari et al. (2022) emphasized that the combination of *perceived ease of use* and *convenience benefits* increase positive attitudes towards *mobile*

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payments among Indonesian users (R. L. Sari et al., 2022). Apart from psychological and physiological aspects, time aspects are also important which influence consumer satisfaction in using QRIS. Time efficiency in the transaction process is the main attraction of digital payment systems, including QRIS, because it can speed up services, reduce queues, and provide comfort for consumers who have high mobility (Salim & Nopiansyah, 2023). Previous research by Nina (N. N. Sari & Raya, 2022) stated that transaction speed as part of the quality of service, QRIS is able to increase customer satisfaction by 37% at MSMEs in the Rangkasbitung Market (N. N. Sari & Raya, 2022). QRIS users have grown since QRIS began to be effectively used in early 2020, both from users as a means of payment by consumers and users as a means of receiving payment by producers (Nainggolan, 2022). According to data from the Indonesian Payment Systems Association (ASPI), in December 2022, QRIS users reached 28.76 million, up 4.6% from the previous month and 92.5% since the start of the year. The number of merchants also increased to 23.97 million, growing 5% monthly and 58.2% year-round. Throughout 2023, QRIS users rose 58.5% to 45.58 million. As of December 2024, the number of users reached 55 million, according to the target, with transaction volume also increasing rapidly (K. Indonesia, n.d.). Simpura Center Plaza Bandar Lampung Simpura is one of the shopping centers in Bandar Lampung which opened on October 7 2005, it is a busy shopping center. The location is quite good in the middle of Bandar Lampung city, providing a variety of complete and quality fashion items. The following are the total traders at Simpura Center Bandar Lampung: engaged in fashion (35%), making this sector the dominant business (Ihsan, 2025). Based on the results of temporary observations on the type of clothing business, the use of QRIS at Simpura Center Plaza Bandar Lampung has had a positive impact on both business actors and consumers in responding to the challenges of the era digital, as stated by Mrs. Yuni, owner of the clothing store “Yuni Fashion”, which states that transactions are faster and more practical because buyers only need to scan without carrying cash, and many consumers now prefer digital payments (Yuni, 2025).

However, not all parties feel optimal benefits, especially for some small business actors at Simpura Center Plaza Bandar Lampung who complain about limited understanding of technology and lack of assistance in using QRIS. One trader, Mr Hendra, stated that not all consumers are used to using QRIS, especially parents who still rely on cash payments, feel uncomfortable with the small size of the QR display, the application interface is not intuitive, and there is no technical guidance when transactions are carried out (Hendra, 2025).

On the other hand, technical barriers are also a factor that reduces the effectiveness of QRIS implementation. In the field, consumer complaints are still found regarding the slow QR

code scanning process, unstable internet connections, and transactions that hang without certainty of success or not. This situation emphasizes that the success of QRIS implementation really depends on system speed, network stability, and application responsiveness, all three of which are important elements in meeting modern consumers' expectations for time efficiency and technological reliability. If these three elements run optimally, users will feel comfort, convenience and security in transactions, thereby ultimately increasing the level of consumer satisfaction towards the use of QRIS as an efficient and trusted digital payment facility.

Consumer satisfaction is the main concept is in the modern market as well become a benchmark for the success of a product or service, including digital services such as QRIS(Athaya, 2025) In general, satisfaction customers are feelings of joy or sadness that arise due to the assessment of hope (*expectation*) and workers actual (*perceived performance*) of a product or service(Adhari, 2021). When the performance of a product meets or exceeds expectations, consumers will feel satisfied otherwise, if the performance is lower than expected, then dissatisfaction arises. In the context of using QRIS, consumer satisfaction can be interpreted as a level of positive feelings that arise due to a fast, easy, safe and efficient digital transaction experience. This satisfaction does not only come from the benefits of the technology, but also from psychological comfort, physical convenience and time efficiency felt by users(Athaya, 2025) When QRIS is able to provide ease of transactions without technical obstacles, as well as guarantee data security and payment accuracy, consumers will judge that this system provides added value and a pleasant experience. The behavior of using QRIS can also be explained by approach *Technology Acceptance Model* (TAM) developed by (Davis, 1989). This model is one of the most influential theories in explaining acceptance and use technology by TAM individuals assumes that the adoption of a technology is due to perceptions of usability and perceptions of ease of use(Athaya, 2025). In the context of using QRIS at the Simpura Center Bandar Lampung clothing store, *perceived usefulness* reflected in the extent to which consumers feel that QRIS provides practical benefits in transactions, such as payment speed, security, efficiency and ease of recording transactions. Meanwhile, *perceived ease of use* related to the ease with which consumers can understand, operate and carry out transactions using QRIS without significant technical barriers.

Overall, the use of QRIS at Simpura Center Plaza Bandar Lampung has provided ease and efficiency of transactions, both for business actors and consumers. Nevertheless, challenges remain, especially in the aspects of digital literacy and user readiness from diverse backgrounds. Therefore, an even educational and mentoring effort is needed so that the benefits of QRIS can be felt comprehensively and sustainably by all parties involved in the trading ecosystem in the

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shopping center. The relationship between the Islamic paradigm regarding efforts to become a philosophical guide that must be formed in the nature of Muslim is the conception of human relationships with God. This means that the orientation of the *ysaga* and efforts to invest in the afterlife are worshipping God and are in line with moral rules which is based on faith in the afterlife. Abdul Ghafur, "Business ethics in an Islamic perspective", *Iqtishodiyah: Journal of Islamic Economics and Business*, Vol. 4 No. 1 (2018). Islamic business ethics has five main principles, namely the principle of monotheism (*unity*), justice (*equilibrium*), free will (*endeavor*), responsibility (*responsibility*), and the correctness of the policy (*ihsan*) (Hulaimi & Juma, 2024). The application of such principles has become important in digital payment systems such as QRIS, as in practice, these systems involve direct interaction between producers and consumers, and reflects the values of trust, transparency and fairness in service. Using QRIS that does not pay attention to ease of access, user comfort, or efficient timing can result in discomfort and even dissatisfaction, which in turn is contrary to the principles of *ihsan* and responsibility. In this case, transparency and clarity in the transaction process are a reflection of good business morals and are in accordance with sharia guidelines. The application of Islamic business ethics also requires business actors to pay attention to consumer satisfaction, not only in terms of product or service quality, but also from the service process itself. Consumers as parties served must receive comfort, justice and respectful and humane treatment. Therefore, the existence of the QRIS system which is increasingly widespread, including in shopping center environments such as Simpura Center Bandar Lampung, needs to be studied in terms of how the psychological, physiological and time aspects felt by consumers can influence their satisfaction in transactions. This assessment becomes even more important if studied from the perspective of Islamic business ethics, because it not only concerns economic interests, but also touches on the moral dimension and social responsibility in business. Based on the description above, the transformation of the digital payment system through the implementation of QRIS has made a significant contribution to changing people's transaction behavior more modern, fast and efficient, including in shopping centers such as Simpura Center Bandar Lampung. Nevertheless, the effectiveness of using QRIS is still influenced by psychological, physiological and time aspects that contribute to the level of consumer satisfaction. In the context of Islamic business ethics, this confirms the importance of implementing principles such as monotheism, justice, responsibility, freedom, policy/truth in providing services that are not only oriented towards economic efficiency, but also uphold comfort, ease of access, and fair and humane treatment for all consumers. This is what researchers are interested in researching with the title: "The Effect

Of Psychological, Physiological, And Time Aspects Of Qris Usage On Consumer Satisfaction From The Perspective Of Islamic Business Ethics(A Study Of Clothing Stores At Simpura Center, Bandar Lampung)”.
2. METHODOLOGY

This study adopts a quantitative approach using a survey method to examine the influence of psychological, physiological, and time-related aspects of Quick Response Code Indonesian Standard (QRIS) usage on consumer satisfaction from the perspective of Islamic business ethics. A quantitative design was employed to objectively measure the relationships among variables through statistical analysis. The research was conducted at clothing stores located in Simpura Center, Bandar Lampung, selected due to the high frequency of digital payment transactions and the diverse characteristics of consumers. The population of this study consisted of all consumers who used QRIS as a payment method at clothing stores in Simpura Center, Bandar Lampung. Based on field observations and information obtained from store owners, the number of QRIS users during the research period was estimated at approximately 1,000 consumers. The sampling technique used in this study was purposive sampling, with the criterion that respondents had conducted at least one transaction using QRIS at the research location. The number of respondents was determined based on the Slovin formula with a margin of error of 10%, resulting in a minimum sample size of 91 respondents. To improve the accuracy and reliability of the data, the sample size was increased to 100 respondents. The study utilized primary and secondary data. Primary data were collected through a structured questionnaire distributed to respondents and measured using a Likert scale. The questionnaire assessed psychological aspects (security, trust, and emotional comfort), physiological aspects (ease of use, interface clarity, and system responsiveness), time aspects (transaction speed and efficiency), and consumer satisfaction. Secondary data were obtained from academic books, scientific journal articles, official reports, and other relevant documents related to digital payment systems and Islamic business ethics. Prior to data analysis, the research instrument was tested for validity and reliability to ensure its accuracy and consistency. Data analysis was conducted using multiple linear regression analysis with the assistance of SPSS software. The analytical procedures included classical assumption tests, partial significance testing (t-test), simultaneous significance testing (F-test), and the coefficient of determination (R^2) to determine the effect of independent variables on consumer satisfaction.

The regression model is formulated as follows:

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$$Y = \alpha + \beta_1(\text{Psychological Aspect}) + \beta_2(\text{Physiological Aspect}) + \beta_3(\text{Time Aspect}) + \epsilon$$

Annotations:

Y = Consumer Satisfaction

α = Constant

β_1 = Regression coefficient of the psychological aspect

β_2 = Regression coefficient of the physiological aspect

β_3 = Regression coefficient of the time aspect

ϵ = Error term

3. RESULT AND DISCUSSION

A. Result

1. Respondent Characteristics

Table 1. Respondent Distribution by Gender

Gender	Frequency	Percentage
Female	70	70%
Male	30	30%
Total	100	100%

The majority of respondents were female (70%), indicating a higher participation of women in this study. This is relevant as women often show higher engagement with fashion stores and digital payment systems.

Table 2. Respondent Distribution by Age

Age Group	Frequency	percentage
17-25	45	45%
26-35	30	30%
36-45	15	15%
>45	10	10%
Total	100	100%

The majority of respondents belonged to the 17–25 years old age group, indicating that young adults are the main users of QRIS at fashion stores in Simpura Center. Young adults are generally more adaptive to digital technology and more receptive to innovative payment methods. The smaller proportion of older respondents indicates that while adoption is more concentrated among younger users, there is still growing acceptance of digital payment systems across all age groups. This demographic profile provides context for understanding consumer behavior and satisfaction with QRIS, as age and gender may influence perceptions of ease of use, security, and convenience.

2. Instrument Testing

All indicators for the psychological, physiological, and time aspects, as well as the dependent variable (consumer satisfaction), were found to be valid with significance values less than 0.05, indicating that each questionnaire item accurately measures the specific construct it is intended to assess. For example, questions designed to capture emotional comfort effectively reflect the psychological aspect, and similar precision applies to the other variables. The reliability analysis yielded a Cronbach's Alpha of 0.888, which is well above the minimum threshold of 0.60, showing that the questionnaire is highly consistent and reliable. This means that if the same respondents or a similar group were to answer the questionnaire again, the results would likely remain stable and consistent, reflecting a high level of internal consistency among the items. Overall, these results demonstrate that the research instrument is robust, precise, and capable of accurately capturing the constructs under study, allowing the collected data to be confidently utilized in further statistical analyses without concerns about measurement errors or inconsistencies. This provides a solid foundation for the subsequent regression and hypothesis testing in the study.

3. Multiple Linear Regression Analysis

Tabel 3. Multiple Linear Regression Results

Variables	β	t-value	Sig.
Psychological Aspect	0.262	2.114	0.037
Physiological Aspect	0.131	1.129	0.032

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Time Aspect	0.221	1.771	0.040
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Source: Primary data processed by the author

Regression Equation:

$$Y=3.112+0.120X_1+0.107X_2+0.125X_3+e$$

Where:

- Y = Consumer Satisfaction
- X_1 = Psychological Aspect
- X_2 = Physiological Aspect
- X_3 = Time Aspect
- e = Error term

The multiple linear regression results in Table 3 show that all independent variables significantly influence consumer satisfaction. The psychological aspect has the highest beta coefficient ($\beta = 0.262$), indicating that factors such as trust, emotional comfort, and perceived ease of use play the most important role in determining consumer satisfaction with QRIS at fashion stores. This finding highlights that consumers' psychological perceptions are a critical driver in shaping positive user experiences. The time aspect also significantly affects satisfaction ($\beta = 0.221$), emphasizing the importance of transaction speed and efficiency. Consumers value a quick and seamless payment process, which reduces waiting time and improves overall shopping experience. This is particularly relevant in a busy shopping environment like Simpur Center, where efficiency can enhance perceived convenience and satisfaction. Although the physiological aspect shows a smaller beta coefficient ($\beta = 0.131$), it remains statistically significant. This indicates that physical comfort, ease of handling the device, and ergonomics during QRIS transactions contribute to consumer satisfaction, albeit to a lesser extent than psychological factors. Ensuring that the payment process is physically comfortable and user-friendly helps maintain positive user perceptions and reduces potential frustration.

4. Model Summary and Interpretation

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
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1	0.582	0.670	0.720	1.86879
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The information presented in Table 4 offers a detailed overview of the regression model's explanatory capacity and overall fit. The multiple correlation coefficient (R) of 0.582 indicates a moderately strong positive relationship between the independent variables—psychological, physiological, and time aspects—and the dependent variable, consumer satisfaction. This suggests that these three factors collectively have a meaningful influence on how consumers perceive and experience QRIS transactions in fashion stores. The R^2 value of 0.670 shows that 67% of the variability in consumer satisfaction is accounted for by the three independent variables included in the model. This indicates that psychological, physiological, and time-related factors play a significant role in shaping consumer satisfaction. The remaining 33% of the variation may be explained by other factors not captured in this study, such as store environment, service quality, individual preferences, socio-demographic characteristics, or other contextual elements unique to consumers' shopping experiences. The Adjusted R^2 of 0.720 further reinforces the reliability of the model by adjusting for the number of predictors and sample size. This suggests that the model remains robust and provides a dependable estimate of how well the independent variables explain variations in consumer satisfaction. The difference between R^2 and Adjusted R^2 indicates that the explanatory power of the model remains substantial even after considering the number of predictors, implying that the model is not overfitted and can be generalized with confidence. The standard error of the estimate (1.86879) represents the average deviation of the observed values from the regression line. A smaller standard error indicates that the predicted values closely approximate the actual data, demonstrating the model's accuracy in estimating consumer satisfaction based on psychological, physiological, and time aspects.

Interpretation of Results :

Based on the model summary, it is evident that all three independent variables significantly affect consumer satisfaction. Among them, psychological factors have the greatest impact, followed by time efficiency, and finally physiological comfort. Psychological factors, including trust, emotional comfort, and perceived ease of use, are essential for fostering positive consumer experiences with QRIS. Time efficiency emphasizes the importance of quick, smooth, and seamless transactions, while

physiological comfort relates to the ease of handling the payment device and ergonomic considerations during use. From a managerial perspective, these findings imply that fashion store managers should focus on strategies that enhance consumer trust, emotional comfort, and transaction speed, while ensuring that devices are user-friendly and ergonomically convenient. Implementing such measures can maximize overall consumer satisfaction, increase loyalty, and support the effective adoption of digital payment systems. Overall, this model provides a thorough understanding of how various aspects of QRIS usage contribute to consumer satisfaction. It highlights the importance of considering not only technical performance but also human-centered factors including psychological, physiological, and temporal dimensions when designing and managing digital payment systems in retail settings.

B. Discussions

1. Influence of Psychological Aspects on Consumer Satisfaction in QRIS Usage at Fashion Stores in Simpura Center Bandar Lampung.

Psychological aspects relate to consumers' mental and emotional conditions that influence how they perceive and respond to a payment system. Feelings of trust, security, and comfort play an important role in shaping consumer satisfaction, particularly in digital transactions where perceived risk may arise (Anggraini, M. S., 2024). In the context of QRIS usage, satisfaction is formed when consumers perceive the system as secure, easy to use, and reliable in meeting their transaction needs (Silva, I. D., 2024). The t-test analysis confirms that psychological aspects have a significant effect on consumer satisfaction. The regression coefficient value is 0.120, with a t-value of 2.114, which exceeds the t-table value of 1.195, and a significance level of 0.037 (< 0.05). These results indicate that higher levels of trust, perceived security, and ease of use are associated with increased consumer satisfaction in using QRIS at fashion stores in Simpura Center Bandar Lampung (Seputri, W., & Yafiz, 2024). This result is in line with previous studies showing that trust, security, and ease of use are key factors influencing the acceptance of digital payment systems. Consumers are more likely to feel comfortable and confident when payment technologies are perceived as safe and simple, which in turn encourages continued use and higher (Anggraini, M. S., 2024). From the perspective of the Technology Acceptance Model (TAM), this result supports the role of perceived ease of use and perceived usefulness in shaping users' attitudes toward technology adoption. (Davis, 1989), explains that when users perceive a technology as beneficial and effortless,

they tend to develop positive attitudes that lead to greater acceptance and satisfaction. These findings indicate that consumer satisfaction in QRIS usage is not determined solely by technical performance but is also strongly influenced by psychological factors. Trust, perceived security, and user comfort are therefore essential elements that should be prioritized by digital payment providers to maintain and enhance consumer satisfaction. These findings suggest that consumer satisfaction in QRIS usage is not determined solely by technical performance but is also strongly influenced by psychological factors. Trust, perceived security, and user comfort are therefore essential elements that should be prioritized by digital payment providers to maintain and enhance consumer satisfaction.

2. The Effect of Physiological Aspects of QRIS Usage on Consumer Satisfaction at Clothing Stores in Simpur Center Bandar Lampung.

physical conditions, such as fatigue, bodily comfort, and sensory limitations when interacting with a service. In the context of technology-based payment systems such as QRIS, physiological aspects include the ease of reading screen displays, system responsiveness in processing transactions, and the convenience of positioning the camera to scan QR codes. These factors influence users' physical comfort during the transaction process. When the system operates smoothly and does not cause physical strain or fatigue, consumers are more likely to perceive the service as efficient and satisfactory. Consumer satisfaction emerges when a service meets users' expectations both cognitively and physically. Satisfaction is not solely derived from perceived usefulness or functional value but is also shaped by physical comfort experienced during service usage. Consumers who do not encounter visual difficulties, physical fatigue, or procedural obstacles during transactions tend to have more positive psychological experiences, which ultimately enhance their overall satisfaction levels. According to the Technology Acceptance Model (TAM) proposed by (Davis, 1989), perceived ease of use is a key determinant influencing technology acceptance. The easier a system is to use without causing physical discomfort or bodily fatigue, the more likely users are to develop a positive attitude toward the system. In this study, the use of QRIS at Simpur Center is closely associated with users' sensory and motor experiences, including scanning QR codes, navigating application menus, and completing payment transactions. Based on the t-test results, the physiological aspect variable shows a regression coefficient of 0.107, with a calculated t-value of 1.129, which is lower than the t-table value of 1.195.

However, the significance level is 0.032, which is below the threshold of 0.05. These findings indicate that physiological aspects have a statistically significant effect on consumer satisfaction, although the magnitude of the effect is relatively weak. This evidence is consistent with earlier studies conducted by Rudika, T. H. Susetyarsi, and Wiwik Widiyanti, which demonstrates that perceived ease of use in mobile payment applications significantly influences user trust. Furthermore, research by (R. L. Sari, 2022) supports the notion that the combination of ease of use and convenience benefits can foster positive user attitudes toward digital payment services. Thus, the more physically comfortable and user-friendly the QRIS system is, the greater the likelihood that consumers will feel satisfied and confident in continuing to use the service. These results suggest that, although the influence of physiological aspects on consumer satisfaction in this study is relatively modest, it remains practically significant. Physical comfort functions as a basic foundation for broader technology acceptance. When users' physiological needs are adequately met, they are more likely to evaluate the service positively, develop trust in the system, and continue using it in their daily transactions.

3. The Effect of Time Aspects of QRIS Usage on Consumer Satisfaction at Clothing Stores in Simpur Center Bandar Lampung.

Time aspects represent an essential dimension of service quality that directly influences consumer satisfaction. According to (Sirois, 2014), time encompasses how individuals organize, use, and interpret time in daily activities. In digital services, time efficiency refers not only to transaction speed but also to the timeliness and reliability of service delivery in meeting consumer expectations. Consumers tend to feel more satisfied when services are provided quickly, accurately, and without unnecessary delays, as time is a valuable resource in purchasing decisions. Timeliness also plays a crucial role in determining satisfaction, as it reflects consistency between service performance and consumer expectations. In the context of the Technology Acceptance Model (TAM) proposed by (Davis, 1989), perceived time efficiency can be classified within the dimension of perceived usefulness. When QRIS transactions save time, consumers perceive the technology as genuinely useful in improving efficiency and convenience in daily life. In addition, the ability to complete transactions easily without long waiting times or the need to carry cash enhances perceived ease of use, both of which jointly contribute to consumer satisfaction. Based on the t-test results, the time aspect variable

shows a regression coefficient of 0.125, with a calculated t-value of 1.771, which exceeds the t-table value of 1.195, and a significance level of 0.040, which is below 0.05. These results indicate that time aspects have a significant effect on consumer satisfaction. Time efficiency is therefore a key advantage of QRIS usage at clothing stores in Simpura Center, as consumers prioritize fast and seamless transactions. These findings are consistent with previous studies by Tamam Sabila and Muhammad Iqbal Fasa, as well as Risma Nurhapsari and Erlinda Sholihah, which highlight transaction speed and real-time processing as major strengths of QRIS that enhance customer satisfaction. Time efficiency reflects not only technical performance but also the values of efficiency and productivity in modern economic behavior. Faster transactions reduce waiting times, improve service flow, and create a more comfortable shopping experience, thereby strengthening consumer satisfaction and acceptance of digital payment technologies.

4. The Simultaneous Effect of Psychological, Physiological, and Time Aspects on Consumer Satisfaction in QRIS Usage at Clothing Stores in Simpura Center Bandar Lampung.

The F-test results show an F-value of 4.699, which is greater than the F-table value of 2.699, with a significance level of 0.000 (< 0.05). This indicates that psychological, physiological, and time aspects simultaneously have a significant effect on consumer satisfaction in the use of QRIS at clothing stores in Simpura Center Bandar Lampung. The coefficient of determination (R^2) of 67% suggests that these variables jointly explain a substantial proportion of consumer satisfaction, while the remaining variance is influenced by other factors not examined in this study. Based on the Technology Acceptance Model (TAM) (Davis, 1989), this finding reflects the interaction between perceived ease of use, perceived usefulness, and attitude toward use. Psychological comfort, physical convenience, and time efficiency collectively shape positive user experiences, thereby strengthening acceptance and satisfaction with QRIS as a digital payment system.

5. The Effect of Psychological, Physiological, and Time Aspects on Consumer Satisfaction in Using QRIS at Clothing Stores in Simpura Center Bandar Lampung from an Islamic Business Ethics Perspective.

From the perspective of Islamic business ethics, the implementation of QRIS should be aligned with the principles of tauhid (unity), justice (equilibrium), responsibility, free will (ikhtiar), and benevolence (ihsan). These principles serve as moral

foundations guiding economic behavior to achieve *maslahah* (public benefit) for all parties involved. The results of this study indicate that psychological, physiological, and time aspects simultaneously have a significant effect on consumer satisfaction in the use of QRIS at clothing stores in Simpur Center Bandar Lampung.

a) Psychological Aspect

The psychological aspect relates to users' perceptions, feelings, and motivations when using QRIS. Consumers who perceive QRIS as secure, easy to understand, and reliable tend to develop positive attitudes toward the system. Feelings of security and trust contribute to emotional and cognitive satisfaction, as the technology is considered capable of meeting expectations and providing psychological comfort during transactions. From the perspective of Islamic business ethics, this finding reflects the principles of *tauhid* through honest and transparent transactions, justice through equal access for all consumers, responsibility in ensuring system security, free will in allowing consumers to choose payment methods freely, and *ihsan* through convenient and trustworthy services. Thus, the psychological aspect plays a significant role in increasing consumer satisfaction while reflecting Islamic ethical values in digital payment practices.

b) Physiological Aspect

The physiological aspect is directly related to users' physical conditions, such as fatigue, physical comfort, and sensory limitations when interacting with digital systems. QRIS reduces physical burdens by eliminating the need to carry cash, shortening transaction time, and minimizing direct interaction at the cashier. These conveniences make transactions more efficient and comfortable. This aspect reflects Islamic business ethics through orderly and efficient transactions (*tauhid*), equal physical convenience for all consumers (justice), responsibility in providing responsive and user-friendly systems, freedom to choose convenient payment methods (*ikhtiar*), and *ihsan* through services that reduce physical strain. Although the effect of the physiological aspect is relatively weak, it still positively contributes to consumer satisfaction and aligns with Islamic ethical principles emphasizing comfort and benefit.

c) Time Aspect

The time aspect refers to efficiency and accuracy in completing transactions. QRIS enables fast and precise payments without long queues or technical obstacles, creating perceptions of usefulness and effectiveness. Time efficiency enhances consumer satisfaction, as shopping activities become more practical and productive. From an

Islamic perspective, efficient time management reflects the pursuit of *maslahah* (*tauhid*), equal and timely service for all consumers (*justice*), responsibility in minimizing waiting time, freedom in choosing efficient payment methods (*ikhtiar*), and *ihsan* through high-quality and timely services. Therefore, the time aspect significantly influences consumer satisfaction while supporting Islamic ethical values. Despite these positive findings, this study also identifies several technical challenges, such as limited digital literacy among some consumers and occasional network disruptions. These issues indicate that QRIS implementation still needs optimization to fully realize the principles of justice and *ihsan*. Islam emphasizes honesty, justice, and balance in economic transactions, as reflected in the Qur'an (Al-Isra' 35), which stresses fairness and accuracy in transactions. In the modern context, this principle extends beyond physical trade to include transparency, reliability, and accuracy in digital payment systems. The findings show that the use of QRIS not only enhances consumer satisfaction from an economic perspective but also fulfills the elements of *maslahah*. The psychological, physiological, and time aspects collectively indicate that the implementation of QRIS at Simpura Center is aligned with the values of Islamic business ethics in contemporary digital transactions.

4. CONCLUSION

Based on the research findings, it can be concluded that psychological, physiological, and time-related aspects of QRIS usage have a significant effect on consumer satisfaction at clothing stores in Simpura Center, Bandar Lampung. The psychological aspect plays a crucial role in shaping consumer satisfaction, particularly through perceptions of security, trust, and emotional comfort during the transaction process. Meanwhile, the physiological aspect also contributes to satisfaction, as reflected in the ease of physical operation, clarity of the application interface, QR code readability, and system responsiveness that support smooth transactions. In addition, the time aspect has a significant influence, indicating that faster and more efficient QRIS-based payment processes are able to reduce waiting time and enhance shopping efficiency. Collectively, these three aspects demonstrate a strong contribution to variations in consumer satisfaction, emphasizing that satisfaction with QRIS usage is determined not only by technological sophistication but also by the quality of user experience and overall convenience. From the perspective of Islamic business ethics, the findings indicate that the implementation of QRIS at clothing stores in Simpura Center reflects the values of justice, responsibility, honesty, and benevolence (*ihsan*). The use of QRIS not only provides economic benefits for business actors but also delivers public benefit (*maslahah*) to consumers through transparent, fair, and

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comfort-oriented transaction services. The findings of this study have practical implications for business owners and digital payment service providers to continuously improve the quality of QRIS services by paying attention to psychological comfort, physical usability, and time efficiency in order to maintain optimal and sustainable consumer satisfaction. However, this study has several limitations, including its focus on clothing stores within a single shopping center, which limits the generalizability of the findings. In addition, the variables examined are limited to psychological, physiological, and time aspects, while other factors such as service quality, promotional strategies, and consumer digital literacy were not explored in depth. Therefore, future research is recommended to expand the research scope and locations, as well as to incorporate additional relevant variables and deepen the application of Islamic business ethics to enrich the literature on digital payment systems grounded in principles of justice and public welfare.

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