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The effect of E-service quality on E-loyalty and its impact on willingness to pay: The role of E-satisfaction as a mediator (Case study on Qaris users in Indonesia)

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Abstract

This research aims to analyze the influence of E-service quality on E-loyalty and its impact on willingness to pay by utilizing E-satisfaction as a mediating variable among QRIS service users in Indonesia. The research sample was 201 respondents who met the sample criteria. Data was obtained through distributing questionnaires online via Google Form. The data was tested statistically via Smart PLS. The research results show that E-service quality partially has a significant influence on E-satisfaction and E-loyalty. This research found that E-satisfaction has a significant effect on E-loyalty. Besides that, E-loyalty has a significant effect on willingness to pay. This research also involves E-satisfaction as a mediating variable. The results show that E-satisfaction mediates the influence of E-service quality on E-loyalty.

Keywords: E-loyalty; E-satisfaction; E-service quality; QRIS; Willingness to pay

1. Introduction

The rapid growth of information technology has encouraged the Indonesian government to adopt payment system digitization to accelerate economic growth and digital finance. (Natakusumah et al., 2023). The development of the Quick Response Code Indonesian Standard (QRIS) service by Bank Indonesia can be considered as a strategic response to this trend. QRIS can simplify the online transaction process, increase efficiency, and provide convenience for consumers. This initiative is an important step in meeting the needs of a growing market, as well as accommodating changes in consumer behavior that increasingly lead to the use of technology in transactions.

The use of QRIS can simplify the online transaction process in an efficient way. (Natakusumah et al., 2023). Shoppers only need to scan the QR code using a smartphone, thus reducing the need to remember or enter payment details manually. Thus, QRIS can provide significant convenience for consumers. Users do not need to carry physical cash or cards, just use their smartphones to make payments. It makes the payment process faster and more practical which encourages them to continue using it. Here is the growth trend of transaction value using QRIS in Indonesia.

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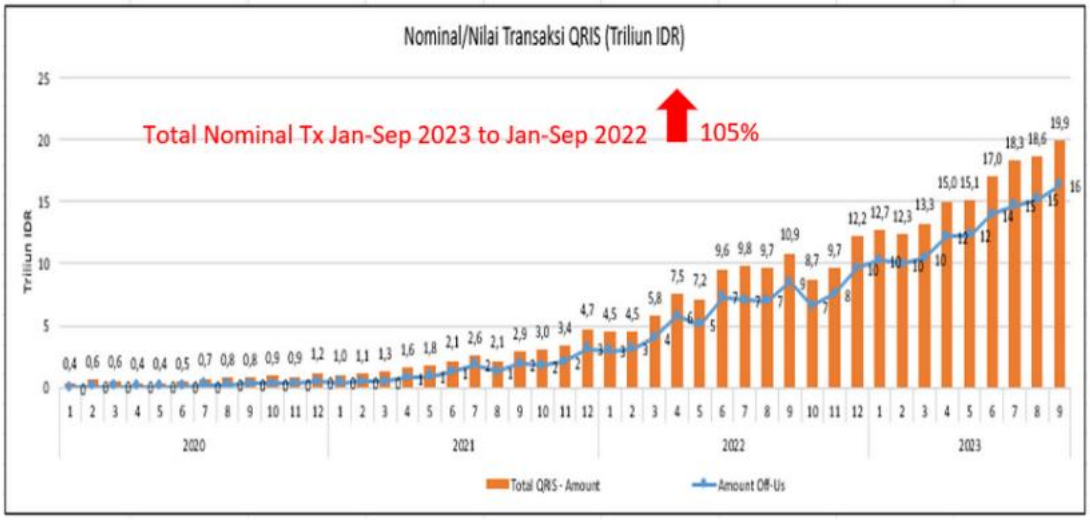

Source: Indonesian Payment System Association (ASPI) (2022)

Figure 1 Trend of QRIS Transaction Value in Indonesia Period January 2020-September 2023

Referring to Figure 1. shows significant growth in the use of QRIS in Indonesia, reaching a record high in September 2023 with transaction value reaching Rp19.9 trillion. The growth in transaction value during the period January to September 2023 has increased by 105% compared to the period January to September 2022, reflecting the rapid adoption and high public trust in QRIS. While QRIS usage growth is at a record high, the role of e-loyalty in sustaining and increasing QRIS usage in Indonesia is critical and requires further understanding.

In the context of digitalization, e-loyalty can encourage users to make repeated electronic transactions in the future. E-loyalty is a user's commitment and attitude towards using products or services offered through various websites (Li et al., 2015). (Li et al., 2015)E-loyalty is the commitment and attitude of users towards using products or services offered through various websites (Li et al., 2015), and can be the key to ensuring repeat electronic transactions in the future (Sadeghi et al., 2018).. Users who feel emotionally or functionally attached tend to be more loyal and are more likely to give recommendations to pay using QRIS. This influence can help expand the customer base and create a positive domino effect.

Building and maintaining loyalty is of strategic importance in the field of marketing (Lee & Wong, 2016). Customers who are loyal to online services tend to be more willing to pay for the products or services offered. Customers will be willing to use the payment method regularly. Previous findings show that e-loyalty can encourage users to be willingness to pay. (Malarvizhi et al., 2022).. However, along with the increased use of QRIS in making payments, e-service quality becomes a critical factor in maintaining and increasing user loyalty.

E-service quality is explained as the customer's assessment of the extent to which the seller provides efficient products and effective and appropriate electronic services on the website and in service delivery. (Raza et al., 2020). The success of online transactions using QRIS depends not only on the product or service offered, but on the experience provided to users during online interactions. This includes all aspects of electronically delivered services, including user interface, transaction speed, security, and customer support. Therefore, e-service quality plays an important role in building e-loyalty.

Previous findings show that e-service quality has an effect on e-loyalty (Anser et al., 2021; Khan et al., 2019). Contrary to the findings by Chan et al. (2022); Al-Hawari (2014) that e-loyalty is not influenced by e-service quality. The results of previous research identify discrepancies in previous findings, which indicate the need for further research. Therefore, it is necessary to use a mediating variable in the form of e-satisfaction as a link between e-service quality and e-loyalty.

According to Alalwan (2020) e-satisfaction is a key predictor in building customer loyalty. Boon-itt (2015) defines e-satisfaction as the accumulation of every transaction that users make online. Users who are satisfied with their experience will be more likely to make repeat transactions in the future, supporting business growth and customer retention. (Trivedi & Yadavi, 2020). Therefore, e-satisfaction helps understand how service quality directly affects e-service quality and in turn affects e-loyalty. Previous findings prove that e-satisfaction mediates the influence between

e-service quality on e-loyalty (Agarwal & Dhingra, 2023; Nasution, 2019). Contrary to the findings by Ashiq & Hussain (2023); Alnaim et al. (2022) that e-satisfaction does not mediate the influence between e-service quality on e-loyalty.

It identifies a gap in the literature regarding the consistency of previous findings on the relationship between e-service quality, e-satisfaction, and e-loyalty and its impact on willingness to pay. This research provides an important impetus to fill the knowledge gap and understand the different contexts in the dynamics of QRIS usage. Therefore, the researcher conducted a study that can be considered a valuable contribution to the current understanding of the dynamics of online transactions, QRIS usage, and factors that influence e-loyalty and its impact on willingness to pay among QRIS users in Indonesia.

This framework reflects the relationship between variables in the study, highlighting the role of e-service quality as a key predictor of e-loyalty and its impact on willingness to pay, with e-satisfaction as a mediator in articulating the impact of e-service quality on e-loyalty in QRIS users. Through this model, research can delve deeper into the factors that influence and mediate QRIS usage and user loyalty in Indonesia.

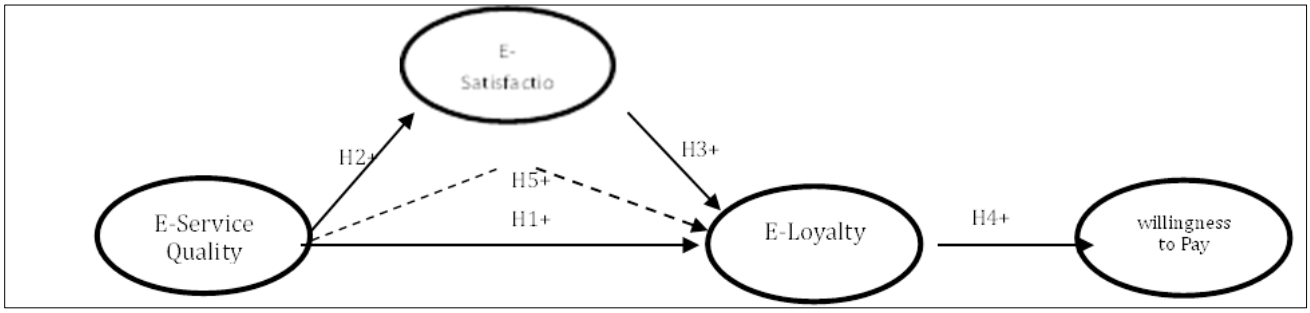

Figure 2 Thinking Framework Model

2. Methods

This research can explore how effectively QRIS is accepted by people in Indonesia in payment transactions. The researcher conducted sampling. Sampling was conducted in the research for several main reasons, namely to be more effective and efficient. The research sample is non-probability sampling due to ease of access, time savings and research cost efficiency. Sampling in this study using purposive sampling method or based on certain criteria. The criteria for respondents who became research samples were QRIS users who were ≥ 18 years old and had used QRIS at all banks throughout Indonesia with a minimum of three transactions in the last month.

This research uses primary data. Primary data is data collected directly by researchers from the first source (Creswell, 2014). (Creswell, 2014). Types of primary data can vary depending on the way the data is collected and its nature. This research uses a survey through distributing questionnaires to respondents. The survey was conducted by distributing questionnaires via google form to respondents. The questionnaire contains two parts. The first part contains the respondent's personal data while the second part contains the contents of the statement on each variable to determine the respondent's perception of the variable under study.

This study uses independent, dependent and mediating variables. Independent variables are variables that can affect other variables or are referred to as independent variables. The dependent variable is a variable that can be influenced by other variables or referred to as the dependent variable, while the mediating variable is a variable that can connect between the two. This study uses e-service quality variables as independent variables, e-loyalty and WTP as dependent variables, and e-satisfaction as a mediating variable.

Table 1 Operational Definition and Measurement of Research Variables

Variables	Definition	Item	Indicator	Statement	Source
Willingness to Pay (WTP)	The amount of money or percentage of the transaction value that users are willing to pay as an additional fee for using QRIS	WT1	Acceptable cost	I am willing to pay slightly higher fees before switching to another service	Malarvizhi et al. (2022)
		WT2	Acceptable cost difference	I am willing to pay higher transaction fees on QRIS services	
		WT3	Quality and functionality factors	I trust the QRIS service in terms of quality and functionality compared to other services	
E-loyalty	The level of frequency of using QRIS in transactions, the level of recommendation to others, or the level of desire to continue using QRIS in the future	LO1	Repurchase behavior	I will transact again using QRIS services in the future	Ganesh et al. (2000)
		LO2	Statement of being a loyal customer	I will still use QRIS services in future transactions	
		LO3	Not price sensitive	I continue to use the QRIS service even though the costs incurred have changed	
		LO4	Resistant to persuasion	I will not be swayed by inducements to use products other than QRIS services	
		LO5	Spread positive information	I will spread positive information to others about the benefits of using QRIS services	
E-satisfaction	User satisfaction level with the experience of using QRIS in the payment process	SA1	A Pleasant Transaction Experience	I feel happy transacting using QRIS services	Al-dweeri et al. (2019); Boon-itt (2015)
		SA2	Transaction Satisfaction	I feel satisfied transacting using QRIS services	
		SA3	Recommend to Others	I would recommend transactions using QRIS services to others	
		SA4	Overall Good	I feel that overall transactions using QRIS services are satisfying for me	
E-service quality	The level of service quality provided by QRIS in facilitating the electronic payment process	SQ1	Speed	Transaction processing using QRIS services with fast time	Boshof (2007)
		SQ2	Reliability	Easy to use QRIS services in transactions	
		SQ3	Efficiency	Using QRIS services for transactions can provide user time efficiency	
		SQ4	Fulfillment	QRIS services can fulfill users' desire to conduct various financial transactions	
		SQ5	System availability	QRIS service provides features that are available 1x24 hours	
		SQ6	Privacy	QRIS service is safe to use in transactions	

This research was tested through the Smart PLS program. There are three stages. First, test the outer model with three testing methods used to evaluate the feasibility of the instrument, namely convergent validity, composite reliability, and discriminant validity. Second, test the inner model by evaluating the feasibility of the structural model, namely R Square, Q Square, and Goodness of Fit (GoF). Finally, hypothesis testing to test the relationship between variables and prove the hypothesis proposed in the study. In the context of SEM analysis using the Smart PLS method. This test is carried out multivariate hypothesis testing with the criteria that the P-value ≤ 0.05 then the hypothesis is accepted.

3. Results

3.1. Respondent Characteristics

This study involved 201 respondents who are QRIS users, where data was collected through an online questionnaire using google forms. The respondent descriptions help researchers to understand who is using QRIS based on various demographic variables such as gender, age, education level, occupation, and length of QRIS usage. This information is important to know which segment of the population uses the service the most. Based on Table 2 shows that the description of respondents based on gender is mostly dominated by female gender (111 respondents; 55.2%); aged 18 years to 30 years (115 respondents; 57.2%); have an undergraduate or postgraduate education (122 respondents; 60.7%), and are dominated by students or students (60 respondents; 29.9%), followed by self-employed (50 respondents; 24.9%). In this study, respondents in using QRIS mostly used between 1 year and 3 years (113 respondents; 56.2%), these results indicate that QRIS is a payment system introduced by Bank Indonesia in 2019, so most new users began adopting this technology in the last 1 to 3 years. Users who have used QRIS for more than 3 years are a minority, considering that QRIS itself has not been introduced for so long.

Table 2 Description of Respondents (N=201)

Characteristics	Category	Frequency	%
Gender	Male	90	44.8
	Female	111	55.2
Age	18-30 years old	115	57.2
	31-45 years old	64	31.8
	46-60 years old	16	8.0
	>60 years	6	3.0
Education	SD	5	2.5
	SMP	18	9.0
	SMA/SMK	56	27.9
	Bachelor/Postgraduate	122	60.7
Jobs	Student/MHS	60	29.9
	PNS	32	15.9
	SOE Peg	35	17.4
	Private Peg	24	11.9
	Self-employed	50	24.9
Length of QRIS Usage	<1 year	48	23.9
	1-3 years	113	56.2
	>3 years	40	19.9
Total		201	100%

3.2. Outer Model Test Results

The outer model test was conducted to evaluate the validity and reliability of the research instrument with three main methods, namely: convergent validity, composite reliability, and discriminant validity. The following are the results of the outer model test conducted. The research results in Table 3 show that the convergent validity evaluation on the four main variables, namely service quality, customer satisfaction, customer trust and customer loyalty, has a loading factor value> 0.50, so these results can be concluded that the research data meets the convergent validity criteria. The second evaluation is composite reliability with a Cronbach Alpha value> 0.60 and aρ c value> 0.70. These results indicate that the research data meets the composite reliability criteria. The last evaluation is discriminant validity with an AVE value > 0.50, which means that the research data meets the discriminant validity criteria. Based on the outer model results, it shows that the research data meets the criteria for research instruments, so it is feasible to carry out further testing, namely the inner model test.

The results of the convergent validity evaluation show that all variables measured in the study, namely: e-service quality, e-satisfaction, e-loyalty and willingness to pay have a loading factor> 0.50. These results indicate that each indicator used in the variable construct has a significant relationship with the variable. Therefore, it can be concluded that the research data meets the criteria of convergent validity, which shows consistency in measuring the same construct. Composite reliability is evaluated using two main metrics: Cronbach's Alpha and ρc. The results show that the Cronbach's Alpha value for each construct variable viz: e-service quality, e-satisfaction, e-loyalty and willingness to pay > 0.60, while the ρc value is > 0.70. These results indicate that the instrument used has a good level of reliability, where all indicators can be relied upon to measure the same construct consistently.

Table 3 Outer Model Test Results

Variables	Item	Loading Factor	Cronbach Alpha	ρc	AVE	Results
E-service quality	SQ1	0.899	0.922	0.940	0.722	Valid & Reliable
	SQ2	0.791				
	SQ3	0.816				
	SQ4	0.875				
	SQ5	0.905				
	SQ6	0.805				
E-satisfaction	SA1	0.732	0.815	0.881	0.651	Valid & Reliable
	SA2	0.901				
	SA3	0.708				
	SA4	0.869				
E-loyalty	LO1	0.733	0.797	0.860	0.552	Valid & Reliable
	LO2	0.809				
	LO3	0.749				
	LO4	0.737				
	LO5	0.681				
Willingness to pay	WT1	0.809	0.730	0.848	0.651	Valid & Reliable
	WT2	0.853				
	WT3	0.756				

3.3. Inner Model Test Results

The inner model test is conducted to evaluate the extent to which the research structural model fits the data collected and whether the model can be maintained or needs to be improved. This evaluation involves three main approaches, namely: R Square (R^2), Q Square (Q^2), and GoF. The following are the results of the inner model test conducted. The R

test results[2] in Table 4 have three models, namely E-satisfaction, E-loyalty, and Willingness to Pay. The first model on E-satisfaction shows that the E-satisfaction variable has an R^2 value of 0.289 (moderate), which means that the E-satisfaction variable can be explained by the E-service quality variable by 28.9%, while the remaining 71.1% is explained by other variables. The second model is E-loyalty with an R value[2] of 0.579 (moderate), which means that the E-loyalty variable can be explained by E-service quality and E-satisfaction by 57.9%. The remaining 42.1% is explained by other variables. [2]Finally, the Willingness to Pay model has an R value of 0.525 (moderate), which means that the Willingness to Pay variable can be explained by E-loyalty by 52.5%. While the remaining 47.5% is explained by other variables not studied.

Table 4 Inner Model Test Results

Model	R^2	Q^2	GoF
E-satisfaction	0.289 (moderate)	0.178 (moderate)	0.445 (strong)
E-loyalty	0.579 (moderate)	0.311 (moderate)	0.610 (strong)
Willingness to Pay	0.525 (moderate)	0.334 (moderate)	0.562 (strong)

Here are the results of the Q test[2] involving three models: E-satisfaction, E-loyalty, and Willingness to Pay. The first model is E-satisfaction, which shows that the E-satisfaction variable has a Q^2 value of 0.178 (moderate). This result means that the E-satisfaction variable can be predicted by the E-service quality variable by 17.8%, while the remaining 72.2% is predicted by other variables. The second model is E-loyalty, with a Q value[2] of 0.311 (moderate). This result shows that the E-loyalty variable can be predicted by E-service quality and E-satisfaction by 31.1%, while the remaining 68.9% is predicted by other variables. The last model is Willingness to Pay, with a Q value[2] of 0.334 (moderate). This result means that the Willingness to Pay variable can be predicted by E-loyalty by 33.4%, while the remaining 66.6% is predicted by other variables not examined in this study. The GoF test results on the E-satisfaction (GoF=0.445), E-loyalty (GoF=0.610), and Willingness to Pay (GoF=0.562) models are all in the strong category. These findings indicate that the research model has sufficient capability in explaining the relationship between variables, making it suitable for use in testing research hypotheses.

3.4. Hypothesis Test Results

The next step is to conduct a hypothesis test to evaluate the influence between variables. This test uses the P-Value ≤ 0.05 criterions to determine whether there is a significant influence between the variables. If the P-value meets these criteria, then the hypothesis is considered accepted. The following are the results of the hypothesis test.

Table 5 Hypothesis Test Results

	β	T Stat	P Values	Results
E-service quality -> E-loyalty	0.287	4.320	0.000**	H1 accepted
E-service quality -> E-satisfaction	0.537	8.218	0.000**	H2 accepted
E-satisfaction -> E-loyalty	0.568	7.806	0.000**	H3 accepted
E-loyalty -> Willingness to Pay	0.724	15.282	0.000**	H4 accepted
E-service quality -> E-satisfaction -> E-loyalty	0.305	5.883	0.000**	H5 accepted

Notes: ** significant at α 0.01 (1%); * significant at α 0.05 (5%).

Based on Table 5, it shows the effect between E-service quality on E-loyalty which has a value of β = 0.287 with a P-value of 0.000 < 0.05. These results conclude that E-service quality has a significant positive effect on E-loyalty, so H1 is accepted. The second hypothesis is the effect of E-service quality on E-satisfaction with a value of β = 0.537 and a P-Value of 0.000 < 0.05. This means that E-service quality has a significant positive effect on E-satisfaction. These results are in accordance with the hypothesis proposed, so H2 is accepted.

The results of the influence between E-satisfaction on E-loyalty which has a value of β = 0.568 with a P-value of 0.000 < 0.05. These results indicate that there is a significant positive influence between E-satisfaction on E-loyalty, so H3 is accepted. The fourth hypothesis shows the influence between E-loyalty on Willingness to Pay with a value of β = 0.724 and a P-Value of 0.000 < 0.05. These results can be concluded that E-loyalty has a significant positive effect on

Willingness to Pay and is in accordance with the proposed hypothesis, so H4 is accepted. The last hypothesis explains the effect of the mediating variable E-satisfaction with the influence between E-service quality on E-loyalty which has a value of β = 0.305 with a P-Value of 0.000 < 0.05. This means that it can be concluded that E-satisfaction mediates the influence between E-service quality on E-loyalty, so H5 is accepted.

4. Discussion

4.1. The effect of e-service quality on e-loyalty

The results showed that E-service quality has a significant effect on E-loyalty in the context of using QRIS services, so H1 is accepted. This result is because high E-service quality can create a positive user experience that encourages users to remain loyal to using the service. Users who perceive that transaction processing takes place quickly, they are likely to feel satisfied because their time is used efficiently (Agarwal & Dhingra, 2023). This efficiency is reinforced by the convenience and ease of using the QRIS service, which provides a seamless and hassle-free transaction experience. In addition, the QRIS service is able to fulfill users' desire to conduct various financial transactions, indicating that the service is flexible and reliable, so users feel that all their financial needs can be met through the same platform.

The reliability of the QRIS service can be reflected in the provision of features that are available 1x24 hours, which ensures that users can access the service whenever they need. The security aspect is no less important. When users are confident that QRIS services are safe to use in transactions, their trust in the service increases, reducing their concerns about risks such as data theft or fraud. According to Khan et al. (2019) users who feel the real benefits of speed, convenience, efficiency, feature completeness, and service security will be more likely to transact using the service again in the future and continue to use it even if the costs incurred change. Users will be more resistant to inducements to use other products as they have found consistent satisfaction with QRIS. Moreover, this positive experience will most likely encourage them to spread positive information to others regarding the benefits of use, thus strengthening their loyalty through personal advocacy. Therefore, high E-service quality in QRIS services can encourage them to remain loyal. These results are reinforced by previous findings that there is a significant influence between E-service quality and E-loyalty (Dalbehera, 2020; Khan et al., 2019).

4.2. The effect of e-service quality on e-satisfaction

The results showed that E-service quality has a significant effect on E-satisfaction. This result is consistent with the hypothesis proposed so that H2 is accepted. This is based on the fact that high service quality creates a positive and satisfying user experience. In the context of using QRIS services, this can be seen from several key aspects that affect user satisfaction. Users who feel that transaction processing using QRIS services takes place in a fast time will be happy because this service allows them to complete transactions without having to wait long. This is very important in maintaining user satisfaction, as time is one aspect that is highly valued by users in digital services. The speed of this transaction will increase feelings of satisfaction because users can easily make transactions whenever they need, without experiencing delays. (Al Karim, 2020).

The ease of using QRIS services is also a key factor in increasing E-satisfaction. Users who find it easy to use QRIS services in transactions will feel more comfortable and confident to continue using the service. This ease includes an intuitive interface, uncomplicated processes, and adequate support, all of which contribute to user satisfaction. Furthermore, users realize that using QRIS services for transactions can give users time efficiency. This can drive their satisfaction as the service helps them save time and effort. This efficiency makes them feel that the QRIS service really adds value to their daily lives. QRIS services that are able to fulfill users' desire to conduct various financial transactions can increase E-satisfaction. With the various features available, users feel that all their transaction needs can be met through one reliable platform, which increases their overall convenience and satisfaction. Besides, in this study, security is an important factor. Users feel that the QRIS service is safe to use in transactions, they will feel more calm and confident in using the service. This security helps reduce user concerns about potential risks (Boshof, 2007)which in turn increases user satisfaction. This finding is similar to research by Agarwal & Dhingra (2023); Asnawi et al. (2020) that there is a significant influence between E-service quality and E-satisfaction.

4.3. The effect of e-satisfaction on e-loyalty

E-satisfaction has a significant effect on E-loyalty. This result is consistent with the hypothesis proposed, so H3 is accepted. In this study, user satisfaction is the basis of their loyalty to the service of using QRIS services. High satisfaction encourages users to continue using the service and recommend it to others. (Chan et al., 2022). Users feel happy when transacting using QRIS services, where users are more likely to have a pleasant and problem-free experience. This happiness makes them more likely to return to use the same service in the future. In addition, users feel satisfied

transacting using QRIS services, this satisfaction strengthens their trust in the service. Consistent satisfaction makes them feel that the service meets their expectations, so they will continue to use the service in future transactions. (Kasution, 2019). This shows that user satisfaction is a strong foundation for long-term loyalty.

Users who feel that the overall transaction using the QRIS service is satisfactory will be more likely to continue using the service even if there are changes in fees. Also, high satisfaction can make users less affected by inducements to use other products. Satisfied users tend to remain loyal despite other alternatives that may be offered to them. This suggests that satisfaction felt through positive experiences with QRIS creates strong loyalty. Finally, high user satisfaction encourages them to spread positive information to others about the benefits of using QRIS services. In this study, users are satisfied with the QRIS service, so they tend to remain loyal by sharing positive experiences with others and helping attract new users to experience the same benefits. The results of this study are in line with previous research by Agarwal & Dhingra (2023); Chan et al. (2022); Ahmed et al., (2022) that E-loyalty can be significantly influenced by E-satisfaction.

4.4. Effect of e-loyalty on willingness to pay

In this study, E-loyalty has a significant effect on Willingness to Pay (WTP). This result shows that H4 is accepted because user loyalty can make them more willing to pay higher fees to continue using the service. In the context of QRIS services, user loyalty indicates that users value the quality, convenience, and benefits of the service more, thus increasing their willingness to pay more to maintain the positive experience. Users who state that they will transact again using the QRIS service in the future and will continue to use the QRIS service in future transactions, this shows that they have strong confidence and trust in the QRIS service. This confidence is reflected in a higher willingness to pay, because they value the stability and convenience that has been felt. This loyalty makes them feel that the additional cost is worth the benefits received. (Li et al., 2015).

In this study, users continued to use the QRIS service even though the costs incurred changed indicating that they saw significant value in the QRIS service. Users feel that the service provides superior quality and functionality over other services and are willing to pay slightly higher fees before switching to another service. This trust is based on consistent positive experiences and high satisfaction, which reinforces their desire to maintain the use of QRIS despite the increase in fees. High loyalty makes users less influenced by alternatives. This loyalty makes them ready to pay more transaction fees rather than take risks with services that they do not fully trust. (Anderson & Srinivasan, 2003). In addition, users committed to spreading positive information to others about the benefits of using QRIS services show a high level of satisfaction and loyalty, so this can affect willingness to pay. According to Malarvizhi et al. (2022) argue that E-loyalty can significantly influence willingness to pay. Previous findings also provide similar results that willingness to pay can be influenced by E-loyalty (Santos & Schlesinger, 2021).

4.5. The effect of e-service quality on e-loyalty through e-satisfaction

The results showed that E-service quality has a significant effect on E-loyalty mediated by E-satisfaction, so H5 is accepted. Users have felt that transaction processing with QRIS is fast and easy to use, so they will feel happy and satisfied because this service saves time and provides a positive experience. Users feel that QRIS is safe to use in transactions. This will have an impact on users who are calmer and more confident. This high level of satisfaction makes them more likely to recommend the service to others. This means that high e-service quality produces strong e-satisfaction, which can then strengthen e-loyalty, the results of this study are reinforced by Chan et al. (2022) that E-satisfaction is able to mediate the influence between E-service quality on E-loyalty. Similar to the findings by AAhmed et al. (2022); Nasution (2019) that there is a significant influence between E-service quality on E-loyalty through E-satisfaction.

5. Conclusion

This study aims to analyze the effect of E-service quality on customer E-loyalty through E-satisfaction as a mediator for QRIS service users. Referring to the discussion presented earlier, it can be concluded as follows.

- E-service quality has a significant effect on E-loyalty, so H1 is accepted.
- E-service quality has a significant effect on E-satisfaction, so H2 is accepted
- E-satisfaction has a significant effect on E-loyalty, so H3 is accepted.
- E-loyalty has a significant effect on willingness to pay, so H4 is accepted.
- E-service quality has a significant effect on E-loyalty through E-satisfaction, so H5 is accepted.

Limitations

The limitations of this study are as follows.

- Other variables such as the influence of promotion, price, and the presence of alternative services may also play a role in shaping E-loyalty but are not discussed in this study.
- The use of surveys to collect data may contain respondent biases, such as the tendency to give answers that are considered socially favorable.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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