DIJEMSS: Dinasti International Journal of Education Management and Social Science
E-ISSN: 2686-6331
P-ISSN: 2686-6358
DINASTI PUBLISHER
https://dinastipub.org/DIJEMSS dinasti.info@gmail.com +62 811 7404 455

**DOI:** https://doi.org/10.38035/dijemss.v7i1.5265
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**Received:** 21 July 2025 | **Revised:** 23 September 2025 | **Accepted:** 18 October 2025

# Key Factors Driving the Adoption of QRIS for Retribution Payments at Domestic Ports in the Riau Islands Province

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**Abstract:** While research on electronic payment adoption has been explored extensively, an in-depth investigation into the critical factors that motivate ferry passengers to utilize the QRIS application for paying port levies is of utmost importance. This study is important for optimizing levy management processes and enhancing overall efficiency. In our study, we engaged 424 ferry passengers, harnessing an expanded Technology Acceptance Model (TAM) that integrates considerations of compatibility, experience, and technology anxiety. This comprehensive approach enables us to thoroughly evaluate the willingness of passengers to embrace QRIS for their payment needs. Employing the PLS-SEM methodology, our findings reveal compelling insights: both perceived usefulness and perceived convenience play pivotal roles in shaping passengers' attitudes and intentions to adopt QRIS. Notably, while compatibility significantly influences attitudes, it surprisingly does not affect the intention to use the application. Moreover, we found that experience does not sway attitudes or intentions, and while technology anxiety does not significantly affect attitudes but does influence the intention to use QRIS. Crucially, the attitudes towards usage serve as a powerful mediating factor, significantly amplifying the intention to adopt the QRIS application. By understanding these dynamics, we can enhance the implementation of electronic payment systems in ferry operations, ultimately driving greater efficiency and satisfaction among users.

**Keyword:** Adoption; e-payment; QRIS, Technology Acceptance Model; Extended TAM.

## INTRODUCTION

The ever-evolving technology has made various activities easier and more practical. The internet network and the invention of smart phones have made many things possible with just the palm of your hand. This all-electronic technology has also changed people's lifestyles in everyday life. The rapid development of digital payments has also affected the way government works in Indonesia (source: Ministry of Finance, Directorate General of Treasury, Year 2024).

Ministries/institutions and local governments in Indonesia are trying to accelerate the

implementation of non-cash transactions (source of Circular Letter of the Minister of Home Affairs of the Republic of Indonesia Number 910/14003/SJ 2019). This effort is important because people demand fast and transparent services. The implementation of non-cash transactions can optimize Regional Original Revenue (PAD) and improve regional financial management. Non-cash transactions help the financial system to be well recorded and documented, facilitate direct supervision and evaluation, and help prepare financial reports according to accounting standards. In addition, the implementation of non-cash transactions within the government is one of the efforts to prevent corrupt practices in Indonesia (source Presidential Instruction Number 10 of 2016).

The government's commitment to encourage digital payment systems in government agencies is demonstrated by the issuance of the Minister of Finance Regulation of the Republic of Indonesia Number 174/PMK.05/2017. This policy was enacted to encourage the use of non-cash transactions in improving efficiency and transparency in the management of state and regional finances, this circular letter encourages district / city governments to implement non-cash transactions on all regional revenues and expenses that must be carried out since January 1, 2018. (source Presidential Decree of the Republic of Indonesia Number 3 of 2021).Presidential Instruction Number 10 of 2016).

The Riau Islands Provincial Government responded to the circular letter by forming the Regional Digitalization Acceleration and Expansion Team (TP2DD). This team was formed through Riau Islands Province Governor Regulation No. 365 of 2021 and Riau Islands Province Governor Decree No. 224 of 2022 concerning the Riau Islands Province Regional Digitalization Acceleration and Expansion team. This policy is implemented in collaboration with banking institutions. To support the above, the local government together with banking institutions have prepared various digital payment channels so that they can be easily accessed by the public in the form of ATMs, mobile banking, internet banking, besides that there are also non-banking financial services that provide digital wallet facilities such as gopay, OVO, shopee Pay, e-walet, and so on. The latest type of mobile payment has recently been introduced to the public in the form of mobile payments through the Quick Response Code Indonesia standard (QRIS) application. The local government has provided several Retribution payment services, one of which is in the form of payment for ship passenger passes through the QRIS application by providing barcode at each ship ticket purchase post. Where the public can simply scan the barcode from the smart phone they have Describe services in the government that already provide digital payments (source: https://kepriprov.go.id/berita?page=1&per_page=10&keyword=QRIS in 2021)

From this, the author wants to re-examine what factors affect the lack of Regional Original Revenue (PAD) from the digitalization system in the domestic port sector of Riau Islands Province in terms of public intention as ship passengers to use the digital payment system in the form of the Quick Response Code Indonesia standard (QRIS) application to buy ship tickets.

Based on previous research highlighting the importance of attitude in the relationship towards intention to use technology (Hilale & Chakor, 2024) We examined the mediating effect of attitude towards use on intention to use incorporated into the developed model to provide important insights into how attitude towards intention to use QRIS applications. Therefore, this study aims to answer the following research questions: First What factors directly influence the intention to use ship passengers to use the QRIS application in purchasing ship passenger passes. Second Is there a mediating influence of attitude towards use on the intention to use ship passengers to use the Qris application in purchasing ship passenger passes.

By answering this research question, we hope to deepen our understanding of the application of the QRIS application method and improve the current research entitled

"Important Factors of QRIS Adoption for Port Retribution Payment at the Domestic Port of Riau Islands Province". ship passengers.

Over the past five years, research on intention to use has been widely researched. There are various factors that influence consumer attachment to use. This is shown from the results of previous research from international journals found in Google Scholar, Sciencedirect and Scopus. The keyword used is intention to use based on the search results, it can be concluded that research on the topic of factors that influence intention to use is still relevant to research.

Details of previous research are listed as in Table below:

| Author/Year | Country | Theory | Respondent | Dependent Variable |
|---|---|---|---|---|
| Berrin Arzu Eren (2024) | Türkiye | TAM,UTAUT | 207 | Intention to Use |
| Khalisa Marsahanda Rafiani et al (2024) | Indonesia | TAM | 162 | Interest in using QR Code Payment |
| Mohammad Ali Yousef Yamin,et al (2024) | Saudi Arabia | TAM | 153 | Intention to adopt QR Code Mobile payment (ADO) |
| Andalan Tri Ratnawat,Ahmad Malik (2024) | Indonesia | TAM | 200 | Intention to Use QRIS (IU) |
| Monika Febriyanti,et al (2024) | Indinesia | | 400 | Intention to Use |
| Shafa Fadia Zainavy et al (2023) | Indonesia | UTAUT | 200 | Intention to Use |
| Cansu Türker, et al (2022) | Türkiye | TAM | 485 | Intention to Use QR Code MPS |
| Denny Tenggino,Tuga Mauritsius, (2021) | Indonesia | TAM,UTAUT | 400 | Intention to Use |
| Mukhamad Najib,Farah Fahma (2020) | Indonesia | TAM | 120 | Intentation to use digital pyment |
| Ahmad Nazrul Hakimi Ibrahim, et al (2020) | Malaysia | TBP | 437 | Intention to use |
| Muhammad Haidhar Ibrahim et al (2019) | Malaysia | TAM | 485 | Intention to use QR mobile payment |

The Technology Acceptance Model (TAM) is a conceptual framework used to understand how and why individuals or organizations adopt and use new technologies. One

of the best known models is the Technology Acceptance Model (TAM) developed by (Davis, 1989), (Eren, 2024). as a developmental application of the Theory of Reasoned Action (TRA) designed to model user acceptance of information systems, (Saif et al., 2022), TAM has two main factors, namely perceived ease of use and perceived usefulness, influencing a person's attitude towards using technology, which then impacts their intention to use the technology.

Using TAM, technology developers can design more effective training and support strategies, ensuring that users feel comfortable and confident in adopting new technologies. It is assumed QR code mobile payments are a technological novelty and hence usability and ease of use will encourage users to adopt QR code driven mobile payments. Previous literature- advances in information systems have long proven usability and ease of use influence consumer intention to adopt QR code-enabled payment systems.(Sutrisno, 2023)

Quick Response Code Indonesian Standard (QRIS) is an electronic payment system that uses QR codes as transaction media. The QRIS application allows users to make payments easily and quickly through smartphones. This system is designed to facilitate transactions in various sectors, be it for payments in shops, restaurants, transportation, and other services. This is regulated by Bank Indonesia in Bank Indonesia Regulation No. 21/18 2019 concerning International QRIS Standard Regulations (Saripudin et al., 2024) Currently, QRIS has become one of the most popular payment methods in Indonesia, especially among MSMEs (Micro, Small and Medium Enterprises) for several reasons including easy to use, fast and efficient, safe and does not require cards or cash.

Quick Response Code Indonesian Standard (QRIS) was developed by Bank Indonesia and the Indonesian Payment System Association (ASPI), and is supported by technology companies such as OVO, Gopay, DANA, LinkAja and other technology companies such as Google, Apple, and Samsung in addition to community support as well as MSMEs that have used QRIS as an effort to increase sales. Support from these various parties has helped accelerate the development and adoption of QRIS in Indonesia.(Yamin & Abdalatif, 2024c).

Intention to use something is a person's desire to use a particular product, service or technology. This intention is influenced by various factors such as need, convenience, user experience, or the attractiveness of a product or service. Intention to use is defined as a person's desire or goal to use a particular product, service or technology (Chen et al., 2024).

Attitudes towards using technology can vary depending on the individual and the context. Attitudes towards using technology can be divided into positive attitudes negative attitudes and neutral attitudes, positive attitudes such as enthusiasm, satisfaction, dependence. Negative attitudes such as fear, difficulty, rejection. While neutral attitudes such as indifference and indifference. Some people may feel enthusiastic and open to technological innovation because they see its benefits in making daily work easier, increasing efficiency, and providing faster access to information. On the other hand, others may be skeptical or wary of new technologies, especially if they are concerned about privacy, data security, or other negative impacts such as dependency and reduced face-to-face social interaction. These attitudes can also be influenced by factors such as age, education, and previous experience with technology. Therefore, it is important to approach the use of technology with an open but critical mind, and always try to understand both the benefits and risks (Nguyen et al., 2024a).

External factors influence attitudes towards using technology such as social, economic, political, environmental and technological factors themselves (Husrizal Syah et al., 2022). This research focuses on people's attitudes towards the continuous use of technology.

Perceived usefulness is the degree to which a person believes that using a technology will improve performance or improve their goals. This concept was developed by Fred Davis

in 1989 in the Theory Acceptance Model (TAM), This concept is very important in various fields, including technology adoption, marketing, and organizational behavior. For example, in the context of technology, if users find new software very useful in improving efficiency or solving problems, they are likely to adopt and continue using it. Perceived usefulness plays an important role in shaping satisfaction, loyalty, and overall user experience, it can influence a person's attitude and behavior towards technology (Thoumrungroje & Suprawan, 2024).

The perception of its own usefulness can be influenced by several factors including internal factors in the form of knowledge and experience, skills and abilities, motivation and interest. where the more knowledge and experience a person has with technology, the higher the perception of its usefulness as well as skills, abilities motivation and interest. The external factors are technology quality, support and assistance, recommendations and reviews, policies and regulations, environment and culture (Husrizal Syah et al., 2022). By understanding the factors that influence perceived usefulness, users can be more effective in developing and raising technology that suits user needs and preferences.

Ease of use is an important factor in the adoption and success of any product, service or technology. Ease of use refers to the extent to which a product, service or system can be used efficiently, effectively and satisfactorily by users. It involves aspects such as quick and appropriate system response. Products that are easy to use usually have clear guidelines, for example, a well-designed smartphone app will allow users to quickly find the function they need without having to read the manual. With high ease of use, users will be more likely to continue using the product and feel satisfied with their experience.

Perceived ease of use (in the TAM model) is the degree to which a person believes that using a technology will be easy and does not require much effort. Perceived ease of use can be influenced by several factors including ease of use, availability of support, availability of tutorials and guidance (Nguyen et al., 2024a). It has been proven that the perceived ease of use affects the attitude to continue using technology Ratih Megantika Rahayu (Ibrahim et al., 2020), as well as the intention to use technology to continue using the e-government website. assesses the perceived ease of use of technology as learning to use simplicity, easy to use, and difficult to use. Other studies assess perceived ease of use using the following criteria: ease of access, ease of information gathering, ease of conducting transactions through the organization's e-Government website and the easy-to-follow structure of the e-Government website.

Conformity is the degree to which an innovation is perceived to be consistent with existing values, past experiences, and with the needs of potential adopters. An idea that is incompatible with the values and norms of a social system will not be adopted as quickly as a compatible innovation. The first definition implies normative or cognitive kinds of compatibility (compatibility with what people feel or think about a technology), while the second is practical and operational compatibility (compatibility with what people do) (Nguyen et al., 2024a)

In technology, compatibility refers to the ability of hardware or software to work together without problems, such as compatibility between an operating system and a particular application. In the world of work, fit is often measured through the alignment of an employee's skills and values with the company's culture and needs. At its core, compatibility is about finding and creating harmony between different elements to achieve a desired goal.

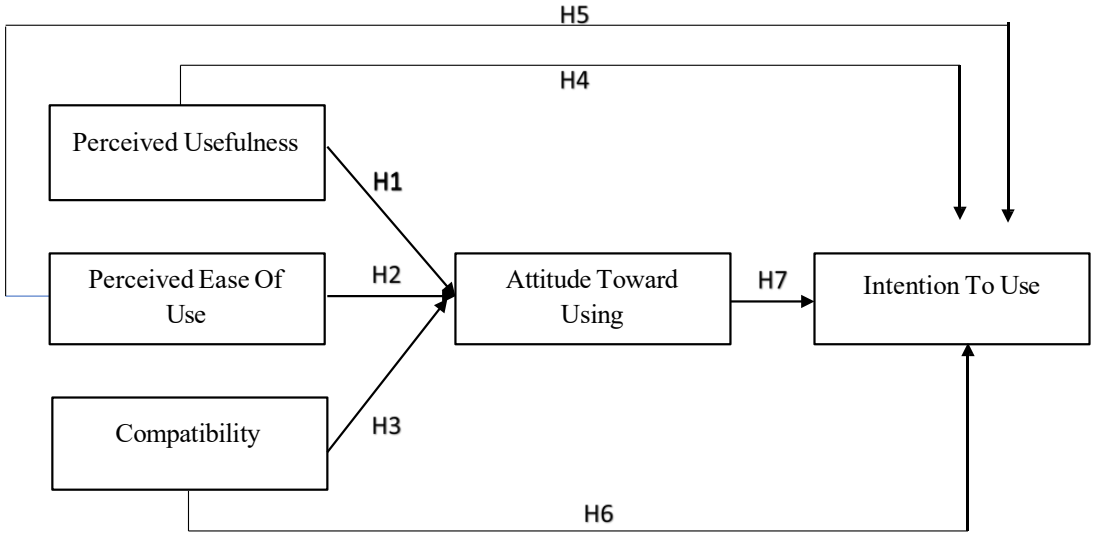
Compatibility refers to the perception that the ability of a new technology to cooperate with other technologies both the same and different (Türker et al., 2022) When individuals are exposed to new technologies, they can give an assessment according to their performance. perception of whether this new technology fits their needs, lifestyle, and

experience or not. Because, the perception of high suitability to the needs and lifestyle of individuals will accelerate their adaptation to new technology.

## HYPOTHESIS DEVELOPMENT

Considering the previous literature review integrated with TAM insights, a research model was designed to do so encompassing Perceived usefulness, Perceived Ease of use, Compatibility, and supplemented with Experience and Technology anxiety, Attitude Toward Using, and Intention to use.

**The research model is formulated in the following image:**




## METHOD

This quantitative research tests hypotheses to attempt to understand the relationship between variables. The purposive sampling technique as a sampling technique with certain considerations, especially in perceived usefulness, perceived ease, suitability, experience and technology anxiety from the intention to use the QRIS application, is used to select samples that must meet certain characteristics in accordance with the research focus. In this study there are 27 question items, so the sample size needed is 424 respondents of ship passengers at the Domestic Port of Riau Islands Province who have used the QRIS application. The data collection instrument is a structured questionnaire with a Likert scale of 1 to 5 adopted for all variables with anchors 'strongly disagree' with points 1 to 'Strongly Agree' with points 5.

Statements to measure perceived usefulness, suitability are adapted from (Nguyen et al., 2024b), statements to measure perceived convenience, intention to use from research (Febriyanti et al., 2024), questions to measure experience from research (Paisri et al., 2022) and questions to measure technological anxiety from research (Chen et al., 2024) In this study, the data were processed using the PLS-SEM method through Smart PLS3, the following research measurement scale is shown in the following table:

| Variable | Scale | Source |
|---|---|---|
| | **Perceived Usefulness** | |
| PU1 | QRIS reduces the time required to make passenger pass payments. | (Nguyen et al., 2024) |
| PU2 | I feel that the QRIS application ensures that the purchase of ship passenger passes is completed quickly. | |

| | | |
|---|---|---|
| PU3 | Using the QRIS application helps me increase the efficiency of purchasing ship passenger passes. | |
| PU4 | I really understand the use of the QRIS application for purchasing ship passenger passes | |
| | **Perception of Ease** | |
| PEU1 | QRIS-based mobile payments are easy to use in purchasing ship passenger passes. | (Febriyanti et al., 2024) |
| PEU2 | The use of QRIS-based mobile payments is clear and understandable for purchasing ship passenger passes. | |
| PEU3 | QRIS-based mobile payment saves me time when purchasing passenger passes. | |
| PEU4 | The QRIS-based mobile payment process is clear and easy to understand. | |
| PEU5 | I feel comfortable purchasing a ship passenger pass with QRIS-based mobile payment because it is easy to use. | |
| | **Compatibility** | |
| COM1 | In my opinion, the QRIS application procedure is suitable for the transaction needs of purchasing ship passenger passes. | (Nguyen et al., 2024) |
| COM2 | The QRIS application suits my transaction style for purchasing ship passenger passes. | |
| COM3 | The QRIS application suits the way I transact. | |
| | **Attitude Toward Using** | |
| ATU1 | I will continue to use the QRIS app to pay for ship tickets. | (Nguyen et al., 2024) |
| ATU2 | In my opinion, QRIS makes it easier to purchase ship tickets. | |
| ATU3 | I am confident that the QRIS app will still be relevant in the next year. | |
| | **Intention To Use** | |
| ITU1 | I intend to use QRIS-based Mobile Payment in the future for purchasing ship passenger passes. | (Febriyanti et al., 2024) |
| ITU2 | I always recommend to others to use cashless QRIS-based mobile payments for purchasing ship passenger passes. | |
| ITU3 | I will use a QRIS-based mobile payment method.<br>For the current time, I will be purchasing a passenger pass. | |
| ITU4 | I tend to increase the use of QRIS-based mobile payments on ship ticket purchases. | |

## RESULTS AND DISCUSSION

| Variable | | Frequency | % |
|---|---|---|---|
| **Gender** | Man | 175 | 41,3% |
| | Woman | 249 | 58,7% |

| | | | |
|---|---|---|---|
| **Age** | | 17 - 25 | 27,8% |
| | | 25 - 34 | 24,3% |
| | | 35 - 44 | 24,1% |
| | | 44 - 54 | 19,1% |
| | | > 54 | 04,7% |
| **Work** | Employees | | 9,7% |
| | Entrepreneurs | | 28,8% |
| | Students | | 26,9% |
| | Civil Servants | | 15,1% |
| | Others | | 19,6% |
| **Last education** | High School/Vocational School | | 26,9% |
| | Diploma | | 10,6% |
| | Bachelor's Degree | | 36,8% |
| | Master's Degree | | 25,7% |
| **Known payment channels** | Mobile Banking | 228 | 53,8% |
| | QRIS (Gopay, OVO, Dana, etc.) | 401 | 94,6% |
| | Counter Attendant | 100 | 23,6% |

A total of 424 respondents were selected as the sample of this study with a ratio of 41.3% male and 58.7% female respondents. The majority of ship passengers were aged 17-25 years old (reaching 27.8%), followed by the age group of 25-34 years old at 24.3% and the age group of 35-44 years old at 24.1% and the age group of 44-54 years old at 19.1% and >54 years old at 04.7% minority included in the age group of under 26 years old and over 55 years old. This age structure reflects a sample that includes different age ship passengers.

In terms of education level, most ship passengers are at the University level at 36.8%, followed by the High School group with 26.9%, and the Master of Management College group at 25.7% Diploma with 10.6%. Judging from the level of employment, most ship passengers are entrepreneurs at 28.8%, as students at 26.9%, other jobs at 19.6%, State Civil Servants at 15.1% and employees at 9.7%.

As for the payment channels known by ship passengers, Mobile banking 53.8%, Qris (Gopay, OVO, Dana etc.) by 94.6% and counter officers only 23.6%

The results of the study reflect that the sample is sufficient to represent all ship passengers at the domestic port of Riau Islands Province.

**1).Validitas Convergent**

**Outer Loadings, Average Variance Extracted (AVE) and Reliability**

| Variabel Indikator | | Outer Loadings | Cronbach's Alpha | Composite Reliability | AVE |
|---|---|---|---|---|---|
| PU | PU1 | 0.791 | 0.781 | 0.873 | 0.696 |
| | PU3 | 0.860 | | | |
| | PU4 | 0.850 | | | |
| PEU | PEU2 | 0.831 | 0.876 | 0.915 | 0.728 |

| | | | | | |
|---|---|---|---|---|---|
| | PEU3 | 0.868 | | | |
| | PEU4 | 0.855 | | | |
| | PEU5 | 0.860 | | | |
| COM | COM1 | 0.884 | 0.675 | 0.860 | 0.754 |
| | COM2 | 0.852 | | | |
| | ATU1 | 0.741 | | | |
| ATU | ATU2 | 0.829 | 0.734 | 0.848 | 0.652 |
| | ATU3 | 0.848 | | | |
| | ITU1 | 0.844 | | | |
| ITU | ITU2 | 0.888 | 0.888 | 0.923 | 0.750 |
| | ITU3 | 0.909 | | | |
| | ITU4 | 0.821 | | | |

The Outer Loadings results show that all indicators from the Convergent Validity test are safe because they have met the Rule of Thumb, which is> 0.60.

From the Reliability and Validity tests, based on these results, it can be concluded that the data has met the convergent validity criteria, because the AVE value is more than 0.5, and the reliability test results show that all constructs have a Cronbach's Alpha value and composite reliability of more than 0.7, so it can be concluded that all constructs are reliable

**2).Structural Model Evaluation (Inner Model)**

**Path Coefficients**

| | | Original Sample (O) | T Statistics (\|O/STDEV\|) | P Values | Hypothesis |
|---|---|---|---|---|---|
| H1 | Perceived Usefulness -> Attitude Towards Using | 0,115 | 2,221 | 0,027 | Influential |
| H2 | Perceived Ease of Use -> Attitude Towards Using | 0,441 | 5,456 | 0,000 | Influential |
| H3 | Compability -> Attitude Towards Using | 0,363 | 9,127 | 0,000 | Influential |
| H4 | Perceived Usefulness -> Intention To Use | 0,149 | 3,189 | 0,002 | Influential |
| H5 | Perceived Ease of Use -> Intention To Use | 0,315 | 4,499 | 0,000 | Influential |
| H6 | Compability -> Intention To Use | -0,022 | 0,620 | 0,535 | Not Influential |
| H7 | Attitude Towards Using -> Intention To Use | 0,222 | 3,756 | 0,000 | Influential |

Among all the variable constructs, there are 7 variables that show a significant effect, namely, Perceived Usefulness, Perceived Ease of Use, Conformity to Attitude to Use, then Perceived Usefulness, Perceived Ease of Use, Technology Anxiety, Attitude towards use towards Intention to use, this is indicated by the value of P-Values <0.05. Meanwhile, the relationship between other latent variables has no significant effect. And there are 4 variables that do not have a significant effect, namely Experience, Technological Anxiety towards Attitude towards use and Suitability, Experience towards Intention to use.

**3).R Squares**

In assessing the structural model with PLS, we need to look at the R Squares value for each endogenous latent variable as the predictive power of the structural model. With the provisions of the R-Square value of 0.75 (strong), 0.50 (moderate), and 0.25 (weak).

| | R Square | R Square Adjusted |
|---|---|---|
| **AttitudeTowards Using** | 0,852 | 0,850 |
| **Intention To Use** | 0,916 | 0,915 |

The value of R squares for the variable Attitude towards use is 0.852, Intention to use 0.916 where the value of R squares> 0.75 indicates the prediction results in the "Strong" category. It can be concluded that Attitude Towards Using as a mediating variable strengthens the dependent variable Intention To Use.

**4).Analyses and Discussions**

This study provides empirical results of the analysis of user acceptance of the QRIS payment system in Indonesia, especially in the Riau Islands Province. Using variables in TAM and previous research which is concluded in several areas of analyses:

H1 Perceived Usefulness on attitude towards use and H4 Perceived Usefulness on intention to use have a significant influence on using the QRIS application. Where the results are in accordance with previous research conducted by (Tenggino & Mauritsius, 2022b) showing that the greater the benefits and ease of technology, the greater the benefits of someone having a good or positive view of technology, from this research obtained shows the perceived usefulness of the QRIS application has an effective, efficient and provides understanding in the use of the QRIS application in purchasing ship passenger passes.

H2 Perception Ease of Use toward attitude and H5 Perception of Ease of use toward intention to use have a significant effect on the use of the QRIS application Where the results are in accordance with previous research conducted by (Tenggino & Mauritsius, 2022b) from this study shows the perception of ease of providing convenience and comfort to ship passengers to use the Qris application in purchasing passenger passes, as well as time efficiency usability and easy to understand.

H3 Compatibility to attitude and H6 Compatibility to intention to use shows where conformity to attitudes towards use has a significant effect on attitudes while compatibility to intentions has no effect on intention to use the QRIS application. Where the results obtained show the QRIS application payment procedure is in accordance with the use but not in accordance with the needs, ways of transacting and transaction styles in purchasing ship passenger passes. This contradicts previous research by (T. T. Le Nguyen et al., 2024c; Tenggino & Mauritsius, 2022b).

H7 Attitude towards QRIS payments has a significant effect on intention to use. this shows that the user's attitude has confidence that using the QRIS application will still be relevant to use in the next 1 year. These results are in accordance with previous research conducted by (Tenggino & Mauritsius, 2022b). [9] which shows that the more positive a person's attitude towards QRIS payments further increases the intention to use.

## CONCLUSION

This research plays an important role, in this case increasing public understanding of adaptation to technological developments in terms of using the QRIS Application for purchasing ship passenger passes. This is to consider the perspective of ship passengers regarding the use of the QRIS application which aims to provide convenience and comfort for ship passengers in purchasing passenger passes. While previous research concentrated on

customer views on the use of QRIS applications in MSMEs (Tenggino & Mauritsius, 2022b), this research focuses on exploring the factors that influence the adoption of certain digital payment methods from the perspective of MSMEs.

This study aims to determine the factors that influence the intention to use the Quick Response Indonesian Standard (QRIS) on ship passengers in the port sector in Riau Islands Province. This study took variables from TAM, of the five hypotheses tested, three were found to be significant or accepted. The accepted hypotheses are perceived usefulness, perceived ease, suitability, towards attitudes towards using the QRIS application as mediation, there are two hypotheses that are not significant or rejected, namely experience and technology anxiety towards attitudes to use the QRIS application.

While directly there are three variables that have an effect, namely perceived usefulness, perceived ease and technology anxiety and attitude towards use as mediation showing significant results on the intention to use the QRIS application, while the other two variables are stated to have no effect on intention to use, namely suitability and experience. This finding aligns with the low intention to use the QRIS application in purchasing ship passenger passes in Riau Islands Province.

## LIMITATIONS AND RECOMMENDATIONS

Although contributing to the existing literature on the QRIS application for purchasing passenger passes in terms of perceived usefulness, convenience, suitability, experience, technology anxiety, attitudes, and intention to use the QRIS application and contributing to the purchase of passenger passes at the Port of Riau Islands Province, this research cannot be separated from limitations. First, due to limited resources, this research data only amounted to 424 ship passengers at the Riau Islands Province Domestic Port. Second, the research model is based on the original TAM theory but the authors only conducted research with part of the original TAM theory (Technology Acceptance Model) by not including all variables in the model. Therefore, future researchers are encouraged to conduct more comprehensive research. Comprehensive studies with larger samples or considering the impact of other variables with the intention to use QRIS applications. In addition, the model and research methods of this topic can be referenced and applied in investigating the perception - attitude - intention relationship of ship passengers in using QRIS applications from other aspects. This research is also the basis for developing research oriented towards the intention to use the QRIS application.

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