

## Research Article

# Impact Technology Factors on Trust and Intent to Use QRIS

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**Abstract.**

Electronic payment systems have become an important part of modern life, driven by rapid advancements in digital technology. One such innovation is the QRIS (Quick Response Code Indonesian Standard) payment system, developed by Bank Indonesia to simplify and unify various electronic payment services. This study explores the influence of key technological factors in users' intentions to adopt QRIS, with trust acting as a mediating variable. Using the Technology Acceptance Model (TAM), the research investigates how perceived ease of use, perceived usefulness, and security/privacy affect users' willingness to adopt QRIS. Trust identified as a critical link between these technological factors and adoption intention. The study aims develop a conceptual framework that highlights trust as a mediator in QRIS adoption. This article provides insights into user experiences, prior studies on QRIS technology, and the implications of its adoption. The findings are intended to help both current and prospective users understand the benefits of QRIS, while emphasizing the importance of building trust to drive wider acceptance.

**Keywords:** QRIS, security, TAM, trust

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## 1. Introduction

Electronic payment systems have become an important part of modern life along with the development of digital technology. QRIS code-based payment system that aims to simplify and integrate various electronic payment services developed by Bank Indonesia. QRIS allows users to make transactions easily and quickly by simply scanning a QR code, without payment cash or physical cash. This is one of the innovations that continues to grow in Indonesia.

In fact, technological advancements are changing the business environment. Technology, according to Bouwman et al. [1] is an easy way to perform tasks, coordinate processes, and organize things. According to [2] [3], incorporating Internet technology has resulted in new applications and opportunities. In addition, due to the increasing use of tablets and smartphones, technology offers a faster service delivery mechanism [4]. Because of their digital options, customers no longer need to visit physical stores. The market is increasingly relying on technology to facilitate transactions, according to Lee and Turban [5].



Bank Indonesia took a strategic step by developing a national standard for QR-based payments QRIS. QRIS is made to incorporate different QR-based payment methods. QR-based payment systems to be more efficient, standardized, and usable by the wider community throughout Indonesia. Various community groups welcome QRIS. This does not happen even though many financial service providers support QRIS, both banks and non-banks. Bank Indonesia data (2020) shows that 37 providers, including 19 conventional banks, 2 Islamic banks, and 15 non-bank providers, support the implementation of QRIS. However, there are still some problems that need to be considered when using QRIS. Although QRIS is considered a new innovation in digital transactions, people are still not interested in using it every day. Although the number of users is increasing, QRIS still cannot beat other payment methods such as cash or credit and debit cards. To make transactions, Indonesian people still believe that using cash is much easier than using QRIS. Therefore, an analysis must be carried out on the factors that influence the acceptance of QRIS in Indonesia.

A significant factor in the adoption of Technology Information is trust, which may be a precondition for the desire to utilize QRIS Payment. It is impossible to isolate this variable from its usefulness towards the perceived usefulness [6]. In the meantime, trust is also crucial to include because using digital technology or payment systems online is still risky and demands a high level of trust because of numerous frauds and other issues [7]. Believe in process of adopting any service related to Digital Banking Services is very important, according to several studies [8-14].

One way to evaluate technology acceptability is the TAM, which is taken from TRA [15]. Two crucial traits that TAM are pertinent to forecasting IT adoption are perceived usefulness, perceived security, and trust. To meet the needs development a conceptual model will be developed based on Grand theory, Middle Theory and Applied Theory. This model is derived out of the importance for three variables above: *Perceived Usefulness, Perceived Easy Of Use and Security*.

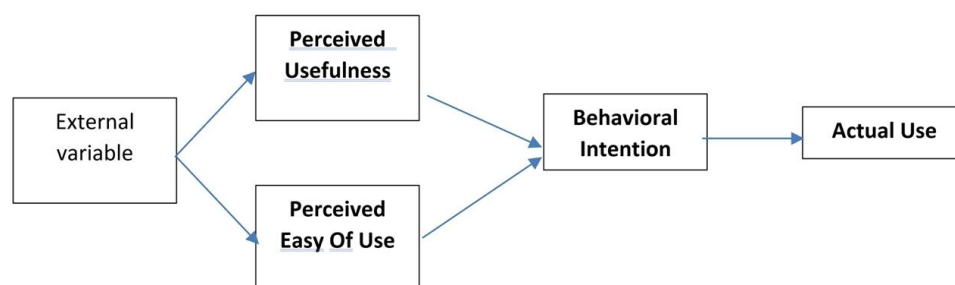
## 2. Literature Review

### 2.1. Technology Factors

#### 2.1.1. TAM

TAM is an example a model was first evolved to analyze and comprehend The elements that influence the use of information technology. It was first introduced by Davis [4], and TAM is the result of the development of TRA that was previously developed by Ajzen and Fishbein [16]. Among other things, TAM aims to explain the general acceptance

of information-based technology and the behavior of its users after it is implemented, with a wide range of users and a sufficiently large user base to offer a foundation for comprehending the influence of outside influences on psychological results. It can be stated that individual belief in relation to technology has an impact on the variables in the TAM and TRA models [17]. TAM has been suggested as a diagnostic method in practice, measuring tool that has the potential for early-stage users to embrace it (Figure 1), and has been utilized to examine and assess methods to increase user acceptance [18].



**Figure 1:** Acceptance Model (TAM) [15].

### 2.1.2. Perceive Security

The degree to which consumers think using online payment methods is secure is known as perceived security. Security is the primary factor influencing the intention to shop online, and numerous research studies have shown the advantages of doing so. Additionally, Gefen discusses how online business practices discourage consumers from making purchases online. As a result, the security that is implemented greatly hinders consumers' ability to use it effectively. One of the most important things that consumers pay [2, 19].

## 2.2. Trust

Research by Gai et al. [10] demonstrates how trust has a significant role in the uptake of technology. According to Mayer et al. (1995), trust can be used from a variety of angles, including gathering opinions on competence, kindness, and integrity. This belief can help consumers become more dependent on mobile technology. Consumers will also be more interested Research by Gai et al. [10] shows that Trust plays a significant role in the uptake of technology [20] determined that trust may be used from a variety of angles, including gathering opinions on competence, kindness, and integrity. Consumer trust in their desire to continue using e-wallets has a significant impact on environmental sustainability [2, 13, 21].

### 2.3. Intention to Use QRIS

According to Fishbein and Azjen [22], Behavioral intention is considered as the power that allows a person to perform a certain behavior. According to, Behavioral Intention refers to a person's desire to perform a certain task with a reason to do so. State that consumers' willingness to use technological products is impacted by colleagues, which is why it is important to strengthen existing users, increase their awareness of technology use, and provide incentives for long-term users. Subjective norm also plays a crucial role in the availability of technology, and technological design should be developed to maximize product quality and sophistication, i.e., through interaction that can establish subjective norms and increase user [17, 19].

## 3. Materials and Methods

Building a conceptual model based on the hierarchical framework of Grand Theory, Middle Theory, and Applied Theory is the aim of this study. This conceptual model can address the research concerns and was created by extending a number of earlier investigations.

## 4. Results and Discussion

When it comes to the adoption of new information technologies, such as fintech, trust is crucial [23]. Because of worries about the security of their financial and personal information, users are frequently hesitant to use fintech services. User trust may also be impacted by uncertainty regarding the legitimacy of fintech businesses. In the context of fintech transactions, where data security and privacy threats are significant concerns, trust is crucial to the adoption of new information technologies. In fintech adoption, user trust serves as a basis that influences the acceptance and use of services. This trust ultimately moderates users' intentions to adopt new fintech services. If users feel confident that their data is secure and the service is managed by a reputable company, they are more likely to use the service despite other uncertain factors. QRIS users ensure that their personal data and information are safe from cybercrime or fraud [24]. QRIS fintech companies must be able to provide a sense of trust, security and ensure that the technology used is easy to use. With the security and reliability that is owned and good data protection, the trust of QRIS users can be achieved. A person's trust increases when the QRIS technology used is able to maintain the security of sending very important information and is able to maintain privacy such as financial transaction data, ease of QRIS disbursement, a sense of security in transactions, and a sense of

having good benefits when using QRIS [25]. With this, the perceived trust factor will be increasingly fulfilled, which can increase the tendency to utilize fintech. Each finding shows that the author appears repeatedly. This shows that QRIS research should be conducted on sub-variables such as customers and regions. The author may argue that digital transformation is the most effective way to save MSMEs during a pandemic. This study shows that many people are already aware of digital transformation in the economy. However, not all people use it, such as Micro, Small and Medium Enterprises (MSMEs) who actively work with sellers with the QRIS payment method. Some other traders still choose cash payments because they think it is more practical and easier, there is no need for disbursement to the bank. This is because some of them do not have a bank account, so they are confused about how to withdraw their QRIS balance (Figure 2).

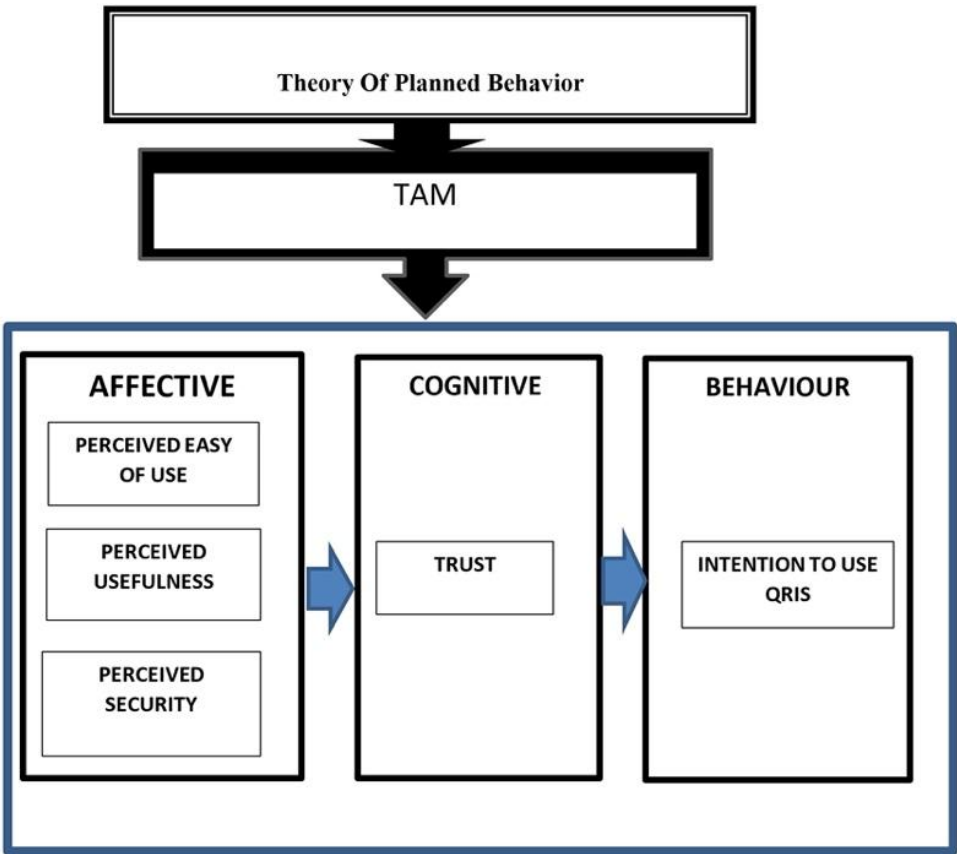


Figure 2: Conceptual Frame Work.

5. Conclusion

The study’s findings support the idea that business operations are impacted by QRIS, which can be used as a cashless payment system. In other words, the intention to use QRIS as a payment application can be determined by the benefits, ease of use, and

trust that QRIS users possess. Based on the findings of this study, it can be concluded that the TAM theory that has been studied by a few other academics is unfounded. Technological factors such as ease of use and security are crucial in overcoming users' mistrust and reluctance to use QRIS. Following the optimization of these elements, users continue to use QRIS as a reliable and useful payment solution, increasing its adoption and routine use in daily transactions.

## 6. Conflict of Interest

The authors declare no conflict of interest.

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