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The Role of Digital Payment in Society's Financial Inclusion: Analyzing Behavioral Aspects of QR-Code Payments in Indonesia

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ABSTRACT

This study seeks to uncover characteristics that impact customer behavior toward the QR Code payment system among QR-code payment users in Indonesia. According to the findings of this study, social influence, habits, and personal innovativeness in information technology are all significantly connected to the behavioral intention to utilize mobile payments using QR codes. In contrast, effort expectation, enabling circumstances, and hedonic motivation were determined to be statistically unimportant. The suggested study approach was empirically evaluated using data acquired from 100 users of banking and online payment applications via an online survey. The study's findings provide valuable insights for mobile payment app developers and mobile payment marketing teams in understanding factors that can help businesses and policymakers develop strategies to promote the adoption of QR code payments and address consumers' perceived risks by implementing strong security measures and communicating the steps to consumers. Policymakers may encourage the use of QR code payments by providing regulatory support and increasing financial awareness in consumers.

ABSTRAK

Penelitian ini berupaya mengungkap karakteristik yang mempengaruhi perilaku pelanggan terhadap sistem pembayaran QR Code di kalangan pengguna pembayaran QR-code di Indonesia. Berdasarkan temuan penelitian ini, pengaruh sosial, kebiasaan, dan inovasi pribadi dalam teknologi informasi semuanya berhubungan secara signifikan dengan niat perilaku untuk memanfaatkan pembayaran seluler menggunakan kode QR. Sebaliknya, ekspektasi upaya, keadaan yang memungkinkan, dan motivasi hedonis dianggap tidak penting secara statistik. Pendekatan studi yang disarankan dievaluasi secara empiris dengan menggunakan data yang diperoleh dari 100 pengguna aplikasi perbankan dan pembayaran online melalui survei online. Temuan penelitian ini memberikan wawasan berharga bagi pengembang aplikasi pembayaran seluler dan tim pemasaran pembayaran seluler dalam memahami faktor-faktor yang dapat membantu dunia usaha dan pembuat kebijakan mengembangkan strategi untuk mendorong penerapan pembayaran kode QR dan mengatasi risiko yang dirasakan konsumen dengan menerapkan langkah-langkah keamanan yang kuat dan mengomunikasikan langkah-langkah tersebut. kepada konsumen. Pembuat kebijakan dapat mendorong penggunaan pembayaran kode QR dengan memberikan dukungan peraturan dan meningkatkan kesadaran finansial konsumen.

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PENDAHULUAN

QR Code payments have gained in popularity as cell phones have gotten more widespread and payment methods have changed. QR code payment is a contemporary payment mechanism that allows customers to make purchases using their cell phones by scanning a unique QR code displayed at a merchant's point of sale. QR code payments provide various advantages over traditional payment systems. It is quick, easy, and safe, and anybody with a smartphone may use it, regardless of whether they have a bank account or not. It also supports cashless transactions, which can help reduce the risk of theft and fraud. Concerns have also been expressed about the security of QR code payments, particularly the likelihood of fraud or theft. Many QR code payment systems, however, have implemented measures to

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address this issue, such as two-factor authentication or encryption. Given the potential benefits of QR codes, they have been widely used across the world for product monitoring, advertising, industrial operations management, and other applications (Rivers, 2009). The notion of QR code payments developed in Japan during the 1990s. Denso Wave, a division of Denso Corporation, created the QR code. The QR code was created to enable rapid and effective tracking of automobile parts during the production process. QR code payments immediately became popular in Japan, and the technique was subsequently implemented by other businesses and sectors. The QR code was initially utilized in Kanban, a form of electronic communication tool commonly employed in Japan's automobile sector (Stein, 2020). Kanban use QR codes to transmit additional information about components and commodities, including their location, quantity, and status. Alibaba, the Chinese e-commerce behemoth, established its own QR code payment system named Alipay in 2011, and it swiftly became China's leading mobile payment platform (Li Li, 2019). Starbucks was one of the first big US corporations to accept QR code payments in 2012. Customers might use the Starbucks mobile app to pay at the cashier by scanning a QR code (Tom Kaneshige 2012). The first QR code was utilized in Indonesia between 2011 and 2012, when various firms started utilizing it for marketing and promotions. Matahari Department Store, a large retail chain in Indonesia, was the first to employ QR codes to give shoppers more information about their items. Other participants joined immediately, and QR codes are now utilized in businesses around the country to provide customers with product information, discounts, and promotions. In Indonesia, QR codes are also commonly utilized for payments. In 2016, the government established QRIS (Quick Response Code Indonesian Standard), a nationwide payment system that allows customers to pay with QR codes. This technology is currently widely used by banks, e-wallet providers, and other payment systems. QR codes are commonly used in marketing to monitor consumer behavior (Trivedi et al., 2019), market research (Tolliver-Walker, 2011), shopping, and marketing communication (Watson et al., 2013). QR codes have now been used in a wide range of industries and applications, including marketing, advertising, and payments. Because of their versatility and ease of use, they are a popular tool for both businesses and individuals.

Understanding the factors that influence customer decision-making while acquiring goods and services is a challenging task. QR-code payments have become increasingly common in recent years. QR-code payments have gained popularity throughout the world as a way to make cashless transactions more convenient and secure. Despite its widespread use, some customers are still hesitant to utilize this payment method. It is critical to understand the factors that influence customer behavior toward QR-code payments in order to increase acceptance.

Factors impacting customer propensity to use mobile payment services, including QR code payments. This study discovered that perceived utility, simplicity of use, perceived security, social impact, and faith in technology are all important determinants of customer intention to utilize mobile payment services (Lee and Lee, 2020). In China, three key features impact customer behavior regarding QR code payments: perceived usefulness, perceived ease of use, and perceived security (Wu and Wu, 2021). It was revealed that perceived usefulness, perceived ease of use and perceived damage are the most critical aspects impacting customer behavior towards QR code payments in Bangladesh (Hossain et al, 2020). Furthermore, in Vietnam there are five primary elements that influence customer behavior towards QR code payments, including perceived utility, perceived ease of use, perceived trust, perceived cost, and perceived social effect (Nguyen et al. 2020). In Bangladesh, perceived usefulness, perceived ease of use, perceived security, and perceived social effect were determined to be the most critical factors affecting customer behavior toward QR code payments (Hossain and

Rahman, 2020). Convenience, security, and availability all influence the adoption of QR code payments in Indonesia. Customers value the simplicity and speed of QR code payments, as well as the security features that protect their personal and financial information. Furthermore, the availability of QR code payment solutions in a wide range of retailers and enterprises has increased their use (Syahrina A. Damayanti and Bayu A. Riyanto, 2020).

Enjoyment as a factor influencing QR code adoption emphasizes the need of taking into account hedonic qualities (such as pleasure, amusement, and enjoyment) while using the technology. This underlines the need of technology that is both practical and user-friendly, particularly among the younger population, such as students. Social influence means that social factors like peer pressure and social norms have a substantial impact on technology adoption behavior. This confirms the social impact Model (SIM), which contends that social variables might impact technology adoption behavior (Yi-Min Tsai and Yu-Chuan Chen, 2014). Unfortunately, few empirical research has been conducted to better understand consumers' intentions to embrace mobile payments in emerging markets (Patil et al., 2020). As a result, there is still a research deficit among Indonesian students in studying particular mobile payment systems, which is insufficient to create generalizations of consumer behavior toward mobile payment acceptance.

TINJAUAN TEORITIS

1. Social Influence

Social influence refers to both deliberate and unintended efforts to impact customers' ideas, perceptions, attitudes, or behavior toward a product or service (Gass, 2015). Social influence is a significant factor in the adoption and endorsement of mobile wallet services (Singh et al., 2020). As a result, the social context has a substantial influence on attitudes about the new system (Oliveira et al., 2016). Theory of Reason Action, social influence is equivalent to the subjective norm (Taylor and Todd's, 1995). This social construct consists of two fundamental and sequential aspects that influence whether people are encouraged or discouraged from taking certain activities. Customers first create opinions based on the acceptance and replies of others they believe to be references. The second criteria are the individual's motivation to behave in accordance with the goals of their reference group. Social impact is important in technology adoption, despite its complexity and vulnerability to many influences. It uses three strategies to influence consumer behaviour: compliance, internalization, and identification (Venkatesh et al., 2003). In the behavioral sciences, social influence is regarded as an important aspect in people's decision-making processes (Lu et al., 2017). Payment is generally made in a public or social context where people may see the behavior of others and be influenced by people they care about (Koenig-Lewis et al., 2015). There is research in developing countries, particularly Malaysia, that shows that social influence is an important role in the uptake of mobile banking services. According to the study, individuals are more inclined to utilize mobile banking if they believe it is used by their peers and is socially acceptable (Chong, 2013). Social influence has a beneficial effect on mobile payments (Patil et al., 2020). The literature study found that social effect can influence mobile payment adoption.

2. Habit

Cues are the triggers that launch behavior, routines are the actions themselves, and rewards are the pleasant results that reinforce behavior. Habits in technology usage are critical for developing successful treatments and encouraging positive behavior. Mobile services have become an essential component of people's everyday life. The broad availability and use of

smartphones and mobile devices have resulted in the creation of a wide range of mobile services to satisfy a number of requirements, including communication, entertainment, productivity, and outreach (Hew et al., 2015). Users of mobile technology services frequently rely on them unconsciously due to their convenience and ease of use (Bagozzi and Yi, 2012). Habit is a strong predictor of continued usage of mobile phones for internet services (Cho et al., 2016). Habits are key in mobile app use, with users establishing habitual behaviors in response to contextual signals such as app icons on their phones (Lee and Kim, 2018). Habit development has an essential role in the continuing usage of mobile payment services (Koo et al., 2020). Technology usage habits have a significant impact on mobile payment adoption, and supporting favorable technology habits, such as regular use of mobile services, can assist raise user intentions to use mobile payments. Habit has a significant role in the adoption and use of mobile payments, particularly QR code payments (Hoque and Sorwar, 2019). Customs plays a key role in the adoption of QR code payments in China. The more frequently customers utilize QR code payments, the more likely they are to form a habit of doing so. The practice of utilizing QR code payments is positively associated to the desire to continue doing so in the future (Wu and Chen, 2020).

3. Personal Innovativeness

Innovativeness is one of the three characteristics of consumer behavior, alongside cognitive and emotive orientations. Innovativeness has been extensively examined in marketing and consumer research because it is a significant predictor of customer acceptance and spread of new items or technology (Hirschman, 1980). Personal innovativeness in information technology is defined as an individual's enthusiasm to experiment with new information technologies (Agarwal & Prasad, 1998). Personal innovativeness in information technology relates to personality traits; persons who are more open to taking chances and comfortable with uncertainty are more likely to adopt and use new technologies. Individuals with high degrees of personal invention in technological innovation have more positive views and intentions toward employing new technologies (Lu et al., 2005). Personal innovation in information technology (PIIT) had a key role in supporting the early uptake of mobile payment services (Yang et al. 2012).

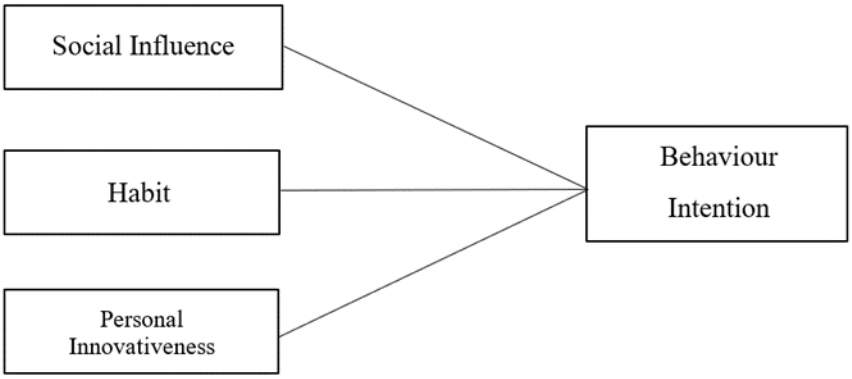
4. Behaviour Intention

Behavioral intention refers to a person's deliberate intentions or decisions to engage in certain activities (Ajzen, 1985). The Theory of Planned conduct (TPB) suggests that three elements impact behavioral intentions: attitudes toward conduct, subjective standards, and perceived behavioral control (Ajzen, 1985). Previous research has demonstrated that individual attitudes about actual conduct and social norms influence behavioral intention (Tan et al., 2014). According to the Technology Acceptance Model (TAM), two key factors influence customers' readiness to embrace new technology: perceived usefulness and perceived ease of use. Customers are more likely to accept and subsequently adopt new technology if they find it useful and easy to use (Davis, Bagozzi, and Warshaw, 1989). Consumer desire to use mobile payment technology is a robust predictor of actual adoption behavior (Lee, Park, & Kim, 2018).

METODE PENELITIAN

The approach used in this investigation was quantitative. The quantitative approach is a scientific way of collecting data for specific purposes and applications using numbers and statistics. The scientific research method is based on scientific characteristics including rationality, empiricality, and systematicity (Sugiyono, 2013, p. 2).

The study's target audience consists of Indonesian customers who use QR codes for payments. There is a tight screening process for users aged 18 and over, who are able to sign up for a mobile payment app. We strive for a minimum of 200 samples. This paper takes a rigorous approach to data analysis, using SmartPLS as the major analytic tool. The conceptual framework for this study is based on SmartPLS analysis, which helps to understand the relationship between the variables. I use SmartPLS, a statistical analysis tool with wide and rigorous analytical capacity, to evaluate the research hypothesis.



HASIL DAN PEMBAHASAN

The validity test demonstrates a link between a structure's measurement principles. To evaluate convergent validity, use an outlier loading value of more than 0.7, communality of more than 0.5, and mean difference extracted (AVE) of more than 0.5. The reliability test was used to assess the internal consistency of the measurement equipment in this study (Chin, 1995) (Abdillah & Hartono, 2015). PLS may be assessed using two criteria: Composite Reliability of the construct indicator block and Cronbach's Alpha. Although a value of 0.6 is acceptable, the rule of thumb alpha value, or composite reliability, must be larger than 0.7 (Hair et al, 2008) (Abdillah & Hartono, 2015). Validity and reliability test results were obtained using the following SmartPLS software:

Table 1. Evaluation of Measurement Model

Factor	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_C)	Average Variance Extracted (AVE)
Behavior Intention	0.529	0.540	0.808	0.678
Habit	0.879	0.844	0.917	0.734
Personal Innovativeness	0.763	0.787	0.893	0.807
Social Influence	0.879	0.880	0.925	0.805

Source: SmartPLS data processed (2023)

Each Cronbach's Alpha value must be more than 0.5 to 0.7 to be considered somewhat reliable. Cronbach's Alpha values of 0.7 to 0.9 indicate strong dependability (Murniati et al., 2013). The composite reliability score exceeds 0.7, indicating that the item variable is dependable (Sarstedt et al, 2017). As a result, it is feasible to say that the three latent variables (behavior intention, habit, personal innovativeness, and social impact) have CA and CR values more than 0.7, implying that the data is trustworthy and that all variables have a high level of dependability. The Average Variance Extracted (AVE) table also shows that the three variables, namely Behavior Intention, Habit, Personal Innovativeness, and Social Influence, have variable AVE values > 0.5, indicating that the requirements for good convergent validity have been met or that the construct can explain 50% or more of the variation in the items (Sarstedt et al., 2017). Convergent validity is considered acceptable if the external loading indicator exceeds 0.7 (Hair et al., 2015). If the external loading value is less than 0.5, it is deemed inconsequential, and the indication should be deleted.

PENUTUP

According to the results of the data analysis, there was a negligible influence that did not support the stated hypothesis. Aside from that, personal innovativeness has a favorable and considerable influence on behavior intention. Furthermore, social influence has a favorable impact on behavioral intention. According to the study's findings, the majority of respondents believe that personal creativity and social influence impact customer behavior when it comes to QR-code payments. These findings can assist payment service providers and company owners in developing more successful marketing and promotional strategies that prioritise innovation and the growth of a robust user community.

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