iscte

INSTITUTO UNIVERSITÁRIO DE LISBOA

RURAL BANKS´ INTENTION TO ADOPT M-BANKING IN THE SPECIAL REGION OF YOGYAKARTA

Joshua Yudantio Utomo

Master in Management

Supervisor:

Professor Paulo Alexandre Bento Fernandes, Department of Marketing, Operations and General Management, Instituto Universitário de Lisboa

September, 2022

Department of Marketing, Operations and General Management

RURAL BANKS´ INTENTION TO ADOPT M-BANKING IN THE SPECIAL REGION OF YOGYAKARTA

Joshua Yudantio Utomo

Master in Management

Supervisor:

Professor Paulo Alexandre Bento Fernandes, Department of Marketing, Operations and General Management, Instituto Universitário de Lisboa

September, 2022

Acknowledgement

Working on this thesis has been the most challenging academic project I have ever experienced.

I would like to begin with my deepest gratitude to my supervisor – Prof. Paulo Bento – for his guidance and constructive feedback throughout the project. As an international student, it is a brand-new experience having to work on a thesis remotely, and he has been most welcoming to me and is willing to assist speedily.

Secondly, I would like to express sincere gratitude to my local mentor and my closest friend, Trestina. She has been a great help to me in this thesis project. She is my source of inspiration whenever I run dry of ideas to write the thesis. We often hang out together, and she happily provides me with insights and advice. I am very thankful for my current situation and for getting to know these fantastic someone.

Last but not least, I would like to thank my family for their continuous moral support, especially my dearest mom – Ririn. She is the most supportive mother when it comes to her children. She always knows whenever I need support and will do her best to help me through hard times.

Resumo

A pandemia de COVID-19 impactou todos os setores da economia, incluindo o setor bancário. Por outro lado, nesta era digital, o uso do m-banking para transações é comum. Não é por acaso que vários setores, incluindo bancos rurais, precisam efetivamente do m-banking, um dos produtos que os banco rurais e o público precisam marcadamente, especialmente durante o período de confinamento. Assim, o m-banking pode ser considerado uma fintech de banco rural. Este estudo examina a intenção de adotar o modelo de m-banking no setor bancário, influenciado pela utilidade percebida, contexto tecnológico, contexto organizacional e contexto ambiental.

Este trabalho e um estudo exploratório efetuado com recurso a questionário. A recolha de dados foi efetuada com sucesso junto de 75 funcionários de bancos rurais e 87 clientes de bancos rurais na Região Especial de Yogyakarta, Indonésia. A ferramenta analítica utilizada é os Mínimos Quadrados Parciais (MQP). Os resultados mostram que o contexto tecnológico, o contexto organizacional e o contexto ambiental têm um efeito positivo e significativo na utilidade percebida. Além disso, a utilidade percebida afeta positiva e significativamente a intenção de adotar o "m-banking".

A dissertação discute as contribuições do estudo, implicações, limitações e direções de investigações futuras. Espera-se que contribua para a melhoria do desempenho dos bancos rurais decorrente da digitalização, especialmente na adoção do m-banking.

Palavras-chave: "m-banking", tecnologia-organização-ambiente, utilidade percebida, banco rural, COVID-19.

Sistema de Classificação JEL:
JEL: O00 Desenvolvimento Económico, Inovação, Mudança Tecnológica e Crescimento
JEL: M310 Marketing

Abstract

The COVID-19 pandemic has impacted all sectors of the economy, including the rural banking sector. On the other hand, in this digital era, the use of m-banking for transactions is commonplace. It's no wonder that various sectors, including rural banks, desperately need m-banking, one of the products rural banks and the public desperately need, especially during the lockdown period. Hence, m-banking can be considered a rural bank fintech. This study examines the intention to adopt the m-banking model in the banking sector, influenced by perceived usefulness, technological context, organizational context, and environmental context.

This research is explanatory research with a survey approach. Based on the research objectives, this research is intended to test the hypothesis. The method of data collection is done by distributing questionnaires. This research is a survey study of 75 rural bank staff and 87 customers of rural banks in the Special Region of Yogyakarta, Indonesia. The analytical tool used in this research is Partial Least Square (PLS). The results of the research that has been carried out show that the technological context, organizational context, and environmental context have a positive and significant effect on perceived usefulness. Furthermore, perceived usefulness positively and significantly affects the intention to adopt m-banking.

This research discusses the study's contributions, implications, limitations, and future research directions. This research is expected to improve rural banks' performance in digitalization, especially in adopting m-banking.

Keywords: m-banking, technology-organization-environment, perceived usefulness, rural bank, COVID-19.

TABLE OF CONTENTS

<div align="center">

CHAPTER 1

Introduction

</div>

1.1 Contextualization

Currently, the world is on the verge of collapse due to COVID-19. Not only taking lives but also changing the economic status of the community. Lockdown is implemented in almost every country to contain its spread. As a result of the lockdown, the economic impact of this pandemic is experienced in almost every country. Many countries are on the verge of economic collapse. The banking sector is the sector most affected by this lockdown. The COVID-19 pandemic has impacted all sectors of the economy, including the rural bank sector (Ahmed & Sur, 2021). Rural banks carry out their business activities conventionally or based on sharia principles without providing services in payment transfers. Rural bank activities are much narrower than commercial banks because rural banks are prohibited from providing demand deposits, foreign exchange business, and insurance (Indonesian Financial Services Authority, 2022).

This pandemic has caused a slowdown and even a decrease in assets and funding in the form of deposits, resulting in less-than-optimal credit distribution. The decrease in the number of credit receipts resulted in a decrease in credit income, so rural banks' ability to earn a profit before tax also decreased (Karjaluoto et al., 2021). The decline in new lending was also due to public demand and the prudential principle of rural banks amid limited liquidity. As a result, rural bank assets in September 2020 experienced a slowdown compared to the same period in 2019. Rural bank asset growth was 3.48% (year-on-year), slower than the same period in the previous year of 10.09% (year-on-year) (Indonesian Financial Services Authority, 2022). In this digital era, the use of m-banking for transactions is commonplace. It's no wonder that various sectors, including rural banks, are in dire need of m-banking. Now, there is an m-banking application, one of the products rural banks and the public need, especially during the lockdown period. This application facilitates financial transactions such as opening accounts and applying for loans, withdrawing funds to managing balances and accounts. M-banking can be said to be the fintech of rural banks.

The need for electronic payment methods and financial technology has become urgent, especially recently with the emergence of the COVID-19 pandemic. With the technological development of societies, especially in recent decades, electronic payment methods have

become a requirement of the times due to the ease of payment, saving time and effort for clients. The emergence of new technological means in any society must be accompanied by challenges to implementing these modern means, as they are not used by all customers (Matar & Alkhawaldeh, 2022). If we compare mobile technology to almost negligible, communication costs have been reduced in most developing countries. However, several developing nations lack reliable fixed-line communication and physical transportation infrastructure, and cellular phone rates are still costly by international standards. Many industrialized nations, including the US, can achieve 21st-century connectedness thanks to mobile technology. Mobile consumers knew they could conduct business anywhere worldwide at the start of this revolution. Cell phone providers let users purchase "air-time" and transfer credits to anybody they choose. Since 2005, mobile money, sometimes known as "m-money," has become popular in developing nations, where several applications have appeared that enable different kinds of financial transactions using mobile phones. Its features include time translation, inter-person financial transactions, and bill payment. With the aid of financial and commercial entities, the process of moving money from one person to another via telephone activation is respected in this situation (Al-Saedi et al., 2020).

The evolution of technology has paved the way for banks to handle banking transactions that must be done online (Alkhowaiter, 2020; Kamdjoug et al., 2021). The enormous potential of internet banking is already getting special attention from the government, academics, researchers, and financial institutions. It is done for consumers, businesses, and banking institutions (Ahmed & Sur, 2021). The adoption of innovative technology has become a necessity for rural banks. Researchers have conducted interviews with several rural banks. Based on the initial survey conducted by researchers, it was found that not many rural banks have adopted internet banking. The intention to adopt banking services via the internet in most rural bank managers already exists, but several things prevent these rural banks from adopting internet-based banking services. Some rural banks already have adequate information technology (IT) but have not focused on customer service. Owned banking technology is only used for internal records related to bookkeeping during transactions (real-time), data centers for placement, storage, and processing, and disaster recovery centers. Banking technology has a monitoring and evaluation mechanism for IT facilities and security mechanisms ranging from systems, data, and networks. Unfortunately, this IT cannot reach customer service online. At the same time, rural banks must continue to be able to manage their customers under any conditions (Matar & Alkhawaldeh, 2022).

Mobile banking (m-banking) is a solution for banking barriers in most developing countries in serving their customers. M-banking enables banks to provide customer services more efficiently in obtaining, transmitting, and sharing information than traditional physical networks. As a result, banks can overcome time, location, and market constraints as they save time, reduce transaction costs, and facilitate customer financing (Mao et al., 2020). Mobile banking is the adoption of mobile terminals, such as cell phones, to access banking services, including account investigations, cash transfers, bill payments, and dissemination of banking information (Zhou, 2018). With mobile banking, customer value can be created by providing various banking services and the independence of time and place (Mahakittikun et al., 2020).

The study of user response to a novelty or technical development is an essential topic of investigation in this era of permanent and rapid innovation. It has been studied by many researchers from a variety of theoretical perspectives. Some of the well-known theoretical models exploring the factors responsible for technology acceptance by users include the theory of reasoned action (TRA), the technology acceptance model (TAM), and the technology-organization-environment model (TOE). Given the importance of m-banking in the banking sector, this study aims to determine the intention to adopt m-banking in rural banks in the Special Region of Yogyakarta, based on the TRA of Ajzen and Fishbein (1975), TAM of Davis (1989), and TOE of Tornatzky et al. (1990).

In this study, we measure the intention to introduce m-banking as the most critical dependent variable. Numerous studies have attempted to measure the impact of certain factors on the intention to use a particular technology, given the user's "plans" and "intentions" to use the application in the future (Hanif & Lallie, 2021). Intent to adopt m-banking is defined as many banks adopting m-banking (Kumar et al., 2020; Saprikis et al., 2022). Based on Ajzen and Fishbein's (1975) work, intention is a factor used in schemes and theories that study the intentions of individuals' behaviors related to technology adoption. Based on the definition of Ajzen and Fishbein (1975), in this study, the factor 'intention to adopt m-banking' represents 'a person's subjective likelihood of adopting the m-banking application.'

Chatterjee and Chakraborty (2021) modified the TOE model by adding a TAM model that was found to be easy to use and valuable. In this study, the researchers used only perceived usefulness to influence the adoption of m-banking. Perceived usefulness defines a potential user's subjective likelihood that using a particular application system will improve work-related productivity, performance, effectiveness, and profitability in an organizational context (Davis,

1989; Lu et al., 2021). Chatterjee and Chakraborty (2021) further expand on perceived usefulness by developing the internet technology model to explore user acceptance and propose that the internet is positively related to perceived short-term and long-term perceived usefulness. Previous researchers have found that perceived usefulness positively and significantly impacts the intention to adopt m-banking (Hanif & Lallie, 2021).

Among organizational factors, organizational structure influences expectations for the implementation of new technologies, including professional roles and skills influenced by corporate policy development and dissemination and adoption. In addition, organizational culture influences employee attitudes and reactions to new technologies and is a critical factor in their acceptance and speed of adoption (Huang et al., 2020). Ahmed and Sur (2021) show that technical skills, lack of IT knowledge, and the high cost of IT implementation are significant barriers to technology adoption. Boustani (2021) finds that banks are reluctant to accept internet and e-business technology is caused to a lack of management commitment/support and external pressures.

Considering the environmental context means analyzing the external factors influencing decisions about adopting innovative technologies. Complex and rapid changes create environmental uncertainty (Kwabena et al., 2021). Environmental context is where a company conducts its business, such as where the industry is located, its competitors, regulations, access to resources provided by other parties, and the government with which it interacts (Makttoof et al., 2019). The environmental context focuses on company operations with particular attention to the external factors that influence the industry (Tornatzky et al., 1990). Previous researchers, such as Al-Fahim et al. (2022), have explored environmental conditions that influence the adoption of m-banking in the banking sector.

Based on the phenomenon of rural banks and the existing theoretical gaps, the following can be concluded that several problems arise in rural banks in adopting m-banking: (1) although many banks have adopted m-banking, rural banks have so far not adopted m-banking because the preparation of IT is quite complex; (2) existing human resources have few experiences in adopting m-banking; (3) the research model of m-banking adoption from the perspective of the banking sector still needs to be reviewed, regarding different findings from previous researches.

1.2 Relevance of the Study

Innovations in new technologies have significantly changed all industries to improve product and service delivery. The evolution of the use of smartphones and cellular services has required rural banks to adopt m-banking as one of the technology services (Ciunova-Shuleska et al., 2022). Research on the adoption of m-banking innovation in rural banks is relevant because: (1) studies of m-banking adoption from a banking perspective are still very few, especially during the current COVID-19 pandemic (Al-Fahim et al., 2022); (2) rural banks are faced with industry competition that requires the adoption of IT; (3) Increasing consumer demands for online banking services during the new standard period of the COVID-19 pandemic.

From a theoretical perspective, although several researchers have successfully tested the mobile banking adoption model using TOE, there are differences in the results of those researchers. During the COVID-19 pandemic, Al-Fahim et al. (2022) show that top management support influences the adoption of m-banking. However, before the pandemic, Duh and Fabiao (2018) found that top management support does not affect m-banking adoption. In addition, these authors also found that employee capability has no significant effect on adopting m-banking. Meanwhile, Boustani (2021) found a significant relationship between employee capability and m-banking adoption.

1.3 Research Questions

This research was conducted to answer the following questions:
1. Can technological context influence perceived usefulness?
2. Can organizational context influence perceived usefulness?
3. Can environmental context influence perceived usefulness?
4. Can perceived usefulness influence intention to adopt m-banking?

1.4 Research Objective

This study examines the adoption model of m-banking in the banking sector, influenced by perceived usefulness, technological context, organizational context, and environmental context.

1.5 Structure of the Study

Besides this introduction, this study presents a literature review, the methodology, results, and discussion, ending with the conclusion on the problems in rural banks in the Special Region of Yogyakarta related to the intention to adopt m-banking.

Chapter 2 includes a review of the TOE framework to analyze rural banks' intention to adopt m-banking. The results of previous research are used to determine the relationship between variables used as hypotheses in this study.

Chapter 3 contains the methodology, the research process, and data analysis tools used by Partial Least Square (PLS). Finally, to determine whether the proposed model deserves further research, discuss the initial test of the model using 30 data.

Chapter 4 presents the results. The characteristics of the respondents are written descriptively. Meanwhile, quantitative analysis is presented in percentage diagrams and test results tables.

Chapter 5 shows the conclusions of the answers to the questions posed in the problem formulation section. It also contains a brief statement about the description analysis and a discussion of the results of hypothesis testing.

Ultimately, this research presents a practical contribution to the banking sector and a theoretical contribution to future research.

CHAPTER 2
Literature Review

The factors influencing individual IT adoption behavior have been studied extensively in sociology, psychology, and information systems (IS) research. Several theoretical models have been proposed over the last three decades. Many studies determine the factors impacting the intention and decision to choose online banking. However, these studies mainly use TRA by Ajzen and Fishbein (1975). The TRA model stipulates that a particular behavior is directed by the individual's intention to perform that action, which depends on the attitude toward the intention to adopt. As an extension of the TRA, the TAM model by Davis (1989) has the importance of perceived usefulness and perceived ease of use factors to influence actual behavior directed at innovation.

The combination of TRA, TAM, and TOE theories has been empirically verified in many studies that explain the intention to accept new technologies. It has been verified in various contexts in the realm of technology (Hu et al., 1999), innovation (Teo et al., 2009), online business (Klopping & McKinney, 2004), social media (Rauniar et al., 2014), and online or mobile banking (Priya et al., 2018). The importance of TAM is due to its parsimony, verifiability, and generalizability. As per TAM, a user's technology use is determined by behavioral intentions, which is a function of the user's perception of usefulness (the belief that using knowledge will make their job better) and perception of the simplicity of use (i.e., using knowledge will be easy).

Studies and theories have explained technology adoption and m-banking from organizational and customer perspectives. Yu (2012) and Baptista and Oliviera (2015) provide a list of models and theories to understand intentions to adopt m-banking. It can be seen from the list that in several studies, the TOE model has been used to examine it from the company's point of view. Several studies have proposed and used the TOE framework to explain technology adoption at the enterprise level, s. Tornatzky et al. (1990), the TOE model was chosen because it focuses on organizational factors. Other frameworks, such as the innovation diffusion model (Rogers et al., 2014) and the technology acceptance model (Davis, 1989), were also considered in this study because the focus of this study was to analyze the intention to adopt technology innovation. TOE is a holistic instrument suitable for organizational-level research. It categorizes the factors that influence organizations to adopt innovations into three categories:

(1) technology (i.e., relative advantage, complexity, and compatibility), (2) organization (i.e., employee skills, cost reduction, and top management support), and (3) environment (i.e., internal and external environment). The mediating variable analyzed in this study is the perceived usefulness of Davis (1989). This study also accommodates employee and consumer perceptions of the benefits of m-banking between the TOE framework and the intention to use m-banking. This mediating variable makes it possible to verify employee and customer perceptions of m-banking as a valuable technology for providing better services.

2.1 Rural Banks in Indonesia

Rural banks existed in Indonesia long before Indonesia's independence in 1945. The existence of rural banks originated from a desire to help farmers, employees, and laborers escape the snares of moneylenders (lenders) who provide high-interest loans. The establishment of these rural banks started in the nineteenth century. At that time, the only funding source to obtain loans in the village was moneylenders who applied high-interest rates, reaching 100–200 percent per year. Due to this condition, the idea of establishing a People's Credit Institution emerged. The idea of establishing this institution emerged at the end of the 19th century.

The Financial Services Authority noted that the number of rural credit banks declined. It was recorded that until September 2021, the number of rural banks in Indonesia reached 1,646 units. With this number, the downward trend in the number of rural banks continues. It was recorded that in 2016 there were 1,799 rural banks, then in 2017, there were 1,786 units, and in 2018, there were 1,764 units. In 2019 there were 1,709 units, and in 2020 there were 1,669 units. In 2022, the number of rural banks will be 1,618. The situation worsened due to the COVID-19 pandemic. As a result, rural banks' assets in September 2020 experienced a slowdown compared to the same period in 2019. The growth of rural banks' assets was 3.48% (year-on-year), slower than the same period the previous year of 10.09% (year-on-year) (Indonesian Financial Services Authority, 2022).

2.2 M-banking

Due to technological advancement, many innovative channels have entered the banking industry to reach consumers. Compared with other banking platforms, m-banking is one of the most convenient platforms to provide banking services with higher popularity and localization. Through the m-banking platform, consumers enjoy mobile phone banking services (Shankar & Rishi, 2020). In recent years, m-banking has become a valuable mobile commerce application for banks and consumers. Banks can reach mass consumers cost-effectively

through mobile banking platforms (Shankar & Kumari, 2016). On the other hand, consumers can perform all banking activities, such as making transactions, checking bank account balances, investing, requesting checkbooks, obtaining account statements, making payments, and paying electricity bills (Jebarajakirthy & Shankar, 2021).

Innovative developments in IT have changed the conventional banking distribution framework (Shaikh & Karjaluoto, 2015). Financial companies today offer their services through various platforms, such as digital banking, online banking, ATMs, and mobile banking. This digitization has led to the emergence of mobile banking services as an essential focus for banks and other financial institutions (Sahoo & Pillai, 2017). It is especially in terms of accessibility and presence in everywhere (Karjaluoto et al., 2021). Mobile banking is an innovative technology that can significantly increase the efficiency of customers' routine tasks and save time for banks and customers (Geebren et al., 2021). Therefore, it has become the most valuable, helpful, and flexible platform for using banking services in recent years. Mobile banking is defined as using mobile data technology in performing banking transactions (Pal et al., 2021). Zhou (2018) describes this as using smartphones to perform banking operations without going to the bank in person. Tam and Oliveira (2017, p. 17) defined it as "a service or product by financial institutions using wearable technology."

Banking companies currently use M-banking as a primary approach to meet consumer needs and gain a strategic advantage in the financial sector (Shankar & Rishi, 2020; Geebren et al., 2021). Furthermore, m-banking, compared with traditional banking with improved customer relationships, will significantly reduce banks' operating costs (Shareef et al., 2018). As for customers, they are not limited to the bank's business hours or the presence of customer service to carry out daily banking operations. Due to these unique properties, mobile banking is considered the most adaptive and convenient way to receive banking services (Singh & Srivastava, 2020).

As the competitiveness of the banking industry increases, banks need to understand better how m-banking services align with their operations, dynamics, and customer experience (Komulainen & Saraniemi, 2019). Therefore, to attract and retain mobile users and attract potential customers who see the benefits and are willing to accept mobile banking services. Banks must develop influential books (Laukkanen, 2016); and deliver a superior experience that meets customer expectations (Klaus & Maklan, 2013).

Mobile banking is another payment method in which individuals and organizations use a mobile device (e.g., tablet, smartphone, personal digital assistant) or mobile phone to pay for services rendered, goods, bills, and bill payments. Through wireless communication technologies such as cellular telephone networks or technologies that have not yet emerged (Kumar et al., 2020). Mobile devices can be used for various payment purposes such as digital content (e.g., ringtones, music, logos, games, or news), concerts, trams, airfare, taxi fares, and parking fees. A mobile banking system allows individuals to use a mobile device connected to a server to make payments by verifying, authorizing, and confirming the transactions performed (Souiden et al., 2020).

M-banking platforms encompass all gadgets (technologies) presented to the individual user and all tasks performed by the reimbursement institutions to carry out such reimbursement transactions. Recently, a few technology solutions and architectures have been suggested to improve m-banking security, functionalities, scalability, and cost (Teng & Khong, 2021). M-banking services broadly fall into two main categories: (i) bills and invoices payments and (ii) purchase payments (Pal et al., 2021). The system allows access to "computer-based payments" and online banking payments, direct debit assignments, and other forms of mobile funds transfer in bills and invoice payments. While in purchase payments, the system competes with or supplements the usual cash, credit, or debit cards, checks, and other touchable transactions.

M-banking platforms allow users to conduct financial dealings using any device, anytime. However, its development faced various challenges ranging from cultural, information, service excellence, security, and security issues to user authentication, especially in emerging countries. The system comprises three different parties (i.e., "financial institutions, internet services providers, and telecommunication services providers"), each performing unique value-added services in the payments delivery channel (Baabdullah et al., 2019).

Mobile banking benefits both banks and consumers; therefore, several attempts have been made in the literature to study the behavior of adoption intention in the context of mobile banking (Giovanis et al., 2019; Shankar & Rishi, 2020). Most studies explore different possibilities (perceived usefulness, perceived ease of use, compatibility, facilitation, subjective norm, perceived behavioral control, trust, social influence, attitudes) and inhibition (privacy concerns, risks, security, financial risk, uncertainty, unavailability, cost) mobile banking adoption intentions and usage behavior (Shaikh & Karjaluoto, 2015). Indeed, the convenience

of using banking services through a mobile banking platform plays an important role (Shareef et al., 2018) and banks want to know how they can increase their rates to accept mobile banking.

2.3 TOE Model

Previous researchers have analyzed the intention to adopt m-banking using the Technology-Organization-Environment (TOE) theory (Duh & Fabiao, 2018). This research's theory is the TOE from Tornatzky et al. (1990). TOE shows that technological, organizational, and environmental factors influence a company's decision to introduce new technology. In addition, several kinds of literature have explored the adoption of innovative technologies by combining the TOE framework with the theory of diffusion of innovations to explain the theory of diffusion of innovations from an organizational perspective that focuses more on the impact of internal and external factors (Mujahed et al., 2021).

TOE is the basis for ensuring innovation confirmation by identifying organizations adopting technological innovations (Al-Fahim et al., 2022). The TOE framework helps investigate various innovation contexts, such as e-commerce and e-business. Duh and Fabiao (2018) show that the TOE framework can be used to explain the readiness to adopt innovation (m-banking) in banking. The TOE framework suggests three factors (environment, organization, and technology) influencing innovation adoption (Tornatzky et al., 1990). In the following, the three TOE factors of the model will be discussed:

2.3.1   Technological Context

Considering the technological context means analyzing innovative technology adoption from a technological perspective. It relates to the newly adopted technology and the enterprise's current system (DePietro & Byrd., 1990). Technological context focuses on technical capabilities in managing internal and external technologies that benefit the company (Makttoof et al., 2019). The technological context represents the set of technologies available for the company to adopt. The decision to adopt a technology depends not only on what is available in the market but also on how it is compatible with the technology already owned by a company (Tornatzky et al., 1990). Technological factors are widely studied by researchers using Rogers' diffusion theory. TOE can explain the theory of innovation diffusion (Rogers et al., 2014) from an organizational perspective and focus on the influence of innovation diffusion due to internal and external factors (Oweis & Alghaswyneh, 2019).

Technology context refers to the internal and external technologies that are useful to the company and indicate the relevant skills required to use a particular technology (Ndungu & Moturi, 2020). Making the right decision for technology usage is by identifying the changes existing with current technologies (Tornatzky et al., 1990). The frequently referred to are relative advantage, privacy and security, ease of use, compatibility, and connectivity. Innovation adoption in the literature envisages that different adopters can perceive innovation characteristics. Therefore, a researcher must consider the perception based on innovation attributes rather than focusing on the feature as they are inherited from the technology and might not change across organizations' settings (Tam et al., 2020). Thus, the technological factor is also defined as how the organization believes that technology can be learned. Technology's effectiveness and efficiency can be well integrated (Vvan & Van, 2019). According to Lu et al. (2021), technological context consists of relation advantage and complexity.

Previous researchers such as Vvan and Van (2019) and Prause (2019) measured technological context with the following indicators:

a) Relative Advantage

Relative advantage is the degree of additional benefit for the organization from adopting the innovation, according to Roberts and Amit (2003). It is also defined as the degree to which an individual perceives a technological innovation as having more benefits and greater effectiveness than other innovations, that is, more significant performance benefits and usefulness from using a particular system (Van Deventer et al., 2017) supports the importance of perceived relative advantage as a predictor of behavioral intention in different contexts (Ewe et al., 2015). In the context of mobile banking, location-free access is considered the relative advantage of this service over other banking services. However, consumer resistance to mobile banking still exists due to the lack of mobile banking features (Esmaeili et al., 2021).

b) Complexity

Complexity is the degree to which the technologies are perceived as challenging to understand and use, and it is typically negatively correlated with adoption (Premkumar & Roberts, 1999).

c) Compatibility

Compatibility is the degree to which technological innovation can be easily integrated with the existing infrastructure and processes (Roberts, 1995). It refers to "the degree to which

participation in m-banking with banks is perceived as being consistent with existing systems, tasks, and the current needs and objectives of the organizations" (Giovanis et al., 2019, p. 1167). Banking services can improve if the adopted technologies are compatible with a working application system. The compatibility or incompatibility of innovation can be with the socio-cultural values. This of the client's need for innovation or previous ideas that have been introduced. Users with a perceived innovation use and found that it does align with their values become more accepting of innovation use (Rogers et al., 2014).

2.3.2 Organizational Context

The organizational context refers to the organizational structure and culture which impact new technology's acquisition, utilization, and support. Among the organizational factors, the structure of an organization influences the development and dissemination of corporate policies and expectations for the implementation of new technology, including the job roles and skills impacted by its adoption. Moreover, the organizational culture influences the employees' attitudes and reactions to new technology and has been considered an essential factor in its acceptance and speed of adoption (Huang et al., 2020). According to Mahakittikun et al. (2020), organizational context argues that research on technology adoption is fundamental and needs further study. In addition, organizational readiness to use new systems such as m-banking is a prerequisite for successful adoption (Chatterjee & Chakraborty, 2021).

The organizational context reflects the characteristics of the internals of the organizations. Therefore, this context can influence the utilization of m-banking. According to the literature, the organization can give a rich source of structures and processes. Therefore, it either limits or improves the adoption process of new technologies (Tomatzky et al., 1990). The literature has explored different constructs of different organizations, such as top management, technological competence, IT infrastructure, size, etc. (Islam et al., 2017). Several factors that influence adoption in an organizational context are employee skills (Bharati & Chaudhury, 2015), cost perception (Potluri & Vajjhala, 2018), and top management support (Tortorella et al., 2019).

The emergence of m-banking makes it easier for banks to access resources that, until now, were dominated by large banks (Hamidi & Safareeyeh, 2019). M-banking presents an opportunity to compete outside their local market. Adopting advanced IT includes reduced costs, increased productivity, system integration, native environment, and inc. The findings of the study by

Boustani (2021) indicate that the lack of technical skills, IT knowledge, and the high cost of IT implementation are significant barriers to technology adoption. Kaur et al. (2021) find that banks are reluctant to accept internet and e-business technology are caused to a lack of management commitment/support and external pressures. Rahi et al. (2021) show that technology is significant for banking, and it needs help for further research studies.

Previous researchers such as Tortorella et al. (2019) measured organizational context with the following indicators:

a) Employee Skills

In addition to the importance of top management support, Trawnih et al. (2021) add that if employees lack the skill and technical knowledge in terms of employee skills, many organizations may delay the adoption of an innovation. Employee skills are the extent to which an organization is equipped with IT infrastructure, IT skills, knowledge and experience, and effective IT operations utilization. Furthermore, IT experience and other IT elements determine an organization's ability to rapidly develop and deploy more innovative techniques to enhance performance. Although researchers agree that IT may support new product and process developments and employee empowerment, proof of the direct positive impact of IT on firm performance has not yet been firmly established. Thus, in this study, we are interested in IT infrastructure or investments and focused on IT knowledge and utilization to support different business functions (Boustani, 2021).

b) Cost Perception

Chen et al. (2021) state that technology that is considered to have a cost that follows the value of the benefits obtained tends to be easier to adopt. Likewise, Premkumar and Roberts (1999) state that the cost of hardware/software is a considerable barrier to adoption for small businesses.

c) Top Management Support

According to Chatterjee and Chakraborty (2021), the top management championship is essential for assimilating information technologies, such as web technologies, because it defines institutional norms and values how the company perceives innovation. If the top management believes in innovation and actively shapes the vision and strategy, this serves as a solid signal to the organization to overcome obstacles in the assimilation process. Some traits include technological knowledge, a supportive environment, passion, leadership styles, academic qualifications, and technology awareness through networking.

As a result, the authors consider top management qualities to be a significant factor in the adoption of the three stages of technological innovation.

2.3.3 Environmental Context

Considering the environmental context means analyzing the external reasons that influence decisions regarding adopting innovative technologies. Similarly, Kwabena et al. (2021), in their study of mobile payments, revealed that stakeholders in emerging financial technologies include service consumers, providers, and government regulators. Mahakittikun et al. (2020) show that increasing competitive pressure will make retail and service companies more willing to implement mobile payment systems. Environmental context is the main force that can encourage or deter organizations from adopting innovations (Rogers et al., 2014). The external environment is the arena in which the organization conducts its business. The primary environmental pressure in technology adoption is competitive pressure. Other essential factors are government involvement in encouraging technology adoption and ecological uncertainty (Baabdullah et al., 2019).

Environmental uncertainty occurs when complex and rapid changes occur. Environmental context is the area in which a company conducts its business, such as where the industry is located, its competitors, regulations, access to resources provided by other parties, and the government with which it interacts (Kwabena et al., 2021). The environmental context focuses on the company's business operations, particularly concerning the industry's external factors (Tornatzky et al., 1990). Previous researchers such as Ahmed and Sur (2021) and Matar and Alkhawaldeh (2022) have examined the environmental context influencing the adoption of m-banking in the banking sector.

The environmental context reflects how users perceive the technology and behave towards it. Users will find m-Banking services accessible once they experience the system and see that environmental conditions can help them learn to use m-Banking services, but they can become skilled. Environmental factors have been under-considered in the studies presented in the literature regarding m-Banking adoption. Environmental factors consist of competitive pressure and consumer pressure. This pressure can be overcome by providing IT services. IT departments need to provide m-Banking services that meet the organization's current requirements without jeopardizing future system upgrades (Makttoof et al., 2019).

Previous researchers such Ahmed and Sur (2021) and Matar and Alkhawaldeh (2022) measured environmental context with the following indicators:

a) Internal (Bank)

   1. Competitive Pressure

   Competitive pressure is when competitors feel the pressure that forces companies to adopt 4.0 technologies that enable them to survive (Seo et al., 2020). Regarding market factors, competitive pressure was measured in terms of the degree to which other banks put pressure, influenced, and drove banks to adopt mobile banking (Ahmed & Sur, 2021).

   2. Customer Pressure

   Customer pressure was measured according to the extent to which the banks' customers did not only expect and demand the use of mobile banking, but the relationship with their banks will be affected if mobile banking is not adopted (Matar & Alkhawaldeh, 2022).

   3. Government Support

   Support from the government is measured by the extent to which banks can receive assistance from the government to facilitate the acquisition and use of their mobile banking (Seo et al., 2020).

b) External (Customer)

   The consumer perceptions of mobile banking are easy and practical to use (Duh & Fabiao, 2018).

2.4 Perceived Usefulness

Chatterjee and Chakraborty (2021) have modified the TOE model by adding a TAM model of perceived ease of use and usefulness. In this study, researchers only use perceived usefulness as one factor influencing the adoption of m-banking. Perceived usefulness defines the prospective user's subjective probability that using a particular application system will increase work-related productivity, performance, effectiveness, and profitability in an organizational context (Davis, 1989; Lu et al., 2021). This new dimensional view extends the perceived usefulness relationship to short-term and long-term consequences. The short-term effects variables are identical to increased productivity, effectiveness, performance, or satisfaction. Long-term consequences refer to consequential outcomes in one's career prospects or social utility/image, reflecting the most important motivations for adopting technology (Rogers et al., 2014). The achievement of perceived short-term usefulness paves the way for actualizing long-term usefulness.

Lu et al. (2021) expands on perceived usefulness further by developing the internet technology model to explore user acceptance and propose that the internet is positively related to perceived short-term and long-term perceived usefulness. Mobile banking provides ample information and can be used for different banking services at the user's convenience. It makes banking hassle-free and effortless as we can use it whenever we need it (Ahmed & Sur, 2021). Any services perceived as helpful by the user can enhance job effectiveness through productivity and performance improvement (Kumar et al., 2020). Perceived usefulness can be defined as the user's belief that using digital banking services will benefit them (Baabdullah et al., 2019). Understanding the user's perceived usefulness is essential to increase the use of digital banking usage (Chaurasia et al., 2019).

Perceived usefulness has become crucial in examining individual expectations for accepting various innovations (Davis, 1989; Venkatesh, 2012). The visible value, as used in this setting, refer to the extent to which a person believes that m-banking will be beneficial in one way or another; for example, reserve funds and access to advances. Assistance seen as part of TAM seems to affect one's expectations of m-banking management (Baabdullah et al., 2019). Visible value is the kind of outward inspiration. A person's inspiration is seen as external when the person concerned sees that acting will play a role in achieving a good result independent of the movement itself. Consumers can thus be inspired to have a behavioral goal of accepting portable storage money if they think it will encourage more accessible access to their transaction activities (Chakraborty, 2019). Consumers believe that managing m-banking will be valuable in making exchanges. For example, the exchange of money. Exchanging cash for individuals or receiving cash will be a simple and precious component that can affect the acceptance of portable storage money. It is widespread for people to send money and the like to help people in rural areas. That is a beneficial component as it allows people in rural areas easy access to funds. Tiwari et al. (2021) reflect on and point out that clients see they will put time and effort into practice. For example, charging installments by taking advantage of the convenience of managing account administration. Such elements will significantly influence their behavioral expectations to embrace portable savings (Chakraborty, 2019).

Previous researchers such Lu et al. (2021) and Chatterjee and Chakraborty (2021) measured perceived usefulness with the following indicators:

a) Internal (Bank)

   The organizational perspective is that using a particular application system will increase productivity, performance, effectiveness, and profitability related to work within the organization (Davis, 1989; Lu et al., 2021).

b) External (Customer)

   The degree to which customers believe that utilizing a particular system will improve their job performance (Davis, 1989). Perceived usefulness refers to the opportunities provided by mobile banking and whether it is advantageous to conduct financial transactions using a mobile phone (Tiwari et al., 2021).

2.5 Intention to Adopt M-Banking

Schiffman and Kanuk (2004) state that intention is related to a person's tendency to perform a specific action or behavior. The intention is an individual component that refers to the desired behavior. It means that intention is also related to the possibility of realizing a promise or intention. Intention to adopt m-banking is defined as s large number of banks that have adopted m-banking (Kumar et al., 2020; Saprikis et al., 2022). Adoption is a kind of judgment about the optimal utilization of technical development. Intention, implementation, satisfaction, and utilization have been taken as proxies, as abstracted from the literature. Many empirical studies have used the intention to adopt technology (Kamdjoug et al., 2021). Based on the work of Ajzen and Fishbein (1975, p. 262), the intention is "a person's subjective probability that he will perform some behavior." The Intention is a factor used by schemas and theories investigating individual behavioral intentions toward technology adoption. So, based on the definition of Ajzen and Fishbein (1975) and the point of view of Venkatesh et al. (2003, p. 426), in this study, the factor 'intention to adopt m-banking' describes "the subjective probability of an individual that he or she will adopt m-banking applications."

Intention to adopt m-baning is seen as an individual's willingness or subjective possibility to use mobile banking services (Shankar & Rishi, 2020). It can also be described as a deliberate plan of an individual to use mobile banking to manage accounts and make transfers in his daily life (Nguyen & Nguyen, 2020). Meanwhile, m-banking is illustrated by the actual use of mobile banking for checking balances, transferring money, paying bills, finding branches and ATMs, blocking lost cards, and downloading bank statements (Kamdjoug et al., 2021). In the context of m-banking, the existence of a significant relationship between use intention and usage behavior has been supported by several researchers in recent years (Trinh et al., 2020). For example, postulates that bank customer intentions play a crucial role in explaining the use of

mobile banking in the United States. Furthermore, Trinh et al. (2020) also validate the importance of intention to adopt m-banking in determining the behavior of adopting m-banking in Vietnam.

Previous researchers such Kumar et al. (2020) and Saprikis et al. (2022) measured intention to adopt m-banking with the following indicators:

1. Use the mobile banking application in the next three months.
2. Use the mobile banking app in the future.
3. Plan to use the mobile banking application in the next three months.
4. Use mobile banking applications in the future.

2.6 Conceptual Model and Research Hypothesis

The study on the use and adoption of digital banking services focuses on several factors that support the use of digital banking services. Much research has been conducted on the adoption of m-banking by rural banks and the factors influencing clients' use of the service. Most research focuses on personal reasons, such as individual perceptions of m-banking or demographic influences. This section will review several studies on the factors that influence the use of m-banking services by banks and customers. The perceived usefulness of m-banking can affect their intention to use this service. The usability benefits of using digital banking services by banks and their customers make them receptive to these digital banking tools, which is the main reason for the increased adoption of digital banking services (Meher et al., 2021). In addition, several studies have included other factors, including technological context, organizational context, and environmental context, as predictors that influence the adoption of m-banking.

This study combines the framework of Ajzen and Fishbein's theory of reasoned action (Ajzen & Fishbein, 1975), the technology acceptance model (Davis, 1989), and Technology-Organization-Environment model (Tornatzky et al., 1990). Several previous researchers have used this theory, including Ahmed and Sur (2021), and Matar and Alkhawaldeh (2022). They used the perceived usefulness variable to research the intention to adopt m-banking. Both managed to find that perceived usefulness had a positive and significant effect on the intention to adopt m-banking. In addition, Al-Fahim et al. (2022) used technological, organizational, and environmental contexts as predictors, influencing the intention to adopt m-banking.

Based on the literature regarding the intention to adopt the m-banking model, the research design in this study is as follows:
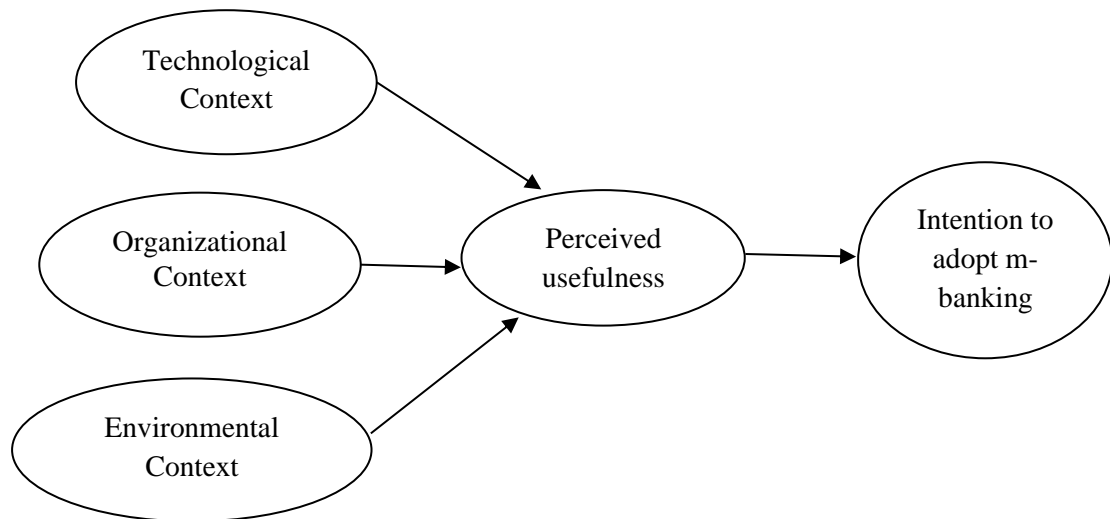
Figure 1: *The Research Design*
Source: Rogers et al. (2014) and Davis (1989)

Sekaran and Bougie (2016) stated that the hypothesis is a temporary answer to the research problem formulation, where the problem formulation is stated in the form of a statement sentence. Based on the literature regarding the intention to adopt the m-banking model, the hypotheses in this study are as follows:

H1: Technological context is positively related to perceived usefulness

H2: Organizational context is positively related to perceived usefulness

H3: Environmental context is positively related to perceived usefulness

H4: Perceived Usefulness is positively related to the intention to adopt m-banking

2.7 Contextualization

Several research papers and articles were studied to understand the adoption process of digital banking services. However, studies on adopting m-banking in the context of rural banks are still minimal. During the COVID-19 pandemic, several rural banks in Indonesia experienced a decline in assets, so this research has significance in shaping digital banking penetration in Indonesia. In addition, the current COVID-19-related lockdown scenario adds a different dimension to the m-banking adoption process. On the other hand, the use of m-banking for transactions has become commonplace entering this digital era. No wonder various sectors, including rural banks, are in dire need of m-banking. The m-banking application is one of the products that rural banks and the community need, especially during the lockdown period. Therefore, m-banking can be said as a fintech rural bank.

Thus, this study highlights four main objectives. First, due to the proliferation of handheld devices and the increasing use of mobile phones for banking, finance, and payment purposes, this study views m-banking as one of the critical components of a bank's multichannel banking strategy. Second, we develop a theoretical TOE model regarding adopting m-banking service technology, with the financial services sector and its customers as the empirical context. Third, we evaluate whether perceived usefulness affects the intention to adopt m-banking. Thus, we sought to assess what motivates rural banks and consumer groups of organizations to adopt innovative services. Fourth, we provide helpful policy guidelines and advice that will have an impact as a planning tool for businesses, the wider community (including local communities), governments, researchers, and other policymakers. Consequently, this paper attempts to stimulate discussion on how technological context, organizational context, and environmental context affect perceived usefulness, affecting the intention to adopt m-banking.

This contextualization to achieve these objectives answers the following research questions:

RQ1. Does the technological, organizational, and environmental context affect the adoption of m-banking services from the perspective of rural banks and consumers?

RQ2. Does perceived usefulness affect the intention to adopt m-banking from the perspective of rural banks and consumers?

This article continues as follows. We next discuss the theoretical background of the research, the conceptual framework, and hypothesis development, followed by the methods and results, then a discussion of the research findings. Finally, this article concludes by discussing the study's contributions, implications, limitations, and future research directions. This research is expected to improve rural banks' performance in their digitalization sector. On the other hand, the results of this study expect the government to provide support in the form of materials as well as increasing skills and knowledge related to m-banking services, which are essential in the COVID-19 pandemic situation and later after the pandemic.

CHAPTER 3
Research Methodology

This chapter shows the methodology contains the research process and data analysis tools. It deserves further research to find out the proposed model. This section discusses the initial test of the model using 30 data. This research is explanatory research with a survey approach. Based on the study objectives, this research is intended to test the hypothesis. According to Sekaran and Bougie (2016), hypothesis testing is research that examines the relationship between the dependent and independent variables or other variables. Therefore, this research can be concluded as causal research examining the cause-and-effect relationship between two or more variables. In causal research, the independent variable is the cause variable, and the dependent variable is the effect variable. Based on the time horizon, this study is classified as a one-time or cross-sectional study. The definition of a cross-sectional study is research that is carried out only at one time to answer research questions.

This research was conducted using quantitative data. This chapter discusses how the research methodology is carried out by researchers using descriptive analysis and quantitative analysis approaches. According to Sekaran and Bougie (2016), descriptive analysis is an analysis by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the public or be generalized. Meanwhile, the quantitative analysis method used in this research is PLS. According to Hair et al. (2017), PLS is one of the Structural Equation Modeling (SEM) techniques that can directly analyze latent variables, indicator variables, and measurement errors. More will be discussed in the points below.

3.1 Methodology

This research is a survey study of 75 rural bank staff and 87 customers of rural banks in the Special Region of Yogyakarta, Indonesia. The survey was conducted between 15/03/2022 and 16/04/2022. The number of respondents refers to the adequacy of the model set by Stevens (1996), who states that the minimum sample size required to reduce bias in all types of SEM estimates is 15 x the number of observed variables. The number of variables in this study is five (technological context, organizational context, environmental context, perceived usefulness, dan intention to adopt m-banking), so the number of samples needed to meet the requirements is a minimum of 75 respondents. This study used 75 respondents, including operational, human resource, and marketing managers at rural banks. To analyze the

consumer's perspective, researchers also obtained a sample of 87 consumers. This number of samples has met the sample adequacy requirements. The survey was conducted online using Google forms. In addition, an in-depth interview was conducted with Google Forms.

The independent variables in this study are the technological context, organizational context, and environmental context. Technological context indicators include perceptions of relative advantage, complexity, and compatibility. Organizational context is demonstrated by employee skills, perceived high costs, and top management support. Finally, environmental context is measured by indicators of environmental pressure, government support, and environmental uncertainty. Table 1 shows the variables' definitions and indicators used in this study.

Table 1. Definition of Operational Variable

Variable	Operational Definition	Indicator

Technological Context (X1)	Technological factors are defined as the extent to which the organization believes that technology can be learned, and with the existence of technology, the level of effectiveness and efficiency can be well integrated (Vvan & Van, 2019; Prause, 2019).	a) Relative Advantage
		  1. Using m-banking improves the quality of the tasks I do.
		  2. Using m-banking increases the effectiveness of my tasks.
		  3. Using m-banking increases my productivity.
		b) Complexity
		  1. Using m-banking technology is more flexible for banking operating systems than legacy systems that have been around for a long time.
		  2. Integrating m-banking technology with existing legacy systems is difficult for our organization.
		c) Compatibility
		  1. We have good plans to integrate m-banking technology with existing legacy systems in our organization.
		  2. Our partners help us integrate m-banking technology into existing legacy systems.
		  3. The m-banking technology is compatible with the existing old systems for production and manufacturing in our company.
		  4. Easier customization for m-banking-based manufacturing and production systems.

Organizational Context (X2)	Organizational factors include the company's internal characteristics, such as employees, size, turnover, managerial structure, and various related problems. (Tortorella et al., 2019).	a) Employee Skills 　1. We always innovate to maintain the company's competitive advantage. 　2. We have innovations in changing the design of services offered to our customers to boost organizational development in the future. 　3. We can implement creative solutions to develop the business. 　4. We always update the working mechanism for the better. b) Cost Perception 　1. We use m-banking to reduce banking operational costs. 　2. M-banking saves costs associated with time and effort in banking operations and customer service. 　3. M-banking is more cost-effective for us than traditional systems that have been around for a long time. c) Top Management Support 　1. Top management in my organization is interested in adopting m-banking. 　2. Top management in my organization considers the adoption of m-banking important. 　3. Top management in my organization has shown support for the adoption of m-banking.
Environmental Context (X3)	It is an external environmental condition that influences the organization in encouraging technology adoption initiatives (Makttoof et al., 2019).	a) Internal (Bank) 　1. A large number of banks have adopted m-banking. 　2. Our rural bank has experienced environmental pressures to adopt m-banking. 　3. Most of our competitors are already using m-banking. 　4. Government subsidies will reduce rural bank investment costs. 　5. Overall, government subsidies increase rural banks' interest in sustainably adopting m-banking. 　6. The technology in our banking industry is changing quite fast. 　7. Technological changes present significant opportunities in our banking industry. 　8. There are significant technological developments in our banking industry. b) External (Customer) 　1. I think easy to use mobile banking. 　2. I think mobile banking was practical to use.

Perceived Usefulness (Z)	User subjective probability that using IT can increase work-related productivity, performance, effectiveness, and profitability in an organizational context (Davis, 1989; Lu et al., 2021; Chatterjee & Chakraborty, 2021).	a) Internal (Bank)
		  1. Technology-based systems make companies more efficient.
		  2. The use of technology-based systems increases productivity in organizations.
		  3. Can achieve things faster using technology-based systems.
		  4. Technology-based systems reduce operational costs.
		
		b) External (Customer)
		  1. In my opinion, the use of mobile banking would help in making quick transactions.
		  2. In my opinion, using mobile banking makes a transaction very easy.
		  3. In my view, the use of mobile banking is beneficial.

Intention to adopt M-banking (Y)	A large number of banks have adopted m-banking (Kumar et al., 2020; Saprikis et al., 2022).	1. I will use the mobile banking application for the next three months. 2. I will use the mobile banking app in the future. 3. I was planning to use the mobile banking application in the next three months. 4. I intend to use mobile banking applications in the future.

According to Sekaran and Bougie (2016), the measurement scale is an agreement used to determine the length of the time interval in the assessment instrument so that it will produce quantitative data when used. For example, this study used the Likert scale to measure individuals' or people's attitudes, opinions, and perceptions of social phenomena. In this way, you can quantify variables, convert them into variable indicators, and use them to create instruments in the form of questions (Boone & Boone, 2012). For quantitative analysis, the following 1-5 answer scores are used:

Table 2. Likert Scale Score

Scale	Score
Strongly Agree	5
Agree	4
Neutral	3
Do Not Disagree	2
Strongly Disagree	1

3.2 Outer Model Test

The analytical technique used in this research is PLS. According to Hair et al. (2017), PLS is one of the SEM techniques that can directly analyze latent variables, indicator variables, and measurement errors. A research instrument is a tool used to measure the observed natural and social phenomena (Sekaran & Bougie, 2016). According to Cooper et al. (2006), the instrument test in this study was carried out by analyzing the outer model, which is often also called the (outer relation or measurement model) which is defined by how each indicator block relates to its latent variable. The measurement model (outer model) was used to test the construct validity and instrument reliability. The validity test was conducted to determine the ability of the research instrument to measure what it was supposed to measure. At the same time, the reliability test is used to measure the consistency of measuring instruments in measuring a concept or can also be used to measure the consistency of respondents in answering statement items in questionnaires or research instruments.

The model's initial testing was conducted using a sample of 30 respondents. Figure 2 shows the results of the instrument test of 30 respondents in this study. In detail, the instrument test is measured by looking at the following values:
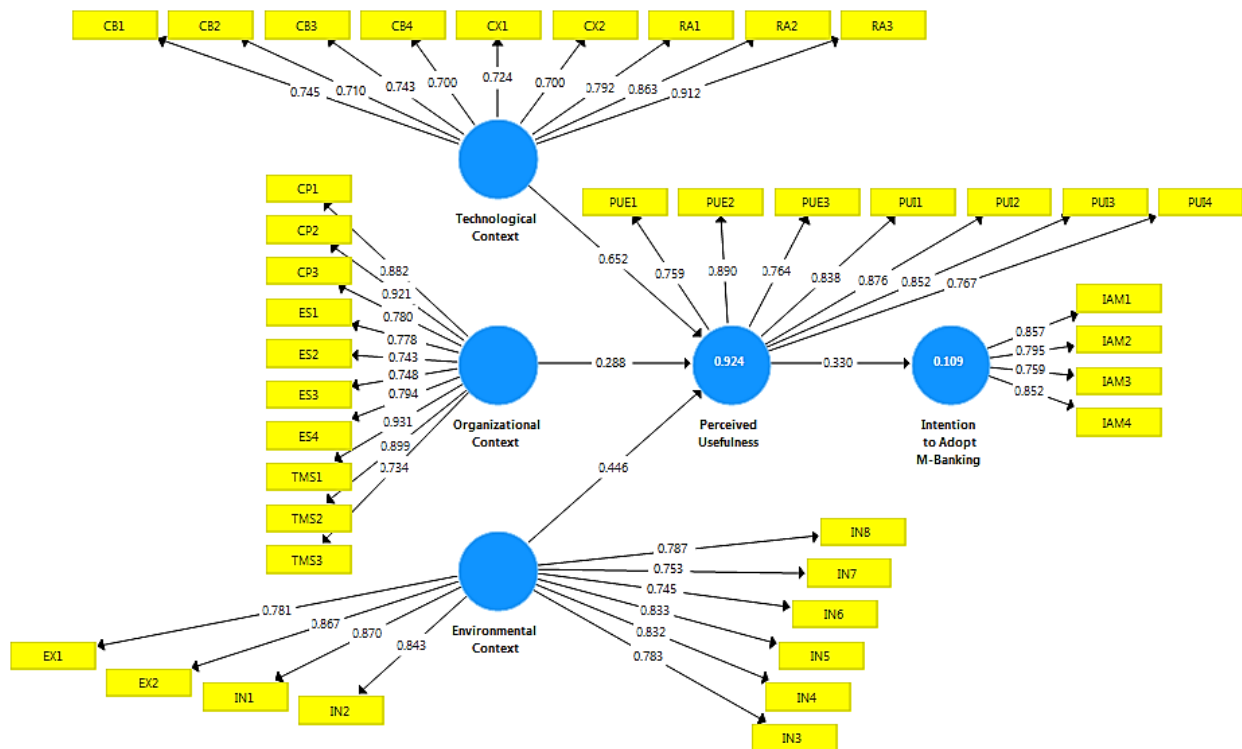
Figure 2: *Algorithm Test*
Source: Own elaboration

3.2.1 Validity Test

Validity is the level of conformity between a given conceptual boundary and the developed operational assistance. This validity test is used to measure whether or not a questionnaire is valid. The questionnaire is said to be valid if the question can reveal something measured by the questionnaire (Hair et al., 2017). Following the opinion of Hair et al. (2017), the minimum number of questionnaire trials was 30 respondents. With a minimum number of 30 respondents, the distribution of values will be closer to the standard curve. The validity test is measured by looking at the following values:

Convergent Validity

The value of convergent validity is the value of the outer loading on the latent variable with its indicators. Expected value > 0.7. But according to Hair et al. (2017), a loading value of 0.5–0.6 is considered sufficient for research in the early stages of developing a measurement scale. This study will use the limit loading factor of 0.7. The value of the outer loading test of 30 respondents is shown in Table 3 below. Based on the data presented in Table 3, it can be seen from the data of 30 respondents. Each variable indicator has an outer loading value > 0.7 so that all indicators are declared feasible or valid and can be used for further research and analysis.

Average Variance Extracted

In addition to observing the cross-loading value, the validity test can also be known through other methods. For example, Hair et al. (2017) say that the expected AVE value is > 0.5. The value of the AVE test of 30 respondents is shown in Table 3 below. Based on the test results of 30 respondents shown in Table 2, it is known that the AVE value of each variable has a value of > 0.5. It means that each variable can be declared valid to be used for further analysis research.

Discriminant Validity

This value is the value of the cross-loading factor, which helps determine whether the variable has an adequate discriminant, namely by comparing the loading value on the intended variable, which must be greater than the loading value with other variables (Hair et al., 2017). The value of the discriminant validity test of 30 respondents is shown in Table 4 below. The test results of 30 respondents below show that the cross-loading factor value of each variable indicator is greater than the cross-loading factor with other variables. Furthermore, it shows that this

research test already has good discriminant validity, so it can be used for further research and analysis.

3.2.2 Reliability Test

A reliability test measures the accuracy of the possible answers to several questions. Reliability tests are conducted to determine the extent to which the measurements provide consistent or stable results over time (Hair et al., 2017). The reliability test is measured by looking at the following values:

Composite Reliability

A variable can be said to meet the requirements of composite reliability if it has a composite reliability value > 0.6 (Hair et al., 2017). The value of the composite reliability test of 30 respondents is shown in Table 2 above. Based on the results of the reliability test of 30 respondents displayed in Table 3, it is known that the composite reliability value of each variable has a value of > 0.6. Therefore, it shows that each variable can be declared reliable to be used for further research and analysis.

Cronbach Alpha

A construct or variable is said to be reliable if it gives a value (α) > 0.7 (Hair et al., 2017). The value of the composite reliability test of 30 respondents is shown in Table 2 above. Based on the results of the reliability test of 30 respondents displayed in Table 3, it is known that each variable's Cronbach's Alpha value has a value of > 0.7. Therefore, it shows that each variable can be declared reliable to be used for further research and analysis.

3.3 Inner Model Test

The inner model, called influence testing or hypothesis testing, aims to predict the relationship between latent variables. The inner model can be evaluated from several indicators, including:

3.3.1 Coefficient Determination

Coefficient determination measures how much other variables influence the endogenous variable. For example, the results of R^2 of 0.67 and above for endogenous latent variables in the structural model indicated the effect of exogenous variables (impacted) on endogenous variables (influenced) included in the excellent category (Hair et al., 2017).

3.3.2   Predictive Relevance

The Q-Square value as Goodness of fit (GoF) value > 0 indicates that the observed values have been reconstructed well with predictive relevance (Hair et al., 2017). Meanwhile, Q-Square < 0 indicates no predictive relevance.

3.3.3   P-value

P-value, the estimated value for the path relationship in the structural model, must be signed and obtained by the bootstrapping procedure. The value of the inner model is indicated by a p-value < 0.05 (significance of 5%) (Hair et al., 2017).

3.4 Hypothesis Test

The significance of the estimated parameters provides beneficial information to determine the relationship between variables in this study. Hypothesis testing is done by looking at the probability value and its t-statistics. For the probability value, the p-value with 5% was < 0.05. The t-table value for 5% is 1.960. So the criteria for accepting the hypothesis are when t-statistics $>$ t-table (Hair et al., 2017). Hypothesis testing with the Smart PLS 3.0 method is carried out by employing a bootstrapping process. The magnitude of the direct effect will be observed from the path coefficients value, while the indirect effect will be observed from the total indirect effects value so that the relationship between the influence of exogenous variables on endogenous variables is obtained as follows:

H1: Technological context is positively related to perceived usefulness
The hypothesis is accepted if the t-statistical value $>$ t-table (1.960) and the p-value < 0.5. It means that the technological context positively and significantly affects perceived usefulness. The magnitude of the direct effect will be observed from the path coefficient values obtained from the Smart PLS 3.0 program.

H2: Organizational context is positively related to perceived usefulness
The hypothesis is accepted if the t-statistical value $>$ t-table (1.960) and the p-value < 0.5. It means that organizational context positively and significantly affects perceived usefulness. The magnitude of the direct effect will be observed from the path coefficients obtained from the Smart PLS 3.0 program.

H3: Environmental context is positively related to perceived usefulness

The hypothesis is accepted if the t-statistical value > t-table (1.960) and the p-value < 0.5. It means that the environmental context positively and significantly affects perceived usefulness. The magnitude of the direct effect will be observed from the path coefficient values obtained from the Smart PLS 3.0 program.

H4: Perceived Usefulness is positively related to the intention to adopt m-banking

The hypothesis is accepted if the t-statistical value > t-table (1.960) and the p-value < 0.5. It means that perceived usefulness positively and significantly affects the intention to adopt m-banking. The magnitude of the direct effect will be observed from the path coefficient values obtained from the Smart PLS 3.0 program.

Chapter 4

Results, Findings, and Discussion

This chapter will present the results of the research that has been carried out. In addition, will discuss the results of the research based on the explanations written in chapter 3. This research has successfully distributed questionnaires to respondents with a total of 162 respondents comprising 75 rural bank employees and 87 rural bank customers in the Special Region of Yogyakarta, Indonesia. The results of this study consist of a descriptive analysis that analyzes the characteristics of the respondents. Meanwhile, the Smart PLS 3.0 analysis tool uses hypothesis testing to analyze quantitatively. The results of hypothesis testing will also be discussed in detail.

4.1 Characteristics of the Respondents

According to Sekaran and Bougie (2016), descriptive analysis is a clarification by explaining the data that has been collected as it is without intending to make conclusions that apply to the public or be generalized. Descriptive analysis in the study includes the characteristics of respondents. This study obtained the number of respondents from as many as 75 rural bank employees and 87 rural bank customers in the Special Region of Yogyakarta, Indonesia. Based on the answers given by respondents to the questionnaire given, the characteristics of respondents in this study can be described as follows:

4.1.1   Age

Characteristics of respondents based on the age of respondents as rural bank employees are presented in Figure 3:
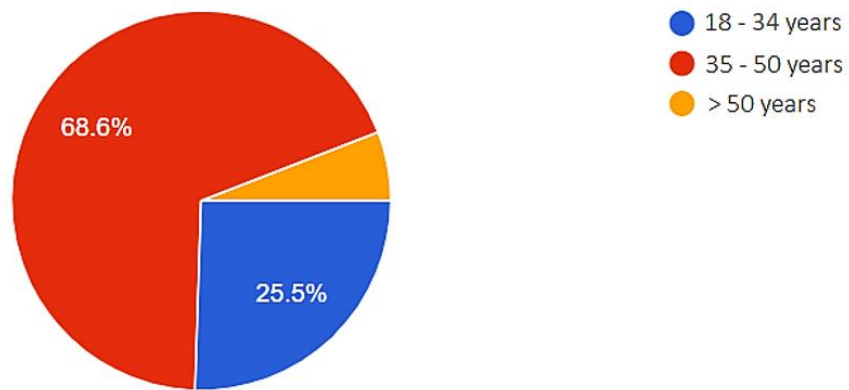
Figure 3: *Age of Respondents as Rural Bank Employees*
Source: Own elaboration

Based on Figure 3 above, it is known that the respondents as rural bank employees aged 18-34 years were 19 respondents (25.5%), 35-50 years old were 52 respondents (68.6%), and > 50 years were four respondents (5.9%). Therefore, based on this data, respondents the 35-50 years have the most percentage.

Characteristics of respondents based on the age of respondents as bank customers are presented in Figure 4:

Figure 4: *Age of Respondents as Bank Customers*
Source: Own elaboration

Based on Figure 4 above, it is known that the respondents as bank customers aged 18-34 years were 29 respondents (33.0%), 35-50 years old were 35 respondents (39.8%), and > 50 years were 23 respondents (27.3%). Therefore, based on this data, respondents the 35-50 years have the most percentage.

4.1.2 Profession

Characteristics of respondents based on the profession of respondents as rural bank customers are presented in Figure 5.
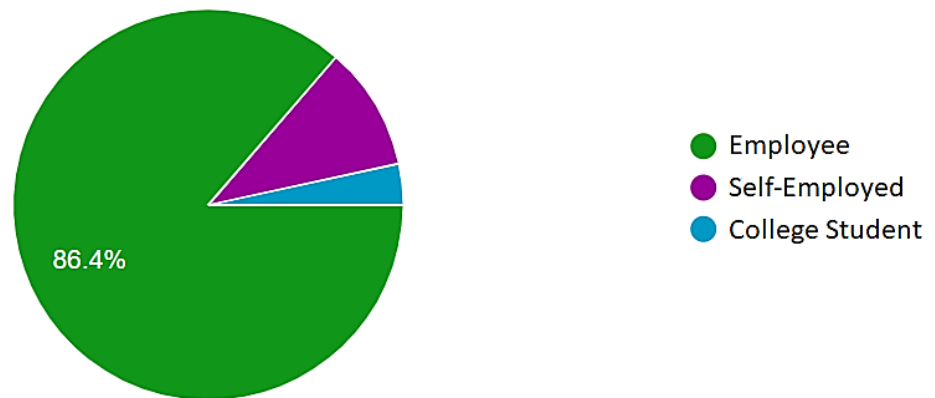
Figure 5: *Profession of Respondents as Bank Customers*
Source: Own elaboration

Based on Figure 5 above, it is known that there are 76 respondents as an employee (86.4%), nine respondents as self-employed (10.3%), and two respondents as college students (2.3%). Therefore, based on the data above, it can be concluded that customers as employees have the most percentage, compared to self-employed or college students.

4.1.3 Salary Level

Characteristics of respondents based on the Salary Level respondents as rural bank employees are presented in Figure 6.
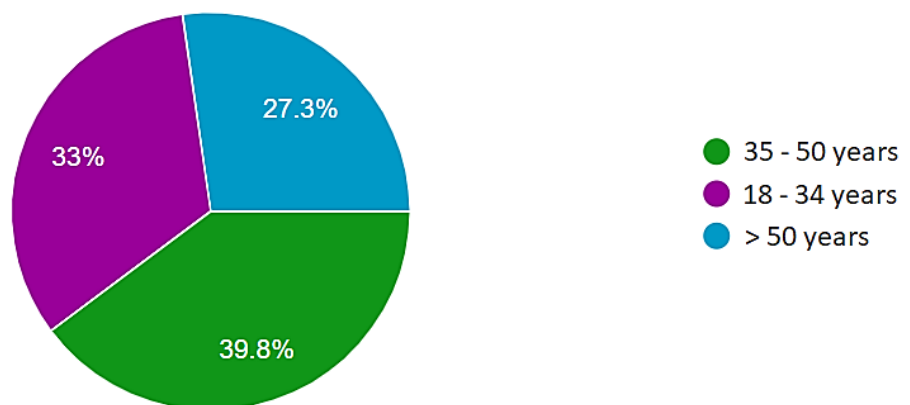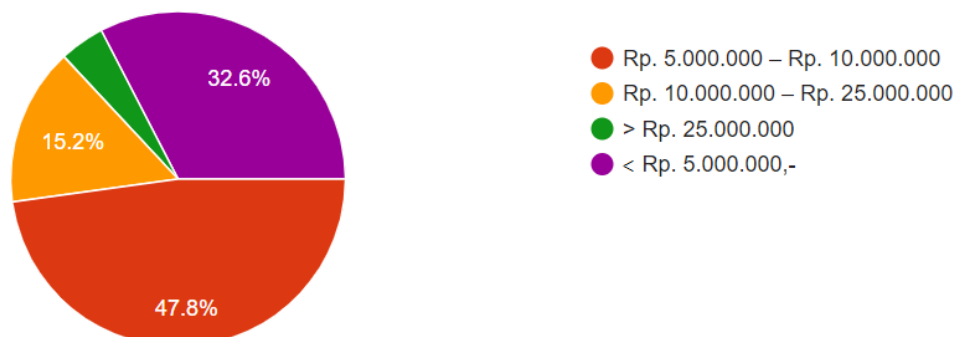

Figure 6: *Salary Level of Respondents as Rural Bank Employees*
Source: Own elaboration

Based on Figure 6 above, it is known that respondents as bank customers who have income < Rp. 5,000,000 as many as 25 respondents (32.6%), Rp. 5,000,000 – Rp. 10,000,000 as many as 36 respondents (47.8 %), Rp. 10,000,000 – Rp. 25,000,000 as many as 11 respondents (15.2%), and > Rp. 25,000,000 as many as 3 respondents (4.3%). Based on the data above, respondents with an income of Rp can be concluded. 5,000,000 – Rp. 10,000,000 is the most percentage.

Characteristics of respondents based on the Salary Level respondents as rural bank customers are presented in Figure 7.
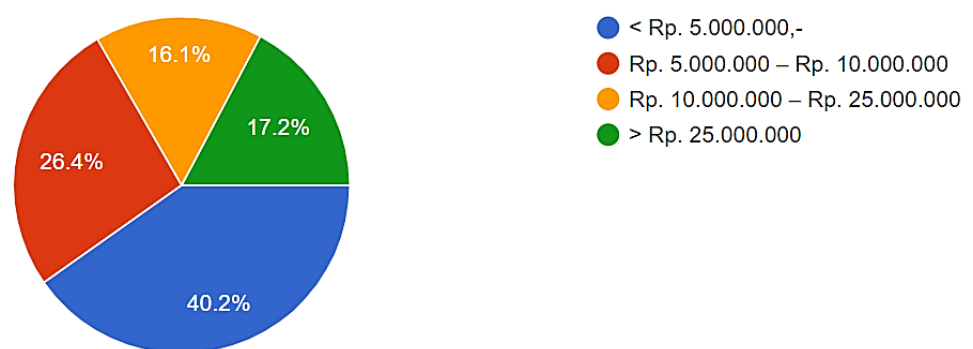
Figure 7: *Salary Level of Respondent as a Bank Customer*
Source: Own elaboration

Based on Figure 7 above, respondents are bank customers with income < Rp. 5,000,000 as many as 35 respondents, Rp. 5,000,000 – Rp. 10,000,000 as many as 23 respondents (26.4 %), Rp. 10,000,000 – Rp. 25,000,000 as many as 14 respondents (16.1%), and > Rp. 25,000,000 as many as 15 respondents (17.2%). Based on the data above, respondents with income < Rp can conclude. 5,000,000 is the most percentage. Thus, it can be said that Rural Banks in the Special Region of Yogyakarta have a standard salary level.

4.2 Outer Model Test

According to Sekaran and Bougie (2016), a research instrument is a tool used to measure observed natural and social phenomena. Therefore, this section used the validity (4.2.1) and reliability (4.2.2) tests as research instruments. Figure 8 shows the instrument test results of the 162 respondents in this study.

4.2.1 Validity Test

Validity is the level of conformity between a given conceptual boundary and the developed operational assistance. This validity test is used to measure whether a questionnaire is valid. The questionnaire is said to be valid if the question can reveal something that will be measured by the questionnaire (Sekaran & Bougie, 2016). The validity referred to in this study is how well the research construct is defined by the measurement variables used. The validity used in this study is content validity which evaluates the extent to which indicators measure a concept. The validity test is measured by looking at the following values:

Convergent Validity

The value of convergent validity is the value of the outer loading on the latent variable with its indicators. Expected value > 0.7. This study will use the limit loading factor of 0.7 (Hair et al., 2017). Based on the data presented in Table 5, it can be seen from the 162 respondents above that each variable indicator has an outer loading value of > 0.7, so all indicators are declared eligible or valid.

Average Variance Extracted

In addition to observing the cross-loading value, the validity test can also be known through other methods, namely by looking at the average variant extracted (AVE) value. For example, hair et al. (2017) said the expected AVE value was > 0.5. The validity test in the study was carried out using the Smart PLS 3.0 software. Based on the test results of 162 respondents shown in Table 5, it is known that the AVE value of each variable has a value > 0.5. Therefore, it means that each variable can be declared valid.

Discriminant Validity

This value is the value of the cross-loading factor, which helps determine whether the variable has an adequate discriminant, namely by comparing the loading value on the intended variable, which must be greater than the loading value with other variables (Hair et al., 2017). The results of the cross-loading factor of 30 respondents are shown in Table 6 below. Based on the test results of 162 respondents below, it shows that the value of the cross-loading factor of each indicator on the variable is greater than the value of the cross-loading factor with other variables. It shows that this research test has had good discriminant validity.

4.2.2 Reliability Test

A reliability test measures the accuracy of the possible answers to several questions. Reliability tests are carried out to determine the extent to which measurements provide consistent or stable

results from time to time. Reliability was measured using composite statistical tests and Cronbach's Alpha (α). The reliability test was carried out with the Smart PLS 3.0 software. The reliability test is measured by looking at the following values:

Composite Reliability

A variable can meet the composite reliability requirements if it has a composite reliability value > 0.6 (Hair et al., 2017). Based on the results of the reliability test of 162 respondents shown in Table 5, it is known that the composite reliability value of each variable has a value > 0.6. Therefore, it shows that each variable can be declared reliable.

Cronbach Alpha

A construct or variable is said to be reliable if it gives a value (α) > 0.7 (Hair et al., 2017). Based on the results of the reliability test of 162 respondents shown in Table 5, it is known that each variable's Cronbach's alpha value has a value > 0.7. Therefore, it indicates that each variable can be declared reliable.
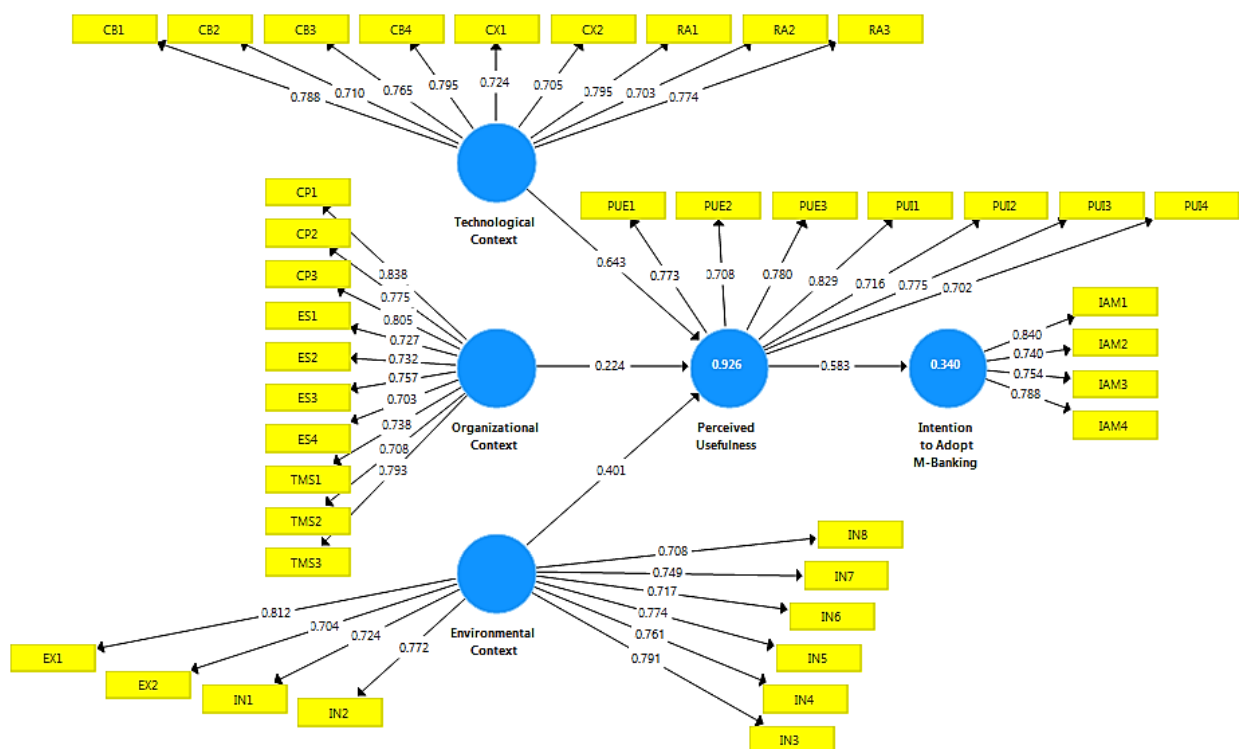
Figure 8: *Algorithm Test*
Source: Own elaboration
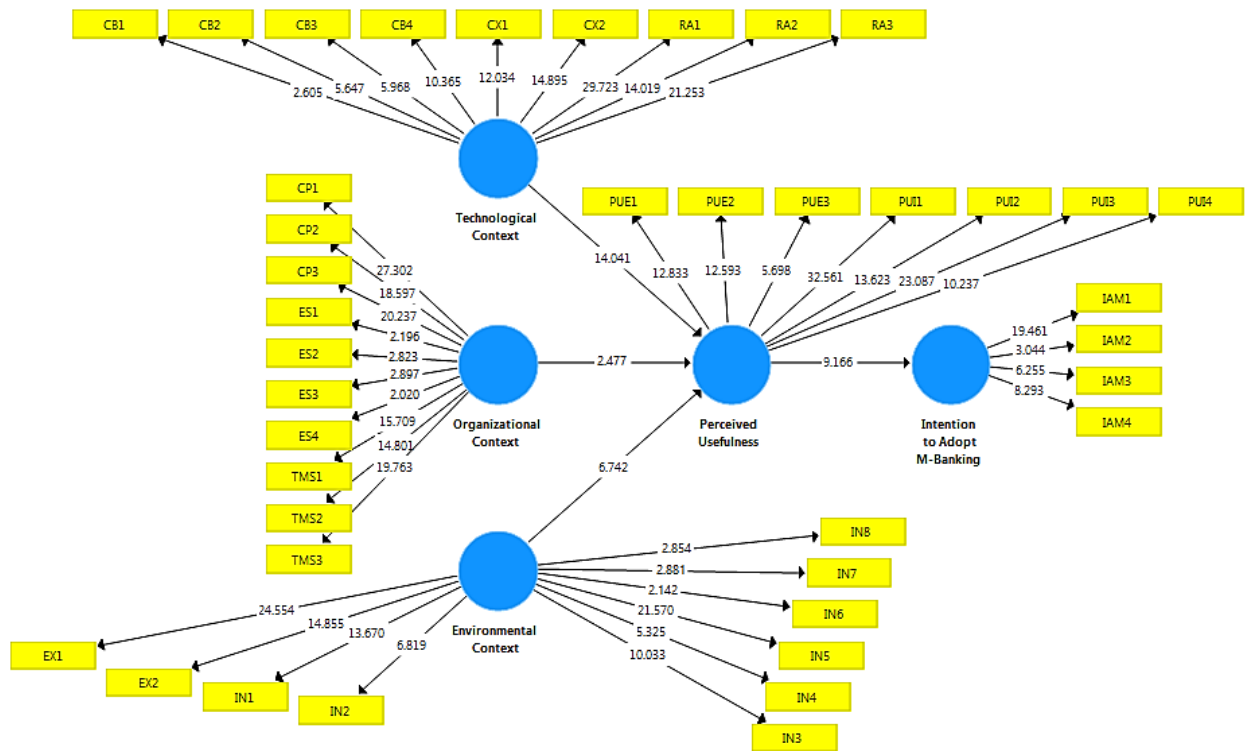
Figure 8: *Bootstrapping Test*
Source: Own elaboration

4.3 Inner Model Test

The inner model test, called influence testing or hypothesis testing, aims to predict the relationship between latent variables. The inner model test is carried out to ensure that the structural model is robust and accurate (D'Agostino, 2017). The inner model test includes Coefficient of Determination (R2), Q2-Predictive Relevance, and Goodness of Fit (GoF). The inner model can be evaluated from several indicators, including:

4.3.1   Coefficient Determination

The R-Square value as Coefficient Determination measures how much other variables influence the endogenous variable. The results of R-squares of 0.67 and above for endogenous latent variables in the structural model indicated the effect of exogenous variables (impacted) on endogenous variables (influenced) included in the excellent category (D'Agostino, 2017). The value of the R-squares test is shown in Table 7 below.

R-squares show that perceived usefulness is influenced by technological context, organization context, and environmental context by 92.6%, and variables outside this research model

influence the remaining 7.4%. Meanwhile, the intention to adopt m-banking is influenced by the perceived usefulness of 34.0%, and the remaining 66.0% is influenced by other variables that are not in this research model.

4.3.2 Predictive Relevance

The Q-Square value as Goodness of fit (GoF) value > 0 indicates that the observed values have been reconstructed well with predictive relevance (D'Agostino, 2017). Meanwhile, Q-Square < 0 indicates no predictive relevance. The value of the Q-Square test is shown in Table 7 below.

The goodness of Fit (GoF) is used to validate the overall structural model. The criteria for assessing Goodness of Fit (GoF) are 0.1 (small GoF), 0.25 (medium GoF), and 0.36 (large GoF) (D'Agostino, 2017). This study's Goodness of Fit (GoF) value was 0.592, which means large. In addition, it means that the observed values in this study have been well reconstructed with predictive relevance.

4.4 Hypothesis Testing

The significance of the estimated parameters provides beneficial information to determine the relationship between variables in this study. Hypothesis testing is done by looking at the probability value and its t-statistics. For the probability value, the p-value with of 5% is < 0.05. The value of the t-table for 5% is 1.960. So the criteria for acceptance of the hypothesis is when the value of t-statistics > t-table (Hair et al., 2017). Hypothesis testing with the Smart PLS 3.0 method is carried out using a bootstrapping process to obtain the relationship between the influence of exogenous variables on endogenous variables as follows:

H1: Technological context affects perceived usefulness
Based on Table 8, the t-statistic value for the technological context variable on perceived usefulness is 14.041 > t-table (1.960) and p-value 0.000 < 0.05. The original sample estimate value shows a positive value of 0.643, indicating that the relationship between the technological context variable and perceived usefulness is positive. Thus H1 in this study is accepted. That is, in this study, the latent variable's technological context with its indicators has a positive and significant effect on the latent variable's perceived usefulness with its indicators.

H2: Organizational context affects perceived usefulness
Based on Table 8, the t-statistic value for the organizational context variable on perceived usefulness is 2.477 > t-table (1.960) and p-value is 0.004 < 0.05. The original sample estimate value shows a positive value of 0.224, indicating that the relationship between organizational

context variables and perceived usefulness is positive. Thus H2 in this study is accepted. In this study, the latent variable's organizational context with its indicators has a positive and significant effect on the latent variable's perceived usefulness with its indicators.

H3: Environmental context affects perceived usefulness

Based on Table 8, the t-statistic value for the environmental context variable on perceived usefulness is $6.742 >$ t-table (1.960) and p-value is $0.000 < 0.05$. The original sample estimate value shows a positive value of 0.401, indicating that the relationship between environmental context variables and perceived usefulness is positive. Thus H3 in this study is accepted. In this study, the latent variable's environmental context with its indicators has a positive and significant effect on the latent variable's perceived usefulness with its indicators.

H4: Perceived usefulness affects intention to adopt m-banking

Based on Table 8, the t-statistic value for the perceived usefulness variable on intention to adopt m-banking is $9.166 >$ t-table (1.960) and p-value is $0.000 < 0.05$. The original sample estimate value shows a positive value of 0.583, indicating that the relationship between perceived usefulness variables and intention to adopt m-banking is positive. Thus H4 in this study is accepted. That is, in this study, the latent variable's perceived usefulness with its indicators has a positive and significant effect on the latent variable intention to adopt m-banking with its indicators.

4.5 Discussion

4.5.1 Research Findings

Technological Context toward Perceived Usefulness

This study's results produce findings that align with the results of research conducted by Vvan and Van (2019) and Lu et al. (2021). The technological context variable has the most significant influence on perceived usefulness. The original value of the technological context sample on perceived usefulness is 0.643, the organizational context is 0.224, and the environmental context is 0.401. The original sample value in this hypothesis is positive, indicating that the relationship in this hypothesis is also positive. It shows that the higher the technological context, the higher the perceived usefulness.

The technological context can also indicate the skills required to use a particular technology (Makttoof et al., 2019). Technological factors in the context of rural banks can be concluded that rural banks in the Special Region of Yogyakarta believe that technology can be learned when they believe that with m-banking, effectiveness and efficiency can be well integrated

(Vvan & Van, 2019). Thus, it is hoped that the intention to adopt m-banking will also be higher. With the trust already owned by rural banks, it is hoped that they can focus more on technical capabilities in managing internal and external technologies that benefit rural banks. Furthermore, the decision to adopt a technology depends not only on what is available in the market but also on how compatible the technology is with the technology already owned by a company (Tornatzky et al., 1990). In this case, it is hoped that rural banks are compatible with existing technology so that the benefits felt in using m-banking can be maximized.

Thus, rural banks need to improve their IT. It can be done by adding capital to their digital technology investment. In addition, network access is also essential to note. Another obstacle that may occur is network problems that may later occur. Therefore, rural banks must look for solutions so that the possibility of errors during online transactions can be minimized.

Organizational Context toward Perceived Usefulness

This study's results align with the research conducted by Chatterjee and Chakraborty (2021). This study also shows that organizational context positively and significantly affects perceived usefulness. It shows that the higher the organization's readiness to use a new system such as m-banking, the higher its perceived usefulness. The emergence of m-banking makes it easier for banks to access resources dominated by large banks (Boustani, 2021). In addition, m-banking presents an opportunity to compete outside their local market (Tortorella et al., 2019). It will provide opportunities for rural banks to compete outside the local market, especially in the Special Region of Yogyakarta. The main benefits of implementing m-banking include reducing operational costs, increasing productivity, increasing system integration, providing a collaborative environment, and increasing overall competitiveness.

This finding is also in line with the study by Mahakittikum et al. (2020), showing that lack of technical skills, IT knowledge, and high costs of IT implementation are significant barriers to technology adoption. In addition, Kaur et al. (2021) find that banks are reluctant to accept internet and e-business technology caused of a lack of management commitment and external pressure. However, this finding shows that organizational context has the lowest influence compared to technological and environmental context variables. It is currently happening in rural banks in the Special Region of Yogyakarta, which has not yet adopted m-banking because there is no strong management commitment and support. With this finding, it is hoped that the high organizational readiness of rural banks will impact the higher perceived usefulness.

Environmental Context toward Perceived Usefulness

The literature on adopting m-banking argues that considering the environment in which banks operate helps to understand the bank's commitment to information and computer technology. It is believed that the environment in which a bank operates can trigger the adoption of m-banking when responding to changes in the external environment. This study is in line with the research results conducted by Kwabena et al. (2021). This study also finds that environmental context positively and significantly affects perceived usefulness. This finding shows that the higher external pressures outside the organization, such as competitor and consumer pressure, the higher the benefits of m-banking. In rural banking, the environmental context is the main force that can encourage or hinder organizations from adopting m-banking. The external environment is the arena in which the organization conducts its business. The primary environmental pressure in technology adoption is competitive pressure.

Other essential factors are government involvement in encouraging technology adoption (Baabdullah et al., 2019) and ecological uncertainty. Environmental uncertainty occurs when complex and rapid changes occur (Matar & Alkhawaldeh, 2022). With this finding, it is hoped that rural banks can have a solid motivation to adopt m-banking. Furthermore, government support is also expected to help rural banks in the Special Region of Yogyakarta to be able to adopt m-banking. With this, the benefits of adopting m-banking can be felt by rural banks, especially in the Special Region of Yogyakarta.

In addition, customer pressure, an essential factor in an environment, also affects the adoption of m-banking in the banking context. The literature shows that satisfying customer needs and expectations through m-banking, which facilitates better interaction and communication with customers, is a significant driver of m-banking adoption. In addition, previous literature also suggested that rural banks consider customer pressure when deciding to adopt m-banking. In fact, because of their rural structure, these banks are more susceptible to pressure from customers than their larger counterparts. But, again, it is because of the considerable dependence of banks economically on big customers to survive in today's competitive market.

Thus, it will be necessary for rural banks to introduce systems for using digital transactions to consumers. It is essential for the successful adoption of m-banking by rural banks. It can be adequately achieved. When consumers are familiar with the digital transaction system, it is hoped that the perceived usefulness of using m-banking can also be achieved. Rural banks must be prepared to face obstacles or challenges that may occur in the future to be helpful in a sustainable manner

Perceived Usefulness toward Intention to Adopt M-Banking

This study's results align with the research conducted by Chatterjee and Chakraborty (2021), which shows that perceived usefulness positively and significantly affects the intention to adopt m-banking. It shows that the higher the perceived usefulness of rural banks, the higher the intention to adopt m-banking. This new dimensional view extends the perceived usefulness relationship to both short- and long-term consequences. Long-term consequences refer to consequential outcomes in one's career prospects or social utility/image, reflecting the most important motivations for adopting technology. The achievement of perceived short-term benefits paves the way to actualizing long-term benefits (Rogers et al., 2014). In this case, rural banks in the Special Region of Yogyakarta are expected to impact using m-banking positively. When rural banks feel the use of m-banking for both short-term and long-term consequences, it is expected that they will have a high interest in adopting m-banking. The achievement of perceived short-term benefits paves the way for the actualization of long-term benefits. Thus, this study has successfully validated the relationship between perceived usefulness and the intention to adopt m-banking.

On the other hand, from the consumer's point of view, this is in line with the findings of Rahi (2019), who found that perceived usefulness is the most critical driver of increasing customer intention to adopt m-banking. According to Rahi (2019), consumers will become more experienced and accustomed to using the mobile banking system in the post-adoption phase. Therefore, user statements that current adoption has met expectations and ease of use of this type of financial service may be a direct reason to increase the perceived benefits of using digital wallets. In addition, consumers have become more experienced and accustomed to using the mobile banking system in the post-adoption phase. Therefore, user statements that current adoption has met expectations and ease of use of this type of financial service may be a direct reason to increase the perceived benefits of using digital wallets. Thus, this study confirmed the relationship between perceived usefulness and the intention to adopt m-banking from the consumer's point of view.

Based on these results, it can be concluded that to successfully implement m-banking technology, both from the banking and consumer perspective, it must have high perceived usefulness. Thus, the benefits of m-banking will be increasingly felt by both parties, from the organizational side (rural bank) and consumers. From a banking perspective, consumers can

show an intention to adopt m-banking if they find it useful. When banks and consumers have synergized to adopt m-banking, the sustainability of m-banking will be achieved successfully.

4.5.2 Contributions to Existing Theory

A systematic review of this research has offered a significant theoretical contribution. Its initial contributions were conceptualization, validation, and separation of viewpoints: rural bank employees and rural bank customers. However, as previously explained, this research has succeeded in showing how the organizational readiness of internal rural banks as well as the readiness of their consumers in their intention to be able to adopt m-banking successfully. Consequently, this important finding provides research in the field with an opportunity to highlight the importance of increasing intentions regarding adopting and using m-banking. In addition, it is also essential to know how internal rural bank organizations' efforts to meet consumer variants' needs for banking and payment services that are more innovative and portable.

This study supports and expands the m-banking conceptual framework model by combining three models: Ajzen and Fishbein's theory of reasoned action (Ajzen & Fishbein, 1975), the technology acceptance model (Davis, 1989), and Technology-Organization-Environment model (Tornatzky et al., 1990). Furthermore, this merger is adjusted by adding new references (Ahmed & Sur, 2021; Matar & Alkhawaldeh, 2022; Al-Fahim et al., 2022) relevant to the COVID-19 pandemic conditions that have occurred during the research process. Thus, this study has successfully demonstrated and described the phenomenon of rapid digital development due to this pandemic, especially in the context of m-banking.

This research makes an essential contribution to the use of the TOE model. It is based on the search for research related to m-banking in the few rural banks that use the TOE model. Several studies have combined TAM and the unified theory of acceptance and use of technology (UTAUT) by Venkatesh et al. (2012). Thus, the results of this study can be used as reference material for further researchers who want to examine the intention to adopt m-banking with the TOE model, which focuses on organization, and the TAM model, which focuses on m-banking consumers in rural banks.

This study contributes to marketing and organizational behavior by using the TOE and TAM frameworks to understand organizational and market factors in adopting m-banking in rural banks in Indonesia. These factors should guide other banks in developing countries with many unbanked customers. However, the results should be generalized with caution until further

studies replicate studies with larger sample sizes. Further qualitative studies can provide deeper insights. A follow-up survey to ascertain whether the drivers of electronic commerce banking in Indonesia are still relevant after four years. This research can be replicated in five years to confirm the importance of the organizational and market factors studied here and investigate other essential drivers that emerged from mobile banking and other forms of electronic commerce. It will be crucial because organizational and market factors in the current study only explain 34% of the variant of mobile banking adoption.

4.5.3   Implications for Practice

This research provides practical implications for the banking industry, especially for rural banks. The results of this study indicate that although technological context has the most significant influence in analyzing intention to adopt, it has the lowest influence in terms of organizational context. It means that although the technology in rural banks is adequate, the organization's internal capabilities have not been able to commit to adopting m-banking. Another factor that is also suspected is why rural banks in the Special Region of Yogyakarta, Indonesia, have not yet adopted m-banking because top management support in the organization has not fully supported the direction of technological innovation.

To successfully adopt m-banking, rural banks must improve digital technology systems for organizations and consumer facilities. Perhaps rural banks will also have to be ready to face obstacles such as an error in the online transaction network. Thus, rural banks must prepare early to find solutions to minimize these errors. In addition, rural banks must also prepare investment capital to be able to have intelligent high technology for the organization.

Another obstacle is how rural banks can change the traditional system to a modern digital one. This change is a long process. This change will also cause many problems that might hinder them from adopting m-banking. For this reason, rural banks must conduct training and self-development for existing employees. When an organization has high technological capabilities, it will be faster to adopt new technology, especially m-banking.

CHAPTER 5

Conclusions and Recommendations

This chapter contains the overall conclusions from the research results conducted on 75 rural bank employees and 87 rural bank customers in the Special Region of Yogyakarta, Indonesia. In addition, this study provides a practical contribution to rural banks in adopting m-banking. Finally, this study's theoretical contributions provide references and input for further research.

5.1 Conclusions

This study obtained the number of respondents from as many as 75 rural bank employees and 87 rural bank customers in the Special Region of Yogyakarta, Indonesia. The survey was conducted between 15/03/2022 and 16/04/2022. This study succeeded in forming a research model of intention to adopt m-banking. Overall, the overall hypothesis in this study is positively and significantly supported. Furthermore, this research has proved that technological context, organization context, and environmental context positively and significantly affect perceived usefulness. In addition, this study also shows that perceived usefulness affects the intention to adopt m-banking.

The analytical technique used in this research is PLS. According to Hair et al. (2017), PLS is one of the SEM techniques that can directly analyze latent variables, indicator variables, and measurement errors. PLS can be used with small samples and applied to all data scales. The outer model or test of reflective indicators is evaluated through convergent validity, discriminant validity, and AVE.

Meanwhile, the reliability test is seen from the composite reliability and Cronbach alpha values. Valid and reliable data is > 0.7, and the expected AVE value is > 0.5. Each construct shown in Table 4 has criteria above the expected standard. Meanwhile, discriminant validity is evaluated by comparing the loading value on the intended construct to be greater than the loading value with other constructs. Table 5 presents the results of the discriminant validity test, which shows that each loading value on the intended construct is greater than the loading value of the other constructs.

The results of quantitative analysis in this study indicate that all hypotheses have a positive and significant effect. The value of the original sample on H1 (0.643), H2 (0.224), H3 (0.401), and H4 (0.583) has a positive value, so it shows a positive relationship. On the other hand, the value

of t statistics has a number > 1.960 and p-values > 5%. This means the hypothesis H1 (t-value = 14.041 / p-value = 0.000), H2 (t-value = 2.477 / p-value = 0.004), H3 (t-value = 6.742 / p-value = 0.000), and H4 (t-value = 9.166 / p-value = 0.000) are supported.

From the results of the data analysis and discussion that has been described, it can be concluded as follows:

1) Technological context has a positive and significant effect on perceived usefulness.
2) Organization context has a positive and significant effect on perceived usefulness.
3) Environmental context has a positive and significant effect on perceived usefulness.
4) Perceived usefulness positively and significantly affects the intention to adopt m-banking.

5.2 Limitations and Recommendations

Limitations

Although this study succeeded in establishing an intention to adopt the m-banking research model, it still has several limitations as follows:

1) Based on the results of the bootstrapping test, the organizational context in this study has the most negligible effect compared to the technological and environmental contexts.

2) The study contributes to marketing and organizational behavior by using the TOE framework to understand the organizational and market factors behind the successful adoption of m-banking banks. These factors should guide other banks in developing countries with many unbanked customers. However, the results should be cautiously generalized until replicated studies with larger sample sizes are performed. In addition, the sample was limited to the Special Region of Yogyakarta, Indonesia.

3) This research can be replicated in five years to emphasize the importance of organizations and markets studied here and investigate other essential drivers emerging from m-banking. It will be essential because perceived usefulness in this study only explains 34% of the variant of m-banking adoption. The rest is influenced by other variables that are not in this study.

4) This study focuses on online payments, which only examines m-banking payments.

5) The low financial inclusion of many cellular phone subscribers in emerging and developing countries, especially in areas such as people's credit.

6) While a solid quantitative tendency characterized the articles included in this research, a few empirical studies grounded in a mix-method approach, including qualitative and quantitative methods, were found (Al-Fahim et al., 2022; Shaikh et al., 2022).

Quantitative modeling and measurement were used to explain m-banking adoption and continuous use in specific contexts. However, this review also showed the lack of certain methodological domains, such as experiments and simulations.

7) M-banking is implemented to create a payment system that is safer and more inclusive, and more innovative. Among the many goals of m-banking are to protect consumers when they pay online and to promote the development of a creative online and mobile payment culture. The implementation of m-banking presents many functional research possibilities. However, whether the results envisaged by m-banking have been fulfilled is not known more clearly, especially in human resources at Indonesian people's credit banks and their users/consumers.

8) The implementation of m-banking supports people's credit banking. M-banking is a collaborative model in which banking data is shared through an application programming interface between two or more unaffiliated parties to provide enhanced capabilities to the market. However, while m-banking provides increased value and benefits to end users, it also challenges data security.

9) Research on rural banks on the adoption and use of downloadable mobile payment/banking applications (mobile communications technology is ubiquitous and reaches a wide range of applications) is very limited, perhaps overlooked by previous research.

10) Most of the respondents in this study were adults with an age range of 35-50 years. Unfortunately, this age includes the older generation, less competent in technology. Thus, this research may not be relevant to today's millennial generation.

11) M-banking has seen a lot of digital innovation and transformation in recent years. M-banking is a form of innovation that allows financial transactions through cellular services and drives financial inclusion. Unlike traditional banking services, m-banking technology relies on a network of agents. While mobile money agents played an essential role in this transformation in most countries where mobile money was introduced, cases of fraud and other exploitative activities have been reported.

12) Much emphasis has been placed on the financial aspects of m-banking, and their non-financial aspects have been sparsely examined. Some of these non-financial services are real-time and important account messaging, including service notifications and alerts, which have created a new research domain dealing with non-financial transactions. Nonetheless, very few attempts have been made to consider the importance of non-

financial services and their role in providing a more significant consumer experience. For example, examining the critical marketing drivers of consumer experience with non-financial transactions available on mobile banking apps.

13) The COVID-19 pandemic has brought about a significant disruption in the social and economic lives of people around the world. Social distancing, restrictions on mass gatherings, and avoidance of physical contact points due to the risk of infection have led to a shift from paper-based and other physical contact points/contacts (e.g., ATMs) to online transactions. It can be said that the COVID-19 pandemic has accelerated the digitization process across the banking, payments, and retail sectors. Thus, maybe this research is slightly different from the m-banking phenomenon after the post- COVID-19 pandemic.

Suggestions for Future Research

Based on the limitations of the research in this study, the researcher provides several suggestions for further research, which include:

1) Future researchers can focus more on the organizational context by adding other measurement indicators such as Financial Resources, IT capability, technical support, etc.

2) The differences in the characteristics of each region or region in terms of culture, demography, infrastructure, and product availability between regions provide opportunities for further researchers to conduct further empirical research regarding the intention to adopt m-banking in other parts of Indonesia.

3) Further qualitative studies can provide deeper insights, as Al-Fahim et al. (2022) conducted a follow-up survey to ascertain whether the factors driving the banking industry to adopt m-banking are still relevant after four years. In addition, it allows further researchers to include other factors influencing the intention to adopt m-banking, such as perceived ease of use, perceived self-efficacy, performance expectancy, perceived awareness, perceived bank credibility, data quality, network enhancement, social influence, policy, government support, etc.

4) This study focuses on online payments, namely m-banking. Future research can examine the intention to adopt the next generation of payment instruments, such as digital wallets, NFC (Near Field Communication), and QR (quick response) codes.

5) Many mobile phone subscribers in emerging and developing countries have low financial inclusion. Therefore, it is imperative to investigate whether an expansion of mobile phone

deployment can contribute to social welfare, consumer well-being, greater financial inclusion, and the greater use of m-banking.

6) Future research may consider using other research methods, such as experimental research and simulation, in examining the various domains of m-banking. Methodological innovations in m-banking research will provide robustness of the findings, a strong validation of theories, and potentially new theory development.

7) Future studies could investigate whether the results envisaged by m-banking have been met. The impact of m-banking adoption on banks, bank customers, and non-banking actors can be better examined through qualitative interviews to understand referrals' challenges and success factors. Large-scale quantitative data collection through surveys of m-banking users/consumers of rural credit banks in Indonesia can help build a strong relationship between implementation success factors and barriers and their impact on customer value.

8) Future research in rural banking could explore the impact of m-banking on risk, data privacy and security, and value creation. M-banking is expected to usher in an entirely new financial services ecosystem and lead to stricter competition between banks and non-banks, where the role of banks can change markedly. Research examining the m-banking model in rural banks and its impact on customer experience is an option for future studies.

9) Future studies should consider investigating consumer attitudes and behaviors regarding these applications against the backdrop of increasing smartphone penetration and increasing use of innovative transactional applications for payment purposes.

10) The new demographic groups (the millennials, generation Z, and generation alpha) allow m-banking research regarding such groups' needs, expectations, and preferences. Research that combines psychological variables with innovation adoption theories to explain the m-banking phenomenon better will lead to new insights and contribute to theory building. Future research can integrate the picky shopper scale into studies comparing the shopping behaviors and innovation adoption of generation X, generation Y, and millennials using m-banking as a context.

11) Future empirical studies could investigate the impact of such behavior (fraud, exploitation) on the adoption and use of mobile money and its ethical considerations. In addition, the role of mobile money agents as service agents also requires further research, especially when the agent's actions or inaction can significantly impact service levels.

12) Shaikh et al. (2020) found that consumer awareness, usefulness, and ease of use of non-financial transactions play significant roles in increasing consumers' sustained use of mobile financial apps. Future research may also examine the effect of digital notifications in such apps on the attitudes and behaviors of consumers.

13) Future research should examine the role played by the post-pandemic in promoting a digital finance culture. Therefore, future studies should consider the post-COVID-19 impact on the transformation and digitization of digital finance.

BIBLIOGRAPHY

Ahmed, S., & Sur, S. (2021). Change in the uses pattern of digital banking services by Indian rural MSMEs during demonetization and Covid-19 pandemic-related restrictions. *Vilakshan-XIMB Journal of Management*. https://doi.org/10.1108/XJM-09-2020-0138

Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological Bulletin, 82*(2), 261–277. https://doi.org/10.1037/h0076477

Al-Fahim, N. H., Abdulghafor, R., & Turaev, S. (2022). Determination of the TOE Factors Influencing the Adoption of Internet Banking Services on SMEs in Yemen: A Moderated Mediation Approach. *In Advances in Electrical and Computer Technologies* (pp. 371-388). Springer, Singapore. https://doi.org/10.1007/978-981-19-1111-8_30

Alkhowaiter, W. A. (2020). Digital payment and banking adoption research in Gulf countries: A systematic literature review. *International Journal of Information Management*, *53*, 102102. https://doi.org/10.1016/j.ijinfomgt.2020.102102

Al-Saedi, K., Al-Emran, M., Ramayah, T., & Abusham, E. (2020). Developing a general extended UTAUT model for M-payment adoption. *Technology in Society*, *62*, 101293. https://doi.org/10.1016/j.techsoc.2020.101293

Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Kizgin, H., & Patil, P. (2019). Consumer use of mobile banking (M-Banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*, *44*, 38-52. https://doi.org/10.1016/j.ijinfomgt.2018.09.002

Baptista, G., & Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators. *Computers in Human Behavior*, *50*, 418-430. https://doi.org/10.1016/j.chb.2015.04.024

Bharati, P., Zhang, W., & Chaudhury, A. (2015). Better knowledge with social media? Exploring the roles of social capital and organizational knowledge management. *Journal of Knowledge Management*, *19*(3), 456-475. https://doi.org/10.1108/JKM-11-2014-0467

Boone, H. N., & Boone, D. A. (2012). Analyzing likert data. *Journal of extension*, *50*(2), 1-5.

Boustani, N. M. (2021). Artificial intelligence impact on banks clients and employees in an Asian developing country. *Journal of Asia Business Studies*, 16(2), 267-278. https://doi.org/10.1108/JABS-09-2020-0376

Chakraborty, D. (2019). Adoption of M-banking service apps for rural consumers: An empirical analysis.

Chatterjee, I., & Chakraborty, P. (2021). Use of information communication technology by medical educators amid covid-19 pandemic and beyond. *Journal of Educational Technology Systems*, *49*(3), 310-324. https://doi.org/10.1177/0047239520966996

Chaurasia, S. S., Verma, S., & Singh, V. (2019). Exploring the intention to use M-payment in India: Role of extrinsic motivation, intrinsic motivation and perceived demonetization regulation. *Transforming Government: People, Process and Policy*, *13*(3/4), 276-305. https://doi.org/10.1108/TG-09-2018-0060

Chen, C. F., Nelson, H., Xu, X., Bonilla, G., & Jones, N. (2021). Beyond technology adoption: Examining home energy management systems, energy burdens and climate change perceptions during COVID-19 pandemic. *Renewable and Sustainable Energy Reviews*, *145*, 111066. https://doi.org/10.1016/j.rser.2021.111066

Ciunova-Shuleska, A., Palamidovska-Sterjadovska, N., & Prodanova, J. (2022). What drives m-banking clients to continue using m-banking services?. *Journal of Business Research*, *139*, 731-739. https://doi.org/10.1016/j.jbusres.2021.10.024

Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods* (Vol. 9, pp. 1-744). New York: Mcgraw-hill.

D'Agostino, R. (2017). *Goodness-of-fit-techniques*. Routledge.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340. https://doi.org/10.2307/249008

DePietro, F. R., & Byrd, J. C. (1990). Effects of membrane fluidity on [3H] TCP binding to PCP receptors. *Journal of Molecular Neuroscience*, *2*(1), 45-52. https://doi.org/10.1007/BF02896925

Duh, H. I., & Fabiao, A. (2018). ORGANIZATIONAL AND MARKET FACTORS AFFECTING MOBILE BANKING ADOPTION BY MOZAMBICAN BANKS. *Journal of Global Business & Technology*, *14*(2).

Esmaeili, A., Haghgoo, I., Davidavičienė, V., & Meidutė-Kavaliauskienė, I. (2021). Customer loyalty in mobile banking: Evaluation of perceived risk, relative advantages, and usability factors. *Engineering Economics*, *32*(1), 70-81. https://doi.org/10.5755/j01.ee.32.1.25286

Ewe, S. Y., Yap, S. F., & Lee, C. K. C. (2015). Network externalities and the perception of innovation characteristics: mobile banking. *Marketing Intelligence & Planning*, *33*(4), 592-611. https://doi.org/10.1108/MIP-01-2014-0006

Geebren, A., Jabbar, A., & Luo, M. (2021). Examining the role of consumer satisfaction within mobile eco-systems: Evidence from mobile banking services. *Computers in Human Behavior*, *114*, 106584. https://doi.org/10.1016/j.chb.2020.106584

Giovanis, A., Athanasopoulou, P., Assimakopoulos, C., & Sarmaniotis, C. (2019). Adoption of mobile banking services: A comparative analysis of four competing theoretical models. *International Journal of Bank Marketing*, *37*(5), 1165-1189. https://doi.org/10.1108/IJBM-08-2018-0200

Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. saGe publications.

Hamidi, H., & Safareeyeh, M. (2019). A model to analyze the effect of mobile banking adoption on customer interaction and satisfaction: A case study of m-banking in Iran. *Telematics and Informatics*, *38*, 166-181. https://doi.org/10.1016/j.tele.2018.09.008

Hanif, Y., & Lallie, H. S. (2021). Security factors on the intention to use mobile banking applications in the UK older generation (55+). A mixed-method study using modified UTAUT and MTAM-with perceived cyber security, risk, and trust. *Technology in Society*, *67*, 101693. https://doi.org/10.1016/j.techsoc.2021.101693

Hu, P. J., Chau, P. Y., Sheng, O. R. L., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of management information systems*, *16*(2), 91-112. https://doi.org/10.1080/07421222.1999.11518247

Huang, F., Teo, T., & Zhou, M. (2020). Chinese students' intentions to use the Internet-based technology for learning. *Educational Technology Research and Development*, *68*(1), 575-591. https://doi.org/10.1007/s11423-019-09695-y

Indonesian Financial Services Authority. (2022). https://www.ojk.go.id/id/Default.aspx

Islam, M. S., Karia, N., Soliman, M. S. M., Fouji, M. H., Khalid, J., & Khaleel, M. (2017). Adoption of mobile banking in Bangladesh: a conceptual framework. *Review of Social Sciences*, *2*(8), 01-08. https://doi.org/10.18533/rss.v2i8.109

Jebarajakirthy, C., & Shankar, A. (2021). Impact of online convenience on mobile banking adoption intention: A moderated mediation approach. *Journal of Retailing and Consumer Services*, *58*, 102323.

Kamdjoug, J. R. K., Wamba-Taguimdje, S. L., Wamba, S. F., & Kake, I. B. E. (2021). Determining factors and impacts of the intention to adopt mobile banking app in Cameroon: Case of SARA by afriland First Bank. *Journal of Retailing and Consumer Services*, *61*, 102509. https://doi.org/10.1016/j.jretconser.2021.102509

Karjaluoto, H., Glavee-Geo, R., Ramdhony, D., Shaikh, A. A., & Hurpaul, A. (2021). Consumption values and mobile banking services: Understanding the urban–rural dichotomy in a developing economy. *International Journal of Bank Marketing*, *39*(2), 272-293. https://doi.org/10.1108/IJBM-03-2020-0129

Karjaluoto, H., Glavee-Geo, R., Ramdhony, D., Shaikh, A. A., & Hurpaul, A. (2021). Consumption values and mobile banking services: Understanding the urban–rural dichotomy in a developing economy. *International Journal of Bank Marketing*, *39*(2), 272-293. https://doi.org/10.1108/IJBM-03-2020-0129

Kaur, S. J., Ali, L., Hassan, M. K., & Al-Emran, M. (2021). Adoption of digital banking channels in an emerging economy: exploring the role of in-branch efforts. *Journal of Financial Services Marketing*, *26*(2), 107-121. https://doi.org/10.1057/s41264-020-00082-w

Klaus, P. P., & Maklan, S. (2013). Towards a better measure of customer experience. *International journal of market research*, *55*(2), 227-246. https://doi.org/10.2501/IJMR-2013-021

Klopping, I. M., & McKinney, E. (2004). Extending the technology acceptance model and the task-technology fit model to consumer e-commerce. *Information Technology, Learning & Performance Journal*, *22*(1). *Available on:* https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.121.3397&rep=rep1&type=pdf

Komulainen, H., & Saraniemi, S. (2019). Customer centricity in mobile banking: a customer experience perspective. *International Journal of Bank Marketing*, *37*(5), 1082-1102. https://doi.org/10.1108/IJBM-11-2017-0245

Kumar, A., Dhingra, S., Batra, V., & Purohit, H. (2020). A framework of mobile banking adoption in India. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(2), 40. https://doi.org/10.3390/joitmc6020040

Kwabena, G. Y., Mei, Q., Ghumro, T. H., Li, W., & Erusalkina, D. (2021). Effects of a technological-organizational-environmental factor on the adoption of the mobile payment system. *The Journal of Asian Finance, Economics and Business*, *8*(2), 329-338. https://doi.org/10.13106/jafeb.2021.vol8.no2.0329

Laukkanen, T. (2016). Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the Internet and mobile banking. *Journal of Business Research*, *69*(7), 2432-2439. https://doi.org/10.1016/j.jbusres.2016.01.013

Lu, L., Liang, C., Gu, D., Ma, Y., Xie, Y., & Zhao, S. (2021). What advantages of blockchain affect its adoption in the elderly care industry? A study based on the technology–organisation–environment framework. *Technology in Society*, *67*, 101786. https://doi.org/10.1016/j.techsoc.2021.101786

Lu, L., Liang, C., Gu, D., Ma, Y., Xie, Y., & Zhao, S. (2021). What advantages of blockchain affect its adoption in the elderly care industry? A study based on the technology–organisation–environment framework. *Technology in Society*, *67*, 101786. https://doi.org/10.1016/j.techsoc.2021.101786

Mahakittikun, T., Suntrayuth, S., & Bhatiasevi, V. (2020). The impact of technological-organizational-environmental (TOE) factors on firm performance: merchant's perspective of mobile payment from Thailand's retail and service firms. *Journal of Asia Business Studies*, *15*(2), 359-383. https://doi.org/10.1108/JABS-01-2020-0012

Mahakittikun, T., Suntrayuth, S., & Bhatiasevi, V. (2020). The impact of technological-organizational-environmental (TOE) factors on firm performance: merchant's perspective of mobile payment from Thailand's retail and service firms. *Journal of Asia Business Studies*. https://doi.org/10.1108/JABS-01-2020-0012

Makttoof, N. ., Khalid, H. ., & Abdullah, I. (2019). Investigation the Key Factors Influencing the Mobile Banking Adoption in Iraq. *Open International Journal of Informatics*, *7*(Special Issue 1), 23–34. Retrieved from https://oiji.utm.my/index.php/oiji/article/view/113

Mao, S., Zhu, M., Wang, X., & Xiao, X. (2020). Grey–Lotka–Volterra model for the competition and cooperation between third-party online payment systems and online banking in China. *Applied Soft Computing*, *95*, 106501. https://doi.org/10.1016/j.asoc.2020.106501

Matar, A., & Alkhawaldeh, A. M. (2022). Adoption of electronic cards using Wi-Fi platform services by clients of banking sector during COVID-19 pandemic. *International Journal*

of   Engineering   Business   Management, *14*,   1-11.
https://doi.org/10.1177/18479790221112797

Meher, B. K., Hawaldar, I. T., Mohapatra, L., Spulbar, C. M., Birau, F. R., & Rebegea, C. (2020). The impact of digital banking on the growth of Micro, Small and Medium Enterprises (MSMEs) in India: a case study. *Business: Theory and Practice*, *22*(1), 18-28. *https://doi.org/10.3846/btp.2021.12856*

Mujahed, H. M. H., Ahmed, E. M., & Samikon, S. A. (2021). Factors influencing Palestinian small and medium enterprises intention to adopt mobile banking. *Journal of Science and Technology Policy Management,* 13(3), 561-584. https://doi.org/10.1108/JSTPM-05-2020-0090

Ndungu, J. M., & Moturi, C. A. (2020). Determinants of mobile Fintech uptake in Kenyan microfinance sector. *Current Journal of Applied Science and Technology*, *39*(28), 102-114. Article no.CJAST.60491

Nguyen, V. A., & Nguyen, T. P. T. (2020). An integrated model of CSR perception and TAM on intention to adopt mobile banking. *The Journal of Asian Finance, Economics and Business*, *7*(12), 1073-1087. https://doi.org/10.13106/jafeb.2020.vol7.no12.1073

Oweis, K. A., Alghaswyneh, O. F. (2019). The Antecedents of Electronic Banking Adoption in Saudi Arabia: Using Diffusion of Innovation Theory. *Marketing and Management of Innovations, 4*, 160-171. http://doi.org/10.21272/mmi.2019.4-13

Pal, A., Herath, T., & Rao, H. R. (2021). Why do people use mobile payment technologies and why would they continue? An examination and implications from India. *Research Policy*, *50*(6), 104228. https://doi.org/10.1016/j.respol.2021.104228

Potluri, R. M., & Vajjhala, N. R. (2018). A study on application of web 3.0 technologies in small and medium enterprises of India. *The Journal of Asian Finance, Economics and Business*, *5*(2), 73-79. https://doi.org/10.13106/jafeb.2018.vol5.no2.73

Prause, M. (2019). Challenges of industry 4.0 technology adoption for SMEs: the case of Japan. *Sustainability*, *11*(20), 5807. https://doi.org/10.3390/su11205807

Premkumar, G., & Roberts, M. (1999). Adoption of new information technologies in rural small businesses. *Omega*, *27*(4), 467-484. https://doi.org/10.1016/S0305-0483(98)00071-1

Priya, R., Gandhi, A. V., & Shaikh, A. (2018). Mobile banking adoption in an emerging economy: An empirical analysis of young Indian consumers. *Benchmarking: An International Journal*. https://doi.org/10.1108/BIJ-01-2016-0009

Rahi, S., Mansour, M. M. O., Alharafsheh, M., & Alghizzawi, M. (2021). The post-adoption behavior of internet banking users through the eyes of self-determination theory and expectation confirmation model. *Journal of Enterprise Information Management*, *34*(6), 1874-1892. https://doi.org/10.1108/JEIM-04-2020-0156

Rauniar, R., Rawski, G., Yang, J., & Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: an empirical study on Facebook. *Journal of Enterprise Information Management*. https://doi.org/10.1108/JEIM-04-2012-0011

Roberts, P. W., & Amit, R. (2003). The dynamics of innovative activity and competitive advantage: The case of Australian retail banking, 1981 to 1995. *Organization science*, *14*(2), 107-122. https://doi.org/10.1287/orsc.14.2.107.14990

Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. In *An integrated approach to communication theory and research* (pp. 432-448). Routledge.

Sahoo, D., & Pillai, S. S. (2017). Role of mobile banking servicescape on customer attitude and engagement: An empirical investigation in India. *International Journal of Bank Marketing*, *35*(7), 1115-1132. https://doi.org/10.1108/IJBM-09-2015-0144

Saprikis, V., Avlogiaris, G., & Katarachia, A. (2022). A Comparative Study of Users versus Non-Users' Behavioral Intention towards M-Banking Apps' Adoption. *Information*, *13*(1), 30. https://doi.org/10.3390/info13010030

Schiffman LG, Kanuk LL (2004*). Consumer Behavior. 8th Ed*. Pearson Education, New Delhi.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. john wiley & sons.

Seo, S. W., Kim, H. C., Zhu, Z. Y., & Lee, J. T. (2020). What Makes Hotel Chefs in Korea Interact with SNS Community at Work? Modeling the Interplay between Social Capital and Job Satisfaction by the Level of Customer Orientation. *International Journal of Environmental Research and Public Health*, *17*(19), 7129. https://doi.org/10.3390/ijerph17197129

Shaikh, A. A., & Karjaluoto, H. (2015). Mobile banking adoption: A literature review. *Telematics and informatics*, *32*(1), 129-142. https://doi.org/10.1016/j.tele.2014.05.003

Shaikh, I. M., Qureshi, M. A., Noordin, K., Shaikh, J. M., Khan, A., & Shahbaz, M. S. (2020). Acceptance of Islamic financial technology (FinTech) banking services by Malaysian users: an extension of technology acceptance model. *foresight*, *22*(3), 367-383. https://doi.org/10.1108/FS-12-2019-0105

Shankar, A., & Kumari, P. (2019). A study of factors affecting mobile governance (mGov) adoption intention in india using an extension of the technology acceptance model (TAM). *South Asian Journal of Management, 26*(4), 71-94. Retrieved from https://www.proquest.com/scholarly-journals/study-factors-affecting-mobile-governance-mgov/docview/2374199122/se-2

Shankar, A., & Rishi, B. (2020). Convenience matter in mobile banking adoption intention?. *Australasian Marketing Journal (AMJ)*, *28*(4), 273-285. https://doi.org/10.1016/j.ausmj.2020.06.008

Shareef, M. A., Baabdullah, A., Dutta, S., Kumar, V., & Dwivedi, Y. K. (2018). Consumer adoption of mobile banking services: An empirical examination of factors according to adoption stages. *Journal of Retailing and Consumer Services*, *43*, 54-67. https://doi.org/10.1016/j.jretconser.2018.03.003

Singh, S., & Srivastava, R. K. (2020). Understanding the intention to use mobile banking by existing online banking customers: an empirical study. *Journal of Financial Services Marketing*, *25*(3), 86-96. https://doi.org/10.1057/s41264-020-00074-w

Souiden, N., Ladhari, R., & Chaouali, W. (2020). Mobile banking adoption: a systematic review. *International Journal of Bank Marketing*, *39*(2), 214-241. https://doi.org/10.1108/IJBM-04-2020-0182

Stevens, J. (1996). *Applied Multivariate Statistics for The Social Sciences (3rd ed.)*. Mahwah, NJ: Lawrence Erlbaum.

Tam, C., & Oliveira, T. (2017). Understanding mobile banking individual performance: The DeLone & McLean model and the moderating effects of individual culture. *Internet Research*. https://doi.org/10.1108/IntR-05-2016-0117

Tam, C., Santos, D., & Oliveira, T. (2020). Exploring the influential factors of continuance intention to use mobile Apps: Extending the expectation confirmation model. *Information Systems Frontiers*, *22*(1), 243-257. https://doi.org/10.1007/s10796-018-9864-5

Teng, S., & Khong, K. W. (2021). Examining actual consumer usage of E-wallet: A case study of big data analytics. *Computers in Human Behavior*, *121*, 106778. https://doi.org/10.1016/j.chb.2021.106778

Teng, S., & Khong, K. W. (2021). Examining actual consumer usage of E-wallet: A case study of big data analytics. *Computers in Human Behavior*, *121*, 106778. https://doi.org/10.1016/j.chb.2021.106778

Tiwari, P., Tiwari, S. K., & Gupta, A. (2021). Examining the impact of customers' awareness, risk and trust in m-banking adoption. *FIIB Business Review*, *10*(4), 413-423. https://doi.org/10.1177/23197145211019924

Tornatzky, L. G., Fleischer, M., & Chakrabarti, A. K. (1990). *Processes of technological innovation*. Lexington books.

Tortorella, G. L., Giglio, R., & Van Dun, D. H. (2019). Industry 4.0 adoption as a moderator of the impact of lean production practices on operational performance improvement. *International journal of operations & production management*, 39(6/7/8), 860-886. https://doi.org/10.1108/IJOPM-01-2019-0005

Trawnih, A., Yaseen, H., Al-Adwan, A. S., Alsoud, R., & Jaber, O. A. (2021). Factors influencing social media adoption among smes during Covid-19 crisis. *Journal of Management Information and Decision Sciences*, *24*(6), 1-18.

Trinh, T., Le, H., & Nguyen, N. (2020). Factors affecting private customers in adopting mobile banking in Vietnam. *Management Science Letters*, *10*(12), 2769-2780. https://doi.org/10.5267/j.msl.2020.4.033

Van Deventer, M., De Klerk, N., & Bevan-Dye, A. (2017). Antecedents of attitudes towards and usage behavior of mobile banking amongst Generation Y students. *Banks and Bank Systems*, *12*(2), 78-90. http://dx.doi.org/10.21511/bbs.12(2).2017.08

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478. https://doi.org/10.2307/30036540

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178. https://doi.org/10.2307/41410412

Vvan den Berg, J., & Van der Lingen, E. (2019). An empirical study of the factors affecting the adoption of mobile enterprise applications. *South African Journal of Industrial Engineering*, *30*(1), 124-146. https://hdl.handle.net/10520/EJC-15ff13b32b

Yu, C. S. (2012). Factors affecting individuals to adopt mobile banking: Empirical evidence from the UTAUT model. *Journal of electronic commerce research*, *13*(2), 104. *Available on:* http://www.jecr.org/sites/default/files/13_3_p01_0.pdf

Zhou, T. (2018). Examining users' switch from online banking to mobile banking. *International Journal of Networking and Virtual Organisations*, *18*(1), 51-66. https://doi.org/10.1504/IJNVO.2018.090675

A. Questionnaire

<u>**THESIS QUESTIONNAIRE 2022**</u>

Before you fill out the questionnaire, read the general instructions first.

General Instructions
1. Read the General Instructions for filling out the questionnaire first before filling out the questionnaire. 2. Make sure you have filled in the respondent's identity correctly. Identity consists of the bank or the consumer. Choose the one that suits you. 3. Complete the questionnaire by following the instructions for each section of the questionnaire. 4. Provide notes in the form of notes and information that you think is important to the questionnaire. 5. After you have filled out the questionnaire, put your signature on the last part of this questionnaire. 6. Congratulations on filling out the questionnaire. Thank you and as a token of our gratitude, we ask for your willingness to accept research souvenirs from researchers.

The identity of the respondent and the results of filling out the questionnaire will be kept confidential
Respondent Identity (Bank)

Respondent Name	:		Salary Level	: [ ] < Rp. 5.000.000
				[ ] Rp. 5.000.000 – Rp. 10.000.000
Mobile Phone Number	:			
				[ ] Rp. 10.000.000 – Rp. 25.000.000
Email	:			
				[ ] > 25.000.000 (rupiah)
Age	: [ ] 18 - 34 years			
	[ ] 35 – 50 years			
	[ ] > 50 years			

* Choose one by ticking (V) or cross (X)

The identity of the respondent and the results of filling out the questionnaire will be kept confidential
Respondent Identity (Customer)

Respondent Name	:		Profession	: [ ] Employee
				[ ] Entrepreneur
Mobile Phone Number	:			[ ] Housewife
				[ ] College Student
Email	:			
Age	: [ ] 18 - 34 years		Salary Level	: [ ] < Rp. 5.000.000
	[ ] 35 – 50 years			[ ] Rp. 5.000.000 – Rp. 10.000.000
	[ ] > 50 years			[ ] Rp. 10.000.000 – Rp. 25.000.000
				[ ] > 25.000.000 (rupiah)

Instructions for Filling Answers

Put an X (cross) in the number box that is closest to your opinion. This study uses a five-point rating scale with **the lowest limit being 1 (VERY NOT SUITABLE) and the highest limit being 5 (VERY APPROPRIATE).**

Scale	Score
Strongly Agree	5
Agree	4
Neutral	3
Do Not Disagree	2
Strongly Disagree	1

Items	Statement	1	2	3	4	5
	Technological Context					
RA1	1) Using m-banking improves the quality of the tasks I do.					
RA2	2) Using m-banking increases the effectiveness of my tasks.					
RA3	3) Using m-banking increases my productivity.					
CX1	4) Using m-banking technology is more flexible for banking operating systems than legacy systems that have been around for a long time.					
CX2	5) Integrating m-banking technology with existing legacy systems is a difficult task for our organization.					
CB1	6) We have good plans to integrate m-banking technology with existing legacy systems in our organization.					
CB2	7) Our partners help us integrate m-banking technology into existing legacy systems.					
CB3	8) The m-banking technology is compatible with the existing old systems for production and manufacturing in our company.					
CB4	9) Easier customization for m-banking-based manufacturing and production systems.					

Items	Statement	1	2	3	4	5
Organizational Context						
ES1	1) We always innovate to maintain the company's competitive advantage.					
ES2	2) We have innovations in changing the design of services offered to our customers in order to boost organizational development in the future.					
ES3	3) We are able to implement creative solutions to develop the business.					
ES4	4) We always update the working mechanism for the better.					
CP1	5) We use m-banking to reduce banking operational costs.					
CP2	6) M-banking saves costs associated with time and effort in banking operations and customer service.					
CP3	7) M-banking is more cost-effective for us than traditional systems that have been around for a long time.					
TMS1	8) Top management in my organization is interested in adopting m-banking.					
TMS2	9) Top management in my organization considers the adoption of m-banking important.					
TMS3	10) Top management in my organization has shown support for the adoption of m-banking.					

Items	Statement	1	2	3	4	5
Environmental Context (Bank)						
IN1	1) A large number of banks have adopted m-banking.					
IN2	2) Our rural bank has experienced environmental pressures to adopt m-banking.					
IN3	3) Most of our competitors are already using m-banking.					
IN4	4) Government subsidies will reduce rural bank investment costs.					
IN5	5) Overall, government subsidies increase in rural banks interest in adopting m-banking in a sustainable manner.					
IN6	6) The technology in our banking industry is changing quite fast.					
IN7	7) Technological changes present great opportunities in our banking industry.					
IN8	8) There are major technological developments in our banking industry.					
EX1	1) I think easy to use mobile banking.					
EX2	2) I think mobile banking was practical to use.					
Perceived Usefulness (Bank)						
PUI1	1) Technology-based systems make companies more efficient.					
PUI2	2) The use of technology-based systems increases productivity in organizations.					
PUI3	3) Can achieve things faster using technology-based systems.					
PUI4	4) Technology-based systems reduce operational costs.					

Items	Statement	1	2	3	4	5
Perceived Usefulness (Customer)						
PUE1	1) In my opinion, the use of mobile banking would help in making a quick transaction.					
PUE2	2) In my opinion, using mobile banking makes a transaction very easy.					
PUE3	3) In my view, the use of mobile banking is beneficial.					
Intention to Adopt M-banking						
IAM1	1) I will use the mobile banking application in the next three months.					
IAM2	2) I will use the mobile banking app in the future.					
IAM3	3) I was planning to use the mobile banking application in the next three months.					
IAM4	4) I intend to use mobile banking applications in the future.					

VITAL RECORDS

Write down important notes that you think are important to convey in the column below.

The questionnaire has been completed

at the date of: April _____ , 2022

Signature:_____

Respondent Name:

-- THANK YOU FOR YOUR PARTICIPATION ☺ –

B. Outer Model Test

Table 3. Construct Reliability and Validity of 30 Respondents

Variables	Items	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Technological Context	CB1	0.745	0,806	0,888	0,837	0,595
	CB2	0.710				
	CB3	0.743				
	CB4	0.700				
	CX1	0.724				
	CX2	0.700				
	RA1	0.792				
	RA2	0.863				
	RA3	0.912				
Organizational Context	CP1	0.882	0,701	0,935	0,743	0,579
	CP2	0.921				
	CP3	0.780				
	ES1	0.778				
	ES2	0.743				
	ES3	0.748				
	ES4	0.794				
	TMS1	0.931				
	TMS2	0.899				
	TMS3	0.734				
Environmental Context	IN1	0.870	0,749	0,932	0,826	0,569
	IN2	0.843				
	IN3	0.783				
	IN4	0.832				
	IN5	0.833				
	IN6	0.745				
	IN7	0.753				
	IN8	0.787				
	EX1	0.781				
	EX2	0.867				
Perceived Usefulness	PUI1	0.838	0,892	0,913	0,918	0,624
	PUI2	0.876				
	PUI3	0.852				
	PUI4	0.767				
	PUE1	0.759				
	PUE2	0.890				
	PUE3	0.764				
Intention to Adopt M-Banking	IAM1	0.857	0,757	0,778	0,850	0,593
	IAM2	0.795				
	IAM3	0.759				
	IAM4	0.852				

Table 4. Cross Loading Factor of 30 Respondents

	Environmental Context	Intention to Adopt M-Banking	Organizational Context	Perceived Usefulness	Technological Context
CB1	0,273	0,595	0,229	0,217	**0.745**
CB2	0,237	0,529	0,234	0,239	**0.710**
CB3	0,320	0,552	0,382	0,201	**0.743**
CB4	0,549	0,376	0,509	0,597	**0.700**
CP1	0,833	0,405	**0.882**	0,731	0,707
CP2	0,766	0,266	**0.921**	0,697	0,671
CP3	0,681	0,089	**0.780**	0,535	0,436
CX1	0,272	0,269	0,186	0,467	**0.724**
CX2	0,179	0,857	0,213	0,317	**0.700**
ES1	-0,501	-0,116	**0.778**	-0,377	-0,353
ES2	0,059	0,139	**0.743**	0,030	0,067
ES3	-0,243	0,100	**0.748**	-0,090	-0,145
ES4	-0,256	-0,352	**0.794**	-0,090	-0,171
EX1	**0.781**	0,089	0,680	0,535	0,436
EX2	**0.867**	0,312	0,531	0,743	0,698
IAM1	0,179	**0.857**	0,213	0,317	0,500
IAM2	0,273	**0.795**	0,229	0,217	0,345
IAM3	0,237	**0.759**	0,234	0,239	0,310
IAM4	0,320	**0.852**	0,382	0,201	0,343
IN1	**0.870**	0,380	0,792	0,590	0,770
IN2	**0.843**	0,292	0,704	0,764	0,628
IN3	**0.783**	-0,011	0,367	0,402	0,298
IN4	**0.832**	0,177	0,734	0,751	0,630
IN5	**0.833**	0,405	0,882	0,731	0,507
IN6	**0.745**	0,028	-0,247	-0,053	-0,133
IN7	**0.753**	-0,072	-0,186	-0,157	-0,156
IN8	**0.787**	-0,116	-0,066	-0,022	0,037
PUE1	0,652	0,238	0,734	**0.759**	0,584
PUE2	0,870	0,380	0,792	**0.890**	0,770
PUE3	0,843	0,292	0,704	**0.764**	0,628
PUI1	0,689	0,124	0,708	**0.838**	0,692
PUI2	0,722	0,200	0,761	**0.876**	0,663
PUI3	0,668	0,318	0,609	**0.852**	0,512
PUI4	0,272	0,269	0,186	**0.767**	0,524
RA1	0,689	0,124	0,708	0,538	**0.792**
RA2	0,722	0,200	0,761	0,576	**0.863**
RA3	0,668	0,318	0,609	0,552	**0.912**
TMS1	0,867	0,312	**0.931**	0,743	0,698
TMS2	0,801	0,371	**0.899**	0,808	0,586

TMS3	0,652	0,238	**0.734**	0,559	0,584

Source: Own elaboration

Table 5. Construct Realiability and Validity of 162 Respondents

	Items	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Technological Context	CB1	0.788	0,820	0,869	0,860	0,521
	CB2	0.710				
	CB3	0.765				
	CB4	0.795				
	CX1	0.724				
	CX2	0.705				
	RA1	0.795	0.820	0.869	0.860	0.521
	RA2	0.703				
	RA3	0.774				
Organizational Context	CP1	0.838	0,790	0,863	0,796	0,568
	CP2	0.775				
	CP3	0.805				
	ES1	0.727				
	ES2	0.732				
	ES3	0.757				
	ES4	0.703				
	TMS1	0.738				
	TMS2	0.708				
	TMS3	0.793				
Environmental Context	IN1	0.724	0,747	0,825	0,783	0,531
	IN2	0.772				
	IN3	0.791				
	IN4	0.761				
	IN5	0.774				
	IN6	0.717				
	IN7	0.749				
	IN8	0.708				
	EX1	0.812				
	EX2	0.704				
Perceived Usefulness	PUI1	0.829	0,826	0,842	0,871	0,597
	PUI2	0.716				
	PUI3	0.775				
	PUI4	0.702				
	PUE1	0.773				
	PUE2	0.708				
	PUE3	0.780				
	IAM1	0.840	0,795	0,778	0,758	0,550
	IAM2	0.740				

Intention to	IAM3	0.754				
Adopt M-Banking	IAM4	0.788				

Table 6. Cross Loading Factor of 162 Respondents

	Environmental Context	Intention to Adopt M-Banking	Organizational Context	Perceived Usefulness	Technological Context
CB1	0,084	0,440	0,043	0,169	**0,788**
CB2	0,289	0,654	0,288	0,388	**0,710**
CB3	0,365	0,688	0,411	0,327	**0,765**
CB4	0,534	0,487	0,537	0,572	**0,795**
CP1	0,774	0,440	**0,838**	0,649	0,600
CP2	0,670	0,480	**0,775**	0,636	0,629
CP3	0,712	0,397	**0,805**	0,663	0,610
CX1	0,558	0,549	0,523	0,702	**0,724**
CX2	0,483	0,840	0,518	0,556	**0,705**
ES1	-0,016	-0,011	**0,727**	0,017	0,022
ES2	0,261	0,067	**0,732**	0,199	0,171
ES3	0,043	-0,037	**0,757**	0,021	0,003
ES4	0,013	-0,126	**0,703**	-0,008	-0,040
EX1	**0,812**	0,397	0,605	0,663	0,610
EX2	**0,704**	0,409	0,638	0,630	0,591
IAM1	0,483	**0,840**	0,518	0,556	0,705
IAM2	0,084	**0,740**	0,043	0,169	0,288
IAM3	0,289	**0,754**	0,288	0,388	0,510
IAM4	0,365	**0,788**	0,411	0,327	0,465
IN1	**0,724**	0,369	0,560	0,708	0,559
IN2	**0,772**	0,234	0,379	0,480	0,387
IN3	**0,791**	0,314	0,612	0,549	0,481
IN4	**0,761**	0,212	0,318	0,424	0,359
IN5	**0,774**	0,440	0,038	0,649	0,600
IN6	**0,717**	0,057	0,033	0,023	0,033
IN7	**0,749**	-0,034	0,055	0,035	0,044
IN8	**0,708**	-0,111	0,076	0,029	-0,017
PUE1	0,639	0,380	0,793	**0,773**	0,547
PUE2	0,724	0,369	0,560	**0,708**	0,559
PUE3	0,572	0,234	0,379	**0,780**	0,387
PUI1	0,710	0,437	0,678	**0,829**	0,795
PUI2	0,512	0,365	0,496	**0,716**	0,703
PUI3	0,595	0,482	0,647	**0,775**	0,774
PUI4	0,558	0,549	0,523	**0,702**	0,724
RA1	0,710	0,437	0,678	0,829	**0,795**
RA2	0,512	0,365	0,496	0,716	**0,703**
RA3	0,595	0,482	0,647	0,775	**0,774**
TMS1	0,704	0,409	**0,738**	0,630	0,591

TMS2	0,629	0,389	**0,708**	0,618	0,578
TMS3	0,639	0,380	**0,793**	0,673	0,547

Source: Own elaboration

C. Inner Model Test

Table 7. Structural Model Inner Test Results

Structural Model Inner Test	Results	Description
R-Square Perceived Usefulness Intention to Adopt M-banking	0.926 0.340	Substantial Strong
Q-Square $Q^2 = 1 - (1 - R_1^2)(1 - R_2^2)$ $= 1 - (1 - 0.926)(1 - 0.340)$ $= 1 - (0.074)(0.066)$ $= 1 - 0.0049$ $= 0.995$	0.995	Very good, meaning that the observed values have been reconstructed very well with predictive relevance.
Goodness of Fit $GoF = \sqrt{average\ AVE\ x\ average\ R^2}$ $GoF = \sqrt{0.554\ x\ 0.633}$ $GoF = \sqrt{0.351}$ $GoF = 0.592$	0.592	Great

Source: Own elaboration

D. Hypothesis Test Results

Tabel 8. Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Supported
H1: Technological Context → Perceived Usefulness	0,643	0.639	0,046	14,041	**0,000**	Yes
H2: Organizational Context → Perceived Usefulness	0,224	0,222	0,050	2,477	**0,004**	Yes
H3: Environmental Context → Perceived Usefulness	0.401	0,404	0,059	6,742	**0,000**	Yes
H4: Perceived Usefulness → Intention to Adopt M-Banking	0.583	0,593	0,064	9,166	**0,000**	Yes

Source: Own elaboration