Technology Acceptance Model to Solve Mobile Payment Problem for SMEs

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Abstract

Several previous studies on the problem of SMEs show that the use and utilization of technology is still a major problem for SMEs, one of which is technology to support transaction processes such as mobile payments. Unfortunately in Indonesia where SMEs are one of the important variables in a country's economy, but mobile payments have not been used optimally by SMEs. the purpose of this research is to help SMEs use m-payment using a technology acceptance model approach. The result of this research is the TAM m-payment model for SME

Keywords
TAM, mobile payment, SMEs

1. Introduction

Innovation is reliably cited as one of the most noteworthy challenges confronted by little and medium enterprises (SMEs) around the world. It is broadly recognized that innovation is important for improving proficiency, exactness, expanding outreach and decreasing costs. In any case, numerous SMEs lack adequate stores to contribute in reasonable backend advances, or work in locales where access to basic foundation such as the Web remains rare. Still others sink stores into poor innovation speculations, or basically select not to contribute, constraining their capacity to develop and compete (Rosenberg, 2009)

The wonder of utilizing mobile payment applications as a substitute for banknotes in exchange installments cannot of course be isolated from dangers. In any case, the utilize innovation has vulnerabilities that clients cannot foresee. For case, there was a framework settle that made the application unusable when required. Installment disappointment may too happen due to web signals. These things can gotten to be deterrents to the appropriation of this innovation, particularly for individuals who are not recognizable with the speed of computerized installments. For a few individuals, adjustment is still required to be able to utilize the computerized wallet application in full. Investigate on SME issues states that utilize and utilization of innovation is still a major issue for SMEs (Maier,2016).

The innovation that's frequently utilized for exchange handling needs nowadays is mobile installment. The most work of using technology is to encourage each exchange that's carried out. Unfortunately in Indonesia, this comfort is underutilized by trade individuals and their clients. In the interim, SMEs are one of the vital factors in a country's economy. The SME division can energize financial development and make occupations, so it can be said that the SME segment can play a part in keeping up financial steadiness. Be that as it may, mobile installment as implies of exchange is right now not utilized ideally by commerce individuals, particularly SMEs. Issues such as abuse of personal data and extortion that regularly happen in online innovation. This is often one of the reasons why SMES doesn't utilize mobile payments (Khatimah,2014) (Luckandi,2019)

This research aims to increase the use of m-payment for SMEs with a technology acceptance model approach. The research method uses qualitative approach by conducting observations and interviews with several SMEs and parties related to SMEs to obtain the required information

2. Literature Review
A. Mobile payment

Mobile payment is a payment instrument using a smart phone device that uses various media technologies such as QR Code, NFC, OTP code, etc. a stage that lets customers to increase entree to financial services exploitation a cell phone is a Definition of Mobile Payment (Shirer ,2016).

Mobile Payments are not only used on smartphones but can also be used on all cell phones. And this is an advantage in developing countries that have low levels of internet networks. This Mobile Payment can be used to receive, send and save money without transactions using a bank account.

Mobile payments are used by users in order to send money quickly and avoid the inconvenience that often helps users when transferring manually.

Mobile Payment is an electronic system based on mobile devices. Cellular payments do not appear alone but are the application of telecommunications technology that is increasingly developing with the application of increasingly sophisticated digital technology so that it can replace analog technology. The use of digital systems allows various data to be sent. Results The output of this digital system, which is applied in cellular telecommunications, allows each cellphone to transmit data with various types of data.

There are stages in a category in mobile payments, the first of which is a so-called bank-centric model. Then the second stage is the development of electronic money (e-money) which encourages various parties to experiment in its use via cellphones. And the third stage of mobile payment is the interoperability of the mobile payment system against the existing financial system.

Therefore, mobile payments as a non-cash payment instrument can be a breakthrough in creating an inclusive economy in Indonesia. The reason is, the penetration of cellphones in Indonesia is very high, even the number of subscribers exceeds the population of Indonesia itself (Must,2010).

Mobile p administrations can be broadly categorized into three bunches: m-transfers, m-payments, and m-financial administrations. M-transfers include cash exchange from one client to another, normally without any going with trade of merchandise or administrations. These are also referred to as person-to-person (P2P) exchanges and may be household or universal. M-payments include cash trade between two clients with an accompanying exchange of merchandise or administrations. M-financial administrations are mobile cash administrations in which mobile money may be connected to a bank account to supply the client with an entire run of transactions that they would get to at a bank department. Clients get too financial-related administrations like insurance and micro-finance among others through their portable phones (Jenkins,2018)

Mobile Payment has been born and will be a trigger for e commerce and m commerce in Indonesia because mobile payments provide convenience and convenience in transactions, this can happen because:
Basic Mobile Payment Architecture (Shrier,2016)

a. Trader: is a place that holds customer transaction details. The data consists of dynamic elements and static elements that can identify any financial transaction
b. Transaction data received by customers the Merchant and match any information with those held. Where a standard payment format has been prepared to be able to process payments. The payment process is in the form The consumer identifies the PIN when the payment request is ready to be transferred
c. Payment requests are received by the account manager and the customer calls in the process of requesting a payment. This identification process includes checking how much funds the customer is requesting and how much funds are available. After the process is complete, a payment notification will send to the Bank data as payment. Then the identified bank data Returns the destination of the Bank on the payment notification and sending a message to the merchant that the payment process was successful.
d. The customer receives a payment notification whether the transaction is accepted or rejected world has entered the information age, an era where information is seen as a power to actualize one self.

B. Small Medium Enterprise and mobile payment

SMEs in the general context have many limitations and thus prevent SMEs from developing. One of the limitations of SMEs is their knowledge of information technology. SMEs have unique characteristics so they need to use a special approach so that SMEs can build larger businesses using information technology (Inayatulloh ,2020).

Mobile payments have an important role for MSMEs but in fact mobile payments have become the most widely used payment system in developed countries (Liébana,2021), (Ting ,2016). Previous research has shown that the increase in m-payment implementation is due to the factor of ease of online transactions (Zhou,2014)

The use of information technology to improve services for and increase the effectiveness of business processes for all types of businesses is very important, including for SMEs. the ability to use information technology to the fullest is the main requirement to increase economic mobility in developing countries. However, mobile payments with extraordinary capabilities for SMEs have not been fully utilized in various developing countries (Dennehy,2015) (Mun, 2017). One of the factors is SMEs do not want to take risks from transactions using mobile payments (Gao ,2017) (Fontes ,2027). Some developing countries still find it difficult to use m-payments for SMEs due to technological, organizational, and environmental factors (Beck,2018).

3. Methods

As previously research stated, SMEs have unique characteristics in which SMEs depend entirely on the owners of SMEs. The owner of a SME is a key factor in the success of a SME business. Some of the success factors for SMEs in relation to the use of information technology are: owner's knowledge of information technology in the context of this research, namely mobile payment technology. Perceived benefits in the context of this research are the benefits of mobile payment and readiness technology (Rahayu,2015).   The unique characteristic of SMEs apart from owner domination is collaboration with other SMEs so that the existence of SMEs communication appears in many countries (Robson,2000) Based on the above considerations, observations and interviews were carried out with several SMEs to design a Technology acceptance model approach for implementing mobile payments for SMEs. Figure 1 explain the research method of this research.
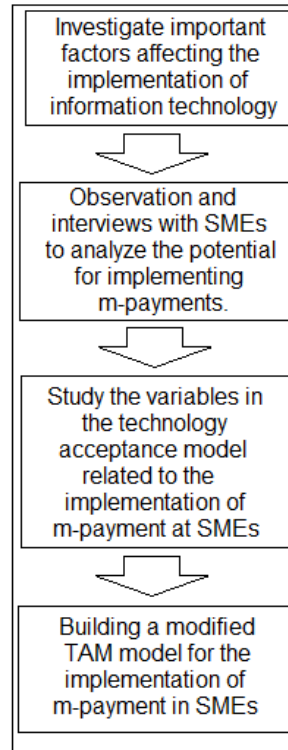
Figure 1. Research method

4. Results and Discussion

Figure 2 explain the result model. Based on observations, experiments and interviews with the SME community, it shows that there are efforts to study opportunities to increase sales for SMEs through e-commerce using m-payment. The desire to use m-payment arises because some SMEs sell their products through e-commerce or e-marketplaces. Although there are several payment options that can be used in e-commerce and e-marketplaces, the trend of using m-payments is increasing along with the effectiveness and efficiency of sales transactions using m-payments.

With the increasing trend of using m-payment, SMEs are starting to study m-payment through discussions with companies that have used m-payment, especially in relation to the risks and opportunities of m-payment.

To be able to understand more deeply about SME Nm-payment Attend e-commerce training with m-payment organized by the government and the private sector. After participating in the training, SMEs try to use m-payment by preparing requirements and technology needs related to the implementation of m-payment in their business. After all the requirements and technological needs are met, SMEs try to simulate small nominal transactions and involve fellow SMEs where one SME acts as a seller and SMEs act as a buyer. After understanding the use of m-payment, SMEs use m-payment to support their e-commerce transactions
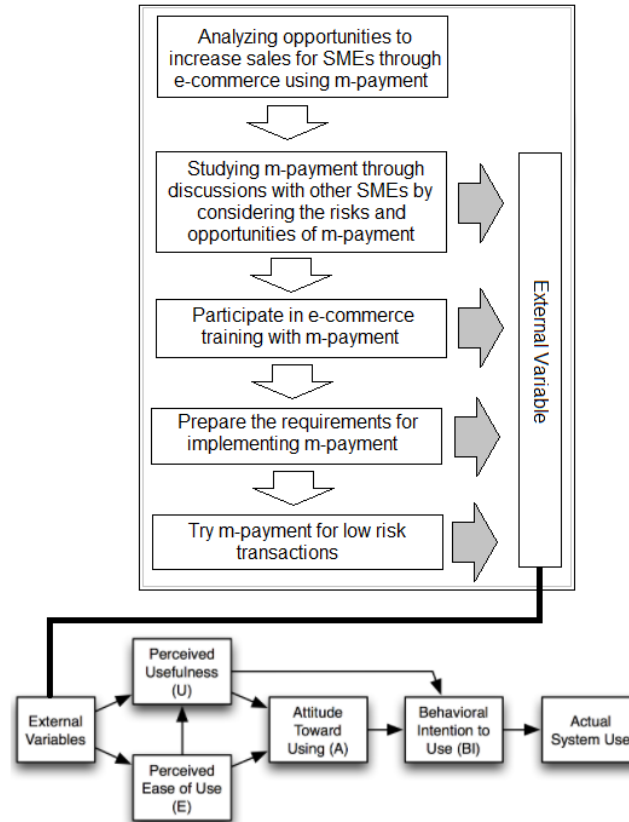
Figure 2. TAM solve m-payment problem in SMEs

5. Conclusion

The development of the TAM model as a solution to the problem of using e-learning by teachers in schools shows that there are factors that can be used to illustrate to teachers that e-learning is easy to use and useful to support learning activities. The resulting solution can be implemented because the solution was generated from discussions with teachers who have problems with e-learning.

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Biography

Inayatulloh is a candidate doctor at Bina Nusanatara University's Doctor of Computer Science. Since 2000, Inayatulloh has been a lecturer at several universities and colleges in Indonesia such as Bina Nusnantara University, Indonusa University, State Islamic University, Archipelago Economics College and is currently a lecturer at Bina Nusantara University in the school of information system. Scopus indexed publications have been produced with topics related to information systems such as e-learning, e-SCM, e-CRM. E-government and others