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Research Article

Mobile Payment Payment Adoption Among Rural Petrol Station Dealers in Malaysia: A Review

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ABSTRACT

The mobile phone has become an indispensable tool for physical and online retail. Mobile phone payment is gaining popularity and accelerating as users prefer no-contact payment due to the pandemic. In rural regions, however, mobile payments (m-payments) are still in the adoption and early acceptance stages. There is a need to speed up the usage, particularly in rural regions, as their mobility and accessibility suggest that they will be widely accepted mobile services. Surrounding issues of m-payment, existing research has ignored recommendations for merchant-centric research in favour of customer acceptance. Therefore, this research gives a preliminary examination of the rural merchants' acceptance of mobile payments. Initially, 325 articles on the emergence of m-Payment were collected and reviewed. Papers were filtered out by considering inclusion and exclusion metrics. The documents covering m-payment for petrol station dealers, published from 2018 to 2022, published in English and full length, have been considered. Finally, 135 articles remained to be considered in this study. The study found that cost, security and attitude are the most significant impediments to merchants' adoption of m-payment systems in rural areas. Based on the findings, several suggestions for practitioners and research directions are identified.

Keywords: m-Payment, Merchant, Adoption, Rural, Petrol Station

INTRODUCTION

Businesses must use the right technology to change the way they now operate since commerce has switched to digital platforms (Alam *et al.*, 2021). Such implementations offer improved outcomes such as better business practices, profitability, and corporate efficiency. It also contributes to higher productivity and sales growth rates and improves customer satisfaction and decision-making. In contemporary times, it is common for companies to use various technological tools, including mobile applications, internet platforms, and digital payment methods (Mahakittikun et al., 2021). Adoption allows firms to conveniently market their goods via online commerce platforms, effectively reaching their intended target clients through advertising platforms on social media or search engines. Moreover, it facilitates the integration of information with logistics providers and facilitates digital payment transactions using mobile devices, often known as mobile payment (Ramli & Hamzah, 2021). Mobile payment, also referred to as m-payment or mobile wallet, is an electronic payment system that facilitates transaction processing via the utilisation of mobile device technology (Chi Ying & Ismail Pakir Mohamed, 2021).

The m-payment revolution has substantially influenced several aspects of Malaysia's financial markets, payment systems, and business strategy. According to (Khas, 2017), m-payment has shown its efficiency and security compared to cash or credit card transactions, primarily because of the enhanced effectiveness of contactless connection. According to (PayNet, 2022), there is a possibility for small and medium-sized enterprises (SMEs) in Malaysia to use mobile payment (m-payment) methods as a means to enhance their competitiveness both domestically and globally, augment their revenue-generating capabilities, and contribute to the advancement of Malaysia's digital economy (Leu & Masri, 2019). To promote the use of mobile payment services, Bank Negara Malaysia (BNM) has allocated a sum of RM 450 million from the 2020 Budget for the initiation of the e-Tunai Rakyat initiatives (Chi Ying & Ismail Pakir Mohamed, 2021). These programmes include the provision of cash handouts via

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mobile payment channels. The E-Tunai Rakyat initiative had a very favourable reception from the general populace, as shown by the approval of around 2.9 million applications within a mere five-day period after its implementation (Chi Ying & Ismail Pakir Mohamed, 2021).

The global implementation of stay-at-home orders or lockdowns in 2020 as a response to the ongoing epidemic has initiated a significant transformation in societal interactions and work practises (Undale et al., 2021). To mitigate the risk of infection, companies are increasingly adopting contactless transaction acceptance and transitioning their operations to online platforms. Consequently, the utilisation and recognition of e-wallets have seen a substantial surge during the ongoing pandemic (Odeh & Yousef, 2021). The paper is arranged in the following sequence: the next section is the literature review followed by theoretical foundation, methodology, finding, discussion, recommendations and conclusions

LITERATURE REVIEW

2.1 M-Payment Concept

M-payment have evolved as an integral part of people's daily lives, playing an essential role in completing financial transactions, alongside internet commerce. Seema Nambiar (2005) is the first person to mention the concept of m-payment, explaining an electronic commerce process called mobile commerce, which involves using mobile devices and networks to trade information, products, or other things. Various authors later interpreted the term as shown in *Table 2.1*.

Table 1 Summary of definition on m-Payment

Author	Definition
(Chen & Chen, 2018)	The described phenomenon entails using a mobile device, such as a mobile phone, smartphone, tablet, or any wireless-enabled device, to securely conduct at least one phase of a transaction over a mobile network or through diverse wireless technologies, including NFC, Bluetooth, RFID, and others.
(Oliveira et al., 2016)	Mobile financial transactions refer to the practice of conducting monetary exchanges via mobile devices, including wireless phones, personal digital assistants (PDAs), radio frequency (RF) devices, and near-field Communication (NFC)- based gadgets.
(Shankar, 2018)	Enables streamlined and protected business transactions between service providers and customers.
(Sinha & Singh, 2022)	Mobile phones or other mobile devices are used to procure products or services.
(Flavian et al., 2020)	Refer to any business activities that complete economic transactions using mobile devices.
(Alhallaq, 2020)	the usage of mobile devices for point-of-sale terminal payments between individuals and businesses using a QR code, an NFC, or an RFID
(Moghavvemi et al., 2021)	Mobile payments refer to using a mobile device to start, authorise, and confirm a transaction involving the exchange of financial value in return for acquiring goods and services.
(Yong et al., 2021b)	Mobile devices enable users to engage in payment or money transfer transactions, facilitating the convenient payment of bills and the purchase of products and services. This is achieved via mobile applications on smartphones and similar devices.
(Chi Ying & Ismail Pakir Mohamed, 2021)	Payment may be facilitated using a mobile device, credit card, or wallet application. In addition, m-Payment encompasses using mobile devices to conduct Internet payments and facilitating payments via a mobile network operator.

All researchers define m-Payment in almost the same way. It can be concluded that the definition of m-Payment is the process of payment or fund transfer transaction made through a mobile device such as a mobile smartphone, tablet, using a mobile wallet or credit card application, banking application, Quick Response Code (QR Code), Near

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Field Communication (NFC), or Radio Frequency Identification (RFID) to initiate, authorise, and validate the exchange of monetary values in return for goods and services.

In general, the m-Payment process will be used and run on mobile terminal devices to facilitate the exchange of goods or services. Regarding the restricted definition of m-Payment, users will utilise wireless communication technology and mobile terminal devices to complete the transfer of funds and payment. M-Payment, according to the m-Payment Forum, utilises mobile terminal devices to transmit capital value using wireless techniques such as short message, hypertext transfer protocol (http), wireless application protocol (WAP), or Near Field Communication (NFC) in order to repay the debt of items or services. With the advancement of m-Payment, it is possible to conclude that m-Payment in this study refers to the use of mobile telephone banks, credit cards, third-party payment platforms such as Apple Pay, and wearable devices such as the Apple Watch to complete the money transfer and payment process via mobile phone network or wireless network. In addition, it merges consumer-related application circumstances and data services.

2.2 m-Payment Implementation

In contrast to more traditional means of making payments, m-Payment integrates the capabilities of mobile devices with those of electronic payment systems (Bt Abd Rahman et al., 2013)M-Payment is differentiated from other payment methods by the following characteristics: First, the payment process is easy. Thanks to the continued development of m-Payment technologies and the combination of online and offline m-Payment, customers can now make purchases online using their mobile devices as a form of payment.

The m-Payment system opens up new opportunities for firms that provide financial services and the mobile technology industry. In the not-too-distant future, it is feasible that clients will be interested in receiving this sort of service. Most mobile devices are fitted with a chip that can be used independently to offer secure authorisation and identification. It is still feasible to do this without a modem, card reader, or personal computer. As a result, a significant number of scholars believe that mobile devices could one day be able to replace all other monetary transaction methods. As a point of reference when writing this paper, some of the numerous academic research that have been conducted about the acceptability of m-Payment are as follows:

Table 2. Existing research on m-Payment

Author	Objective / Aims	Key findings	Future	Limitations
(Angelina & Aswin Rahadi, 2020)	Determine the factors that influence e-wallet usage intent in Java, Indonesia	Several factors are significantly related to e-wallet utilisation intention, and the researcher proposes a new conceptual framework.	The suggested model can be used to analyse the results of a more extensive and diverse sample, such as a different age group from all over Indonesia.	Due to limited time and money, this study will only be used for Generation Z in Java, Indonesia.
(Mahakittikun et al., 2021)	Develop a TOE-based methodology to assess m-Payment's influence on company performance.	TOE elements predict firm performance, including relative advantage, innovativeness, m-Payment information, critical mass, competitive challenges, and external supports.	Validate aspects that may help m-Payment acceptance and examine environmental factors, including competitive pressure and external aid.	Only merchants who have used m-Payment in their firms were sampled to determine the influence on firm performance.

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(Akinyemi & Mushunje, 2020)	Determined the elements that affect rural Africa's mobile money service utilisation (measured by money sent or received).	Bank accounts prevent people from using mobile money to send or receive payments.	Studying Africa, both rural and urban areas, may reveal why individuals utilise mobile money.	Restricted to rural Africa
(Rootman & Krüger, 2020)	To investigate the factors influencing consumer adoption of the m-Payment technology Zapper in South Africa.	Previous m-Payment research results are contradicted by three factors that have no significant impact on customer adoption of Zapper in an emergent economy.	Future studies should compare consumer views of Zapper and Snapscan m-Payment systems.	Variable variance must be addressed; therefore, adding additional elements and applying structural-equation modelling may be acceptable.

Several distinct variables contribute to the growth and spread of m-Payment systems. Despite this, m-Payment solutions have not yet seen widespread acceptance around the world (Bezovski, 2016). The market for m-Payment has not yet reached its full potential and has an opportunity for growth. These issues may have resulted from any one of several different plausible origins, which are all listed below. For instance, no standard is universally recognised for deploying m-Payment systems. This is the case. Currently, a broad variety of service providers are conducting trials of service delivery using various infrastructures and technologies. Consumers, on the other hand, would benefit the most from a convergent service, which would require that all of the consumers have the same access to the network in order for them to use the service. Convergent services would be most beneficial to the end users, or consumers(Pelletier & Cloutier, 2019).

In Malaysia, the adoption of m-Payment in the petrol station business has barely begun. Payment through m-Payment started gaining hold among Malaysian companies in the petrol station market in 2019 when Petronas began utilising the Setel mobile application, which is the purchase and payment of fuel by phone, and its usage is forecast to rise as COVID-19 approaches.

In 2018, Petronas released the Setel mobile application to make it simpler for consumers to refuel without visiting the counter. In addition, there is no need to wait in a lengthy line to reach the payment counter. You may refuel your vehicle immediately using the Setel Petronas application for payment.

Even better, it saves substantial time, particularly during the Holiday season. The petrol station payment counter will probably be overcrowded during school holidays or the festive season. Consequently, with the resurgence of the COVID-19 virus, this Setel Petronas application is essential for all of us!

However, this scenario differs entirely for rural petrol station customers and vendors. They still do not use m-Payment when buying and selling at petrol stations, and even petrol station attendants are unaware of the technology. It is crucial to research the adoption of m-payment in rural areas to determine the elements that impact it.

2.3 Petrol Station Dealer in the rural areas

Most of the previous study (Abdullah et al., 2010; Inderadi et al., 2020; Mohamad Fadzil Bin Md Yasir, 2020; Saad et al., 2017; Sharif & Lwee, 2017) Are focused on petrol stations in major urban areas in Malaysia. No studies focus on petrol stations in rural areas. Previous researchers prefer to do research on major petrol station brands such as Petronas, Shell, Petron, BHP, and Caltex. Few researchers have made a study of petrol station brands in rural areas (Inderadi et al., 2020). This is because it is more comfortable to do research in urban areas compared to rural areas due to the distance and the facility to be there (Wahid, 2009).

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2.4 Issues of M-Payment Adoption

There has been a significant amount of research in the academic literature on the challenges of getting users to accept m-Payment in their setting (Ameerbakhsh et al., 2021). Emotion and security are the aspects that Cara Wrigley (2019) and Shaw & Kesharwani (see consider the most important aspects of m-Payment technology, respectively. According to (Humbani & Wiese, 2018) and (Alalwan et al., 2017), to motivate customers to embrace innovative payment options, attention should be placed on price and pricing transparency issues. However, Welte (2018) believes that the development of m-Payment still faces several additional challenges, including marketing, actor, and technological challenges. In the following paragraphs, we will discuss a few problems with m-Payment.

2.4.1 m-Payment security,

According to Chen and Chen (2018), the research findings show that the most significant barrier to the expansion of m-Payment is the absence of adequate security measures. According to the proposal made by Lim et al. (2019), this level of safety requires user-specific PINs, protected network traffic, and payment transaction certificates (Undale et al., 2021). Encryption, data integrity, authentication, and secrecy are all components of the high grade of payment security that Akanksha Upadhyaya & Bhajneet Kaur (2018) suggest should be implemented. In addition, security encompasses not only the characteristics described before but also the question of how the individual customer feels about the level of safety provided (Meher Neger & Burhan Uddin, 2020). The research conducted by Azman et al. (2020) concluded that the data confidentiality is shown to be the key security aspect of any m-Payment method. This includes the option of cancellation and anonymity, as well as the confirmation of payment by either e-mail or SMS. According to Alwi et al. (2019) the right to anonymity is one of customers' fundamental rights. This is because the identity of consumers should not be exposed to third parties unless the consumers themselves are prepared to provide third parties that privilege.

m-Payment systems, which often include merchants and customers, are a two-sided platform (Kallin et al., 2017; Phoong et al., 2019) As such, both sides need a sense of safety about the transactions completed via the system. The customer is in charge of the payment transaction while using m-Payment, which occurs when the payment is made using a mobile phone and an immediate notice is delivered to both the consumer and the merchant. The trust of the merchants may be gained via the use of this form of quick notice, which also contributes to an increased sense of safety inside the system (Moghavvemi et al., 2021; Naeem et al., 2020; Tuilan et al., 2018). When a customer makes a purchase using their mobile device, the consumer and the merchant are given distinct identifiers and communicate directly. This contributes significantly to the increased level of security that the retailer experiences (Mokhtar, 2019).

2.4.2 m-Payment Cost

According to Handri Mufti Nirmawan (2021), one of the most important factors that must be considered in order to implement a successful m-Payment service is the cost of doing business (Sun & Havidz, 2019; Uwamariya et al., 2021; Yong et al., 2021b). This idea applies to each new service that is offered (Meher Neger & Burhan Uddin, 2020). The acceptability of m-Payment contingent on the users being prepared to pay an additional fee (Prianandaet al., 2020), which is something that may be quite off-putting for potential customers (Angelina & Aswin Rahadi, 2020). Without question, it is not a simple task to persuade customers to pay more if value-added services are not provided that are effective (Ahmad Hajazi et al., 2021). These expenses comprise both fixed costs and transaction costs, in addition to the cost of providing the consumer with a suitable technological infrastructure (Rahman, 2022).

From the merchant's point of view, cost is a significant value driver for adopting m-Payment solutions (Mohd Yusof et al., 2018). The term "cost" refers to the licencing or subscription fees that the merchants or company owners must pay to the supplier of the m-Payment system (Sun & Havidz, 2019). The transaction charge is 1% to 3% of the purchase price (Rootman & Krüger, 2020). The rate of acceptance of the m-Payment ecosystem is significantly influenced by the cost (Mohd Yusof et al., 2018).

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In order to maintain a competitive advantage, according to Hazwan & Roseli (2021), the cost of maintaining m-Payment systems should not be higher than the cost of managing conventional payment systems. This results in a point of cost savings, either directly about the commission given to the vendor or indirectly by saving the time spent with consumers at a point of sale, which assists the merchant in attending to more clients (Oyelami et al., 2020). Despite this, earlier research reveals that most service providers promoted their systems by concentrating on technologically driven ways. In essence, the requirements of merchants have not historically been accorded a greater level of attention, which has further slowed down the progress of adoption (Ahmad, 2009; Yong et al., 2021a).

The researcher must evaluate the concerns and obstacles described in the research, relating to security, cost, and technology awareness, and promote the service's characteristics to acquire merchants' confidence (Dahlberg et al., 2008). The current paper provides an overview of the relevant literature and a theoretical context for several mobile payment adoption studies. It investigates additional facets of merchants' adoption of emerging technologies.

THEORETICAL FOUNDATIONS

3.1. The United Theory of Acceptance and Use of Technology (UTAUT)

According to Purba (2021), the UTAUT paradigm explains technology acceptance. (Altwairesh, 2021) developed this model to investigate the factors influencing a consumer's inclination to accept new technology and innovation. Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB), Theory of Reasoned Action (TRA), Combinational Model of TAM and TPB (C-TAM-TPB), Motivational Model (MM), Model of PC Utilization (MPCU), Innovation Diffusion Theory, and Social Cognitive Theory are the components that make up the UTAUT (Chwah, C.X., Goh, W.C., Lim, J.H., Tai, W.L. and Tan, 2018).

The UTAUT model consists of eight variables: four primary factors, four moderating variables, and four additional variables. The four moderating factors are gender, age, experience, and voluntary product utilisation. The four most important variables are effort expectancy, performance expectancy, facilitating conditions, and social influence, while the four moderating variables are gender, age, experience, and voluntary use.

It is possible to describe performance expectations in terms of perceived usefulness. Performance expectancy refers to an individual's belief that they will experience improvements in performance due to the implementation of new technologies. In addition, Syafinaz et al. (2020) defined effort expectancy as the ease of use of a technology. They also defined social influences as an individual's desire to embrace technology being influenced by social factors like friends or family. Last but not least, enabling circumstances, which may be described as the perceived degree to which the technological infrastructure necessary for the support of the technologies already exists (Chuah et al., 2021).

According to (Altwairesh, 2021), the Technology Acceptance Model (TAM) is a well-known theory that has been extensively and regularly used in research on determining a person's desire to accept new technology and innovation. However, UTAUT has begun to catch the attention of other researchers as it is used in various studies concerning the acceptability of technology. The findings of (See & Goh, 2020) also led them to conclude that the UTAUT model is a very useful model to employ in the study of technology acceptance and helps to understand the drivers of acceptance. It was found in the research conducted by Samad et al. (2021) that while perceived ease of use and perceived usefulness are essential components that would impact the intention of adopting new technology and innovation, social influence also has a significant role in this process.

In this research, the independent variable of social influence was selected from the Unified Theory of Acceptance and Use of Technology (UTAUT) model (N. H. M. Ariffin et al., 2020)This choice was made due to the recognised ability of social impact to effectively capture users' attention and stimulate their intention to embrace new technology and innovation. In addition, this research considers performance expectations and effort expectancy as independent variables, which include the constructs of perceived usefulness and perceived ease of use.

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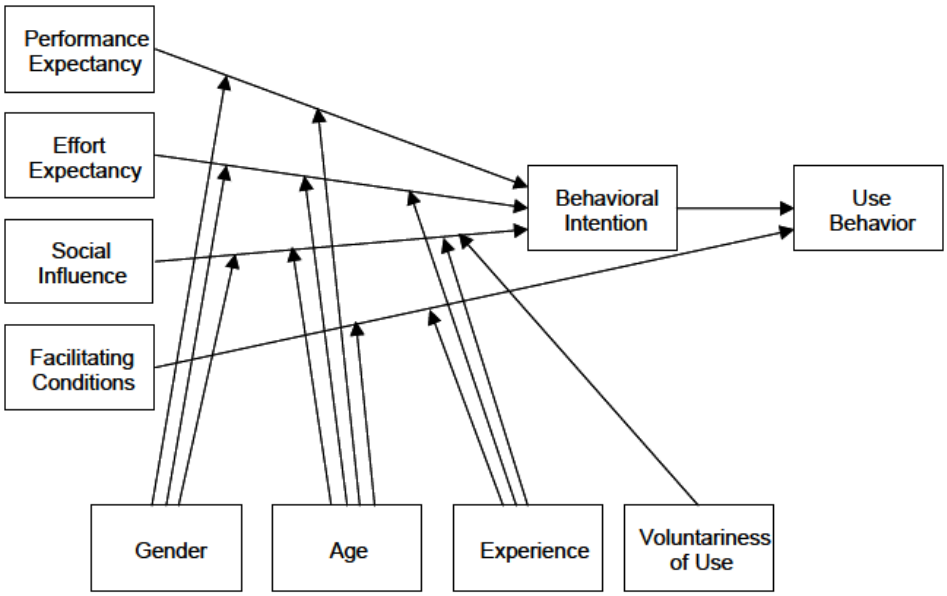

Figure 1: Unified Theory of Acceptance and Use of Technology (UTAUT)

Numerous researchers (see Table 3.1) have investigated various factors that influence the adoption of m-Payment by looking at the theoretical framework and variables. Their findings have supported the idea that technological and mental perceptions determine the pertinent knowledge and understanding of users' m-Payment adoption intentions.

Table 3 Literature reviews related to m-Payment acceptance and adoption frameworks.

Author	Research Title	Theoretical Frameworks	Factors
(Musikapun, 2022)	Merchants' intentions and emotions for introducing m-Payment system – Cases of Japan, Mainland China, Taiwan, and Thailand	UTAUT	Performance Expectancy Effort Expectancy Social Influence Facilitating Condition Behavioural Intention Use Behaviour
(Rahardjo, 2020)	Adoption Of The System In Small-Medium-Sized Enterprises	UTAUT	Performance Expectancy, Effort Expectancy Social Influence Facilitating Condition Behavioural Intention Actual Usage
(N. H. M. Ariffin et al., 2020)	Acceptance of m-Payment by retailers using the UTAUT model	UTAUT	Performance Expectancy Effort Expectancy Social Influence Facilitating Conditions Habit Privacy Perceived Security Intentions
(Syafinaz et al., 2020)	Factors Influencing the Adoption of E-Payment: An Empirical Study in Malaysia	UTAUT	Performance Expectancy Effort Expectancy Social Influence Culture Perceived Security

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(Najdawi et al., 2021)	Factors Impacting Digital Payment Adoption: Empirical Evidence from the Smart City of Dubai	UTAUT & TAM	Perceived Usefulness, Perceived Trust, Perceived Personal Innovativeness, Perceived Ease of Use, Perceived Risk, and Generation Cohort

3.2 Theory of Planned Behaviour (TPB)

The application of the Theory of Planned Behaviour (TPB) is achieved by including a construct known as perceived behavioural control (PBC) into the already established TRA model shown in Figure 3.2 (Ajzen, 2019). TPB is steadfast in its conviction about how perceived behavioural control functions as a factor of intention and behaviour. A revolution in TPB was described in several publications as a means of improving the prediction of intention and action across a broad range of contexts (Ajzen, 2020). In addition to this, TPB is well-known for its application to the study of how individuals adopt and use a variety of technology (Nugroho et al., 2018)The TPB has emerged as one of the most influential ideas in explaining and forecasting user behaviour.

The TPB also allows for examining research on use or consumption intention, another benefit of this framework. (Ajzen, 2020) was the first person to propose the TPB and use the theory of planned behaviour of consumers to predict consumer consumption behaviour; this endeavour garnered widespread academic recognition and support. (Ajzen, 2020) was also the first person to make use of the theory of planned behaviour of consumers to predict the consumption behaviour of consumers (Taylor, 2016). It has been shown that the TPB of Consumers is capable of accurately predicting the use intention and consuming behaviour of consumers (Ajzen, 2020).

Study and additional analysis on the use intention of customers have been carried out at the moment from a variety of various ways of thinking, which can be primarily categorised as research on elements that would impact the usage intention, and prediction on the usage intention of consumers (Angelina & Aswin Rahadi, 2020). A wide range of internal and external aspects, such as socioeconomic classes, family environments, social cultures, consuming environments, and consumption methods, have been considered to stimulate or alter the use intention of consumers. The individual characteristics of customers, their beliefs and principles, their subjective perceptions, habits, and attitudes are all examples of what are referred to as internal factors (Leong et al., 2021)Both of these categories of influencing elements will affect consumers' ultimate choice about their purchase.

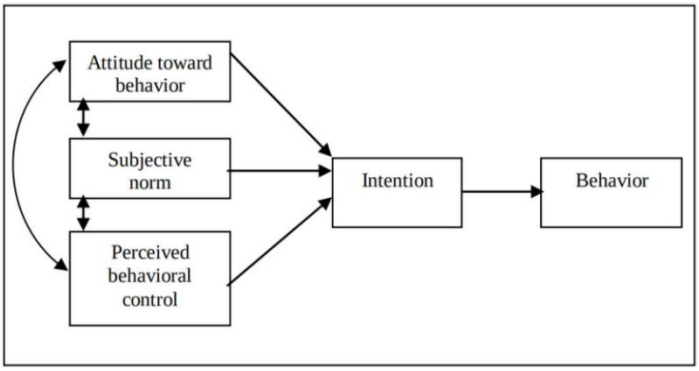

Figure 2: Theory of Planned Behavior

3.3 Combination of TPB And UTAUT

Mobile payments enable financial inclusion, which has the potential to profoundly alter the lives of merchants as they go about running their businesses daily. However, despite the promise offered by mobile payment systems, retailers in rural areas do not often make extensive use of this type of payment. In this paper, past research that has been published on mobile payment acceptance is reviewed, and several drivers and inhibitors of mobile payment adoption are analysed.

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According to this analysis of the relevant literature, most study papers use TAM, UTAUT, or TPB theory or a combination of the two, such as UTAUT and TAM or TAM and TPB. Some even use all three.

However, it was discovered that a microscopic study has been conducted in the field of m-Payment using a combination of TPB and UTAUT during the last five years. Regarding mobile payments, this knowledge gap has to be addressed as soon as possible. However, this combination is often used in research conducted by other industries, as seen in the table below:-

Table 4 Summary of the studies related Combining TPB & UTAUT

Author	Research Title	Theoretical Frameworks	Industry
(Siripipatthanakul et al., 2022)	Applying the TPB and the UTAUT Models Predicting Intentions to Use Telemedicine Among Thai People During the COVID-19 Pandemic	TPB UTAUT	Telemedicine
(Kaye et al., 2020)	A priori acceptance of highly automated cars in Australia, France, and Sweden: A theoretically-informed investigation guided by the TPB and UTAUT	TPB UTAUT	Automated vehicles
(Chuang et al., 2018)	The Determinant Factors of Travelers' Choices for Pro-Environment Behavioral Intention-Integration Theory of Planned Behavior, Unified Theory of Acceptance, and Use of Technology 2 and Sustainability Values	TPB UTAUT	environmental Sustainability
(Kianpisheh et al., 2011)	User Behavioral Intention Toward Using Smart Parking System	TPB UTAUT	Smart Parking
(Kamel Rouibah, 2017)	Factors Affecting Social E-commerce Adoption in an Arab Country: Findings From A Qualitative Study	TPB UTAUT	Social E-commerce
(Tengku Halimatun Sa'adiah T Abu Bakar, Norsida Man, Nolila Mohd Nawi1, 2020)	Adoption of Post-Harvest Practices Implemented by Fruit Farmers in Johor Tengku	TPB UTAUT	Agroculture

Over an extended period, scholars have used theories of human behaviour to investigate the adoption of technology (Ajzen, 2019; Venkatesh, V;Morris, MG;Davis, GB;Davis, 2003). In previous research, it was seen that the Theory of Planned Behaviour (TPB) (Ajzen, 1991) and the Unified Theory of Acceptability and Use of Technology (UTAUT) (V. Venkatesh & Davis, 2000) were the most often used techniques by researchers when studying driver acceptability (Rahman, 2022). The Theory of Planned conduct (TPB) was formulated to provide a comprehensive framework for understanding human conduct in a broad sense (Affecting et al., 2017). On the other hand, the Unified Theory of Acceptance and Use of Technology (UTAUT) was expressly designed to elucidate the factors influencing the acceptance and adoption of technology (Viswanath Venkatesh, 2012)These theories propose several elements that influence the level of acceptance a technology receives, using Behavioural Intention (the intention to use a technology) and Actual Behaviour (the actual use of the technology) as indicators of adoption.

The Theory of Planned Behaviour (Ajzen, 2020), which is an extension of the Theory of Reasoned Action (TRA), was developed to enhance the predictive capacity of the TRA. The Theory of Planned Behaviour (TPB) encompasses three fundamental elements that contribute to forming Behavioural Intention. These components are Attitude, Subjective Norms, and Perceived Behavioural Control (Jena, 2022). This theory suggests that individuals' favourable attitudes and their beneficial normative and volitional control beliefs will develop a positive behavioural intention to use a particular technology. In the context of the Theory of Planned Behaviour (TPB), it is important to note that in addition to the direct impact of Behavioural Intention on actual behaviour, there exists an indirect effect of Perceived Behavioural Control on Actual Use. The Unified Theory of Acceptance and Use of Technology (UTAUT) (Viswanath Venkatesh, 2003) posits four key components influencing behavioural intention and actual behaviour: performance

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expectancy, effort expectancy, social influence, and facilitating conditions. The Unified Theory of Acceptance and Use of Technology (UTAUT) proposes that Performance Expectancy, Effort Expectancy, and Social affect have a beneficial impact on Behavioural Intention (Venkatesh, V;Morris, MG;Davis, GB;Davis, 2003). Additionally, behavioural intention and facilitating conditions affect actual behaviour favourably.

METHODOLOGY

The analysis conducted in the specific field of research included two distinct stages: (a) the gathering of relevant scholarly publications and (b) the subsequent examination and evaluation of these articles (Sabri et al., 2022). The first phase was searching for keywords inside scholarly articles published in prominent journals and conferences (Sabri et al., 2022). The sources used in this research included a range of electronic databases, including IEEE, Google Scholar, Springer Link, Science Direct, Taylor & Francis, and Wiley. Various combinations of search terms were used, including m-payment, merchants, gas station dealer, dealer settings, mobile technologies, smartphones, and rural area. The selection procedure was conducted based on the following inclusion criteria:

• Academic publications spanning the years 2018 through 2022.

• Research articles published in scholarly, peer-reviewed publications.

• The papers that have been published are written in the English language.

The research papers examined in this study included various combinations of the following terms within their titles, abstracts, and/or keywords: m-payment, merchants, gas station dealer, dealer settings, mobile technologies, smartphones, and rural region.

The following query has been used as keywords:

[“mobile payment OR “m-payment] AND [“petrol station” OR ”dealer“].

FINDINGS

A total of 325 articles about the introduction of mobile payment (m-Payment) were first gathered and subjected to examination. The selection of papers was conducted by using inclusion and exclusion criteria. This study considers publications published in English from 2018 to 2022 that specifically address m-payment for gas station dealers. Only full-length papers are included in the analysis. Ultimately, a total of 135 publications remained for inclusion in this analysis. The research questions were addressed by individually analysing the final articles.

1. What are the characteristics of a rural petrol station dealer?

2. What factors influence the adoption of m-payment for rural petrol station dealers?

The characteristics of rural petrol station dealer were discussed in terms of their payment activity, payment method, differences between rural and urban area style, and the trend of m-Payment before, during and after the pandemic. Keywords from articles were extracted and listed. Then, a previous study that discusses a theoretical framework that evaluates the acceptance and adoption of m-Payment is also presented. The factors that influence this acceptance and adoption of m-Payment are identified from this analysis. Five factors (behavioural intention, performance expectation, effort expectation, social influence, m-payment usage, security, and emotional) were defined based on the keywords searched in the articles. The findings related to the research questions are discussed in Sections 5.0, respectively.

M-Payment makes it easier for merchants to contact retail consumers in far-flung locales. This is because the use of electronic payment methods is increasing among customers located in rural areas of huge countries like India and Africa (Odoom & Kosiba, 2020; Sinha & Singh, 2022) . Because of this, merchants can now provide various services online, including customer loyalty and marketing programmes.

As a result, it integrates several different payment methods for the convenience of merchants and owners of small businesses (Yu et al., 2002). Two parties are always involved in these kinds of transactions: the consumer and the

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seller. Both sides contribute equally and significantly to the success of mobile wallet technology, and both parties find that their usage of the technology provides them with advantages and a sense of pleasure (KijkaIsiwat & Chancharat, 2022). As a result, understanding the adoption of mobile service technology requires taking into account not only the perspectives of consumers but also those of merchants (S. K. Ariffin et al., 2021).

The question that needs to be answered is how long this trend will continue and when merchants will start adopting mobile-based payment methods, which are now much needed to bring about financial inclusion and social transformation in rural areas in Malaysia. This is the issue that needs to be answered. According to PayNet, in Malaysia in 2022, 48.4% of the population still makes daily cash purchases. This percentage is much higher in rural and suburban regions. The preference for cash as a mode of payment for day-to-day expenditures is declining; yet, in Malaysia, cash is still used to pay for 48.4% of people's day-to-day expenses. Persons living in urban regions continue to use cash payments at just 36.2%, while people living in non-urban areas continue to utilise cash payments at a rate of over 65%. The term "urban-rural divide" perfectly describes this situation.

DISCUSSIONS

The significance of consumer acceptance of the m-Payment system cannot be overstated since consumers are the ultimate target users of this system (Dr. Swati Kulkarni, Dr. Aparna J Varma, 2021). The absence of a sufficient level of customer acceptance of a mobile payment system would hinder the widespread proliferation of such technology (Abebe, 2020). As previously shown, the level of consumer adoption is intricately connected to the extent of merchant adoption and the behaviour of other customers (Type, 2016) .

The demand for the m-Payment system is contingent upon the number of individuals prepared to accept and use the payment solution. According to previous studies conducted from a consumer standpoint, the key variables influencing the adoption of m-Payment services are simplicity of use, trust and security, utility, cost, and compatibility (Chin & Ahmad, 2015). This study examined many characteristics that were shown to impact merchant adoption.

The extant research has corroborated that many factors, including consumer convenience, cost savings, company development, and simplicity, influence the acceptance rate of mobile payment systems (Jun et al., 2018).

Trust and perceived danger, complexity, and lack of standardisation are barriers to adopting mobile payment systems. The literature has examined additional elements, including network externalities, regulatory influences, and socio-cultural and economic considerations, all of which may either favourably impact or impede the pace of adoption.

The availability of material from peer-reviewed journals was limited, owing to the novelty of this subject. The researcher conducted a comprehensive analysis of both published and unpublished materials and online sources to get up-to-date views on the usage of mobile payment methods.

This chapter critically analyses the existing literature, identifying gaps that further emphasise the need for doing this research. The following chapter elucidates the research inquiries about the adoption of mobile payment systems from the standpoint of merchants. This research study investigated the different constructs offered in the frameworks discussed in this chapter. This study investigates the constructs related to merchants' adoption of mobile payment systems in a developing country. The aim is to identify any new insights that can contribute to enhancing the existing model by incorporating additional constructs. This will result in a comprehensive model that encompasses the factors specific to a developing country context.

The merging of TAM and TPB seemed natural in several research, which aimed to get a better understanding of the elements that play such an important role in behavioural intension (Jalil et al., 2016; Jin et al., 2020; Liébana-Cabanillas et al., 2015) Implementing TAM in an IT setting is much more advantageous than general TPB factors. However, an additional dimension was suggested to aid in evaluating a whole new level of thinking in some studies, so that is something to keep in mind. In m-payment research, however, only a few researchers apply a combination of UTAUT and TPB. This gap will be investigated further in the current study.

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These earlier studies demonstrated successful implementations of the theory and reaffirmed its applicability for research involving the adoption of technology and education delivered remotely. I sincerely hope the current research will contribute to the existing body of knowledge in consumer behaviour by offering a fresh perspective on cultivating a constructive intention to utilise m-payment in rural areas in Malaysia.

RECOMMENDATIONS

In the study conducted by (Moghavvemi et al., 2020), it was hypothesised that adoption research in the future may take place in several different environments. The recommendations include the following: Research should be carried out to understand the contextual relevance of adoption characteristics, and consumers should be engaged in the process of designing mobile services. These ideas should still be considered valid options.

The next suggestion was to enhance the theoretical basis of research on adoption and conduct empirical data collection in real-life payment scenarios. This advice was given after the recommendation to strengthen the theoretical foundation was presented. The concept of acceptance should be further explored and emphasised to provide a more accurate representation of real-world payment situations, either in conjunction with or as an alternative to the concept of adoption intention. It has been emphasised that using a mobile payment service is often only one option among various choices. These alternatives may be subjected to additional investigation if deemed necessary. For example, it is important to investigate the disparities in payment methods allowed at different points of sale inside rural petrol stations. Data collection must be conducted at many time intervals to capture events such as peak and off-peak hours and long and short queues at the points of sale.

The acquisition of comprehensive datasets, including primary and secondary data, may be accomplished via mixed-method approaches. This approach enables researchers to triangulate their findings, enhancing the reliability of their conclusions. Furthermore, a key objective of our study is to motivate other researchers to do similar investigations in several countries, enhancing their understanding of the impacts associated with diverse behavioural factors. Exploring the psychological aspects of payments, theories about human behaviour and cognitive processes, economic frameworks integrating the notion of money, the historical use of payment instruments across various countries, and the valuation of payment instruments are all prospective routes for enhancing the theoretical foundation. Developing a comprehensive framework incorporating various payment instruments, their characteristics, and the specific payment scenarios in which they are used would yield significant advantages for industry professionals and academic researchers.

The paramount suggestion is to thoroughly analyse the concurrent adoption of mobile payments by several groups. The research was conducted on adoption, examining it from several angles. This study allows researchers in behaviour and technology adoption to interact, enhancing their knowledge of both subjects. The impact of stakeholder adoption on inter-organizational governance, business models, and data exchange may be examined. The involvement of behaviour researchers is crucial due to the inherent divergence in judgements between chains of merchants and individual merchants. A merchant's preferences and technical capacity to accept payment instruments are crucial factors in the adoption process. The viability of mobile payments may be compromised if shops fail to devise strategies for their acceptance.

CONCLUSIONS

This document that we have prepared contains an updated version of the literature review that was completed in the past, and it can be accessed here. We drew attention to the qualitative adjustments in the research papers published after 2018. In addition, we offered some qualitative input about the progress made in the development. After conducting our inquiry using the presented methodology, we concluded that m-Payment behavioural intention and dealer adoption are the most significant categories. Research on dealer behaviour came in a close second.

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To summarise the contributions made and some critical remarks, we put in our best effort and did our best. It was beneficial to us to underline that only a small number of academics have investigated mobile payment systems in rural areas from their early years of existence up to the present day. To bring this discussion to a satisfactory conclusion, we offered some helpful critique and some ideas for how future research should be done more exhaustively, pertinently, and significantly.

Therefore, considering the m-Payment adoption framework is highly recommended in measuring the contribution factor. The merging of TAM and TPB seemed natural in several research, which aimed to get a better understanding of the elements that play such an important role in behavioural intention (S. K. Ariffin et al., 2021; Nasri & Charfeddine, 2012; Putra, 2018)Implementing TAM in an IT setting is much more advantageous than the more general TPB factors. However, an additional dimension was suggested to aid in evaluating a whole new level of thinking in some studies, so that's something to keep in mind. In m-payment research, however, only a few researchers apply a combination of UTAUT and TPB. This gap will be investigated further in the current study.

These earlier studies demonstrated successful implementations of the theory and reaffirmed its applicability for research involving the adoption of technology and education delivered remotely. I sincerely hope the current research will contribute to the existing body of knowledge in consumer behaviour by offering a fresh perspective on cultivating a constructive intention to utilise m-Payment in rural Malaysia.

Researchers working on mobile payments have continued to focus their attention needlessly on a few subfields of research while devoting relatively little effort to the investigation of other subfields. In addition, only a few researchers are active for extended periods. We also discovered that more recent researchers often disregard the findings of earlier scholars and continue to examine the same problems. This may be why we have only witnessed minimal m-Payment adoption in rural areas during the last four years. Researchers must enhance the theoretical underpinnings of their studies, acquire high-quality data, use multi-perspective and multi-level methodologies to carry out their investigations, and, of utmost significance, further develop upon the discoveries of prior studies.

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