

ISSN Online: 2329-3292 ISSN Print: 2329-3284

# An Empirical Study on Investigating Mobile Payment Effect on Automated Teller Machine Use

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How to cite this paper: Lei, H. Z., Lan, J. L., & Sleiman, K. A. A. (2022). An Empirical Study on Investigating Mobile Payment Effect on Automated Teller Machine Use. *Open Journal of Business and Management,* 10, 1071-1087.

https://doi.org/10.4236/ojbm.2022.103057

Received: January 13, 2022 Accepted: April 5, 2022 Published: April 8, 2022

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### **Abstract**

The utilization of mobile payment and automated teller machine (ATM) services by consumers in Xian is dependent on their level of trust in its operation. The study looked into the perceived ease of use, usefulness, system security, trust, convenience, mobility, and cost-effectiveness of mobile payments and ATMs. As a result, this paper used the technology acceptance model (TAM) to evaluate the impact of mobile payments on automated teller machine (ATM) services. SPSS was used to conduct a correlation analysis on 210 mobile payment system and ATM users. The findings indicate that the researched parameters have a positive effect on the use of mobile payments while having a negative effect on the use of ATM services in Xi'an.

## **Keywords**

Mobile Payment, Automated Teller Machine

## 1. Introduction

Banks hugely invest in information and communication technology to save costs and achieve customer satisfaction (Ou, Hung, Yen, & Liu, 2009). Automated teller machines have been globally adopted by banks for the many benefits they offer to both the banks and their customers. Users can deposit and withdraw cash conveniently, regardless of time and place, and without the need to visit the bank's branches during business hours (Olatokun & Igbinedion, 2009). The objective behind ATMs is to eliminate the need for direct interaction with the bank's employees "cash withdrawal, fund transfer, cash deposit, paying the bill, and other financial inquiries".

Technology and competition in the banking sector have increased customers' choices regarding banking products and providers. As a result, banks increasingly use electronic delivery channels to distribute products and services conveniently and at low cost to their customers (George & Kumar, 2013). E-banking has enabled customers to receive services anywhere at any time. E-banking can be identified as ATM (Automatic Teller Machine), IB (Internet Banking) and Tele Banking (Kapoor & Dhingara, 2007). These e-banking services allow customers to access their accounts and get the latest information about products and services that banks offer through the bank's website without following bureaucratic procedures such as "sending letters or telephone confirmation" (Thulani, Chitura, & Runyowa, 2009). The use of Automated Teller Machines (ATM) has resulted in enhanced operations and customer satisfaction due to fast transaction times and 24-hour flexibility, which traditional services were unable to handle (Komal, 2009). The machine enables customers to deposit and withdraw cash at more convenient times and places than in the bank branches during work hours (Muhammad, 2010).

China is considered to be the market opportunity for the early decades of the twenty-first century, with a population of 1.3 billion and rapid economic growth. The use of ATMs is the most popular among the four e-banking services that banks provide (Internet banking, branches, and telephone banking, pay their credit card bills) (Wan, Luk, & Chow, 2005). In 2015, the number of network-connected ATMs reached 900,000 units and was projected to reach 1.5 million units by 2020-2021. The Chinese ATM industry still has significant market potential (Global ATM Machine Sales Market, 2018). With no doubt, the internet revolution and e-commerce in the early 2000s brought new challenges to the payment market. It is nearly impossible to travel in China without coming across the blue logo of Alipay and the green logo of WeChat, both mobile applications used for payment. China's online and offline payment market is conducted by non-banking platforms like WeChat and Alipay.

Alipay and WeChat payment take advantage of internet access and the wide availability and affordability of smartphones for most of the consumer population (Tech, 2017). Mobile payment brings more and more technology to both the business sector and to people's lives, increasing convenience and bringing speed to transactions (Sommer, 2014). In comparison with older transaction payment methods, the new mobile payment brings many advantages to people's lives. Therefore, there are few people still using physical currency notes to complete payments, and some shops even reject cash payments. It was obvious that mobile payment changed the way of our daily lives and brought a new chance for e-commerce to emerge. The traditional method of payment cannot stand in this high-fund transaction.

The upcoming mobile payment brings various services (Bucci, 2014) such as a new way of payment. This non-bank payment (such as Alipay and WeChat) takes advantage of the fact that banks failed to provide a convenient, fast, and low-cost payment service for POS and e-commerce. Third-party payment was

able to fill that gap in POS and enabled e-commerce (World Economic Forum, 2017). Mobile payment has guided all payment concepts and trends. It may replace the traditional payment process due to its convenience. Instead, the advantages of this kind of payment, the Chinese bank industry would install 1.5 million unit ATMs by 2020 (Global ATM Machine Sales Market, 2018). According to this report, cash will continue to be used in China due to its legal tendency. Moreover, cash will continue to be used mainly in rural areas due to poor technical infrastructure. This will ensure the level of cash usage along with higher usage rates in rural areas than in urban areas. This may lead to the question of whether ATM usage can be replaceable with mobile payment.

The Automated Teller Machine (ATM) was introduced to reduce the traffic in the bank, give customers easy access to their accounts, and make life more convenient (Adeniran & Junaidu, 2014). The situation dramatically changed in China today, with the growing use of smartphone which enables mobile payment to appear, every smartphone is representing a single ATM. Mobile payment makes people live more convenience and enhanced e-commerce. There is an emerging body of academic research concentrated on investigating the factors of technology acceptance among users. However Technology Acceptance Model (TAM) is the most popular used in studying information system acceptance, according to TAM factors, users would shift to use the new technology if it brings them more satisfaction.

This study is based on a report on the ATM market in China (Global ATM Machine Sales Market, 2018) that indicates the demand for installed ATMs will increase in China. From the observation, it can be seen that the majority of people are using mobile payment instead of cash and other payment methods, with some stores even refusing to accept cash. This paper aims to investigate the most important factors that users take into consideration when using mobile payment and how mobile payment affects the use of ATMs.

This paper is organized as follows: Section 2: Related Work, Section 3: Theoretical Models and Hypotheses. The methodology is in Section 4. Section 5 is devoted to the discussion of the research. We conclude the study with the conclusions and recommendations in Section 6.

## 2. The Related Work

The development of the internet led to the popularity of e-commerce, and the rapid growth of online payment enabled e-commerce and became one of its most important elements since it made e-commerce more convenient and reduced the risk of operating (Schniederjans, Cao, & Triche, 2013). Nowadays, online payment services are not just used on computers but also on mobile phones, especially on smartphones, which increases the convenience for users. People can now buy things online through their smartphones regardless of time and place. Also, the privacy of mobile phones makes people more likely to trust the payment service (Chen, Rong, Ma, Qu, & Xiong, 2017). In research led by Kim,

they put users and systems together to find the intention element for using mobile online payment. The result found that the main element was the difference between the early and the late adopters because of the need for creativity (Kumar et al., 2020). Users accepted mobile payment due to factors such as trust, security, and control (Veerakumar, 2016), compatibility, individual mobility, and subjective norms (Schierz, Schilke, & Wirtz, 2010). Currently, we have two popular kinds of mobile payment.

Alipay is a third-party payment platform, created in 2004 by the Alibaba Group. It offers an easy, fast, and safe payment solution based on trust. Alipay solved the problem of online shopping, customer transfer money to Alipay account, and then Alipay informs the retailer online for the consignment after the consumer receives the products and affirm on their Alipay account (Yang & Jolly, 2009). Then Alipay transfers the money to the retailer's account (Alipay). In 2014 Alipay stands as the most prominent mobile payment company in the world. (Alipay Online) users can finalize secured transactions, online payments, credit card payments, pay in restaurants, taxis, etc. Alipay gives people a new experience of online payment; by 2014, Alipay payments reached 3.8720 trillion per day.

In August 2013, Tencent released the WeChat Pay innovation. It not only enables users to communicate with friends, but also pay for the purchase of goods and services through business cooperation. For users to link their WeChat account with their bank account and complete the identity authentication to enjoy the WeChat online service, the user only needs to enter the password on their smartphone to finalize the payment, which will then run very smoothly. In February 2016, Tencent announced that from March 1st, WeChat Pay would adjust the transaction fee to 0.1% withdrawal of 1000 Yuan (Wei, Zhao, & Zheng, 2019). In June 2015, WeChat launched the fingerprint payment feature. With this, there is no need to enter a password (Qu, Rong, Chen, Ouyang, & Xiong, 2018). The number of WeChat pay increased from 27.51 million users in the fourth quarter of 2013 to 119.07 in the last quarter of 2014 (Huang, 2017). Wechat pays to challenge Alipay's dominant position. WeChat was able to change the online payment into a mobile payment. Alipay and Tencent invested more than a billion in their taxi software, respectively, to cultivate consumers' mobile payment patterns (Feng, 2016).

## 3. Theoretical Model and Hypotheses

Mobile payment is a new method of financial service that enables people to conduct transactions via smartphone. Alipay is the most popular mobile platform for online payment services in China. After WeChat payment service launched, it seized the payment market (China Internet Watch, 2013) WeChat became the top-rated payment service because it was based on social networking (Hsiao, Chang, & Tang, 2015). WeChat payment is different from Alipay due to social interaction.

In this research, we use Alipay and WeChat payment as the case study to ex-

amine the influence of mobile payment on the use of ATMs. We also propose some factors to investigate the impact of mobile payment on ATM usage; the perceived ease of use (PEOU), and perceived usefulness (PU) are adopted from the previous studies (Davis, Bagozzi, & Warshaw, 1989), trust is the primary key to the people ensure security of their financial transaction (Zhou, Lu, & Wang, 2010), while the convenient factor stands for the facilities that help through using the technology transaction (Truong, Simmons, McColl, & Kitchen, 2008), people can carry mobile phones with them everywhere (every mobile representing an ATM). Therefore, mobile phones have solved the location problem. Economizing is a new important factor. All of these factors facilitate the research to investigate the impact of mobile payment on the use of ATMs.

## 3.1. Technology Acceptance Model (TAM)

Davis had developed technology Acceptance Model (TAM) (1989) this model consider the adoption of computer system depend on users behavioral intention and attitudes to use, based on two conceptions Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). According to TAM, if technology found to be easy and useful to use, it will have a positive influence on user's intention to use the technology. Perceived usefulness is defined as a level in which a person believes that using a specific system will enhance his/her performance (pp. 320). Perceived ease of use is defined as the level of which person believe that using the system will keep him free of mental effort (Davis et al., 1989). Moreover, it has been found that his capability to elaborate on his intention and attitude towards using information technology is better than that of the Theory of Reasoned Action and Theory of Planned Behavior (Mathieson, 1991). The TAM model is the most capable and influential model for measuring information system acceptance (Al-gahtani et al., 2007). TAM is a model that can be used in a variety of contexts to predict a user's intention and behavior (Ou et al., 2009). Additional factors have been added to the Technology Acceptance Model. These factors make the model more predictive, such as [22], (Kamal, Sleiman, Lan, Cai, Wang, 2021; Qu et al., 2018). Based on TAM, mobile payment is easy to use and also operate, making it very useful in our daily lives. From the above, we hypothesized the following:

H1: Mobile payment ease of use affects ATM use

H2: Mobile payment usefulness affects ATM use

#### 3.2. The Security and Trust of Mobile Payment

Security and trust are the most critical factors in e-commerce (Chen & He, 2003; Warkentin et al., 2002), for any payment methods. Security is defined as the system's ability to protect a user's personal data from an unauthorized source during an online transaction (Dahlberg, Guo, & Ondrus, 2015). Security is considered a vital factor for online purchasing [37]. Security and privacy play an essential role in creating trust during online transactions (Chellappa, 2002). Cus-

tomers are willing to buy online if only they had the confidence to provide their personal information (Whysall, 2000). Customers tend to purchase from a vendor that they trust or products that familiars with (Chen & He, 2003). Security is considered, being one of the problematic factors that prevent customers from buying online (Laudon & Traver, 2017). In e-commerce trust integrated with reliability (Yang, Pang, Liu, Yen, & Tarn, 2015) and system security (Baptista & Oliveira, 2015). Trust may change the user's perception toward using mobile payment. Then the perceived usefulness of mobile payment users' behavior will be affected (Zhou, 2015). Security and trust are the online purchase determinants, directly related to customer satisfaction (Barakat & Cairns, 2002). Trust affects user adoption of mobile payment (Dahlberg, Mallat, Ondrus, & Zmijewska, 2007). Thus, any secure payment can have a reliable and satisfied customer. Based on the above, the following research hypothesis is defined.

**H3:** Mobile payment security affects ATM use

H4: Mobile payment trust affects ATM use

## 3.3. Perceived Convenient

Convenience has not been verified as a WTP for different payment methods. However, literature is adoption. It provides the first clue as to why the fit is particularly high on cell phones (such as (Kim, Chan, & Gupta, 2007; Kleijnen, Ruyter, & Wetzels, 2007). First, since most consumers always carry a mobile phone, mobile payment makes them independent of their wallet (which contains cash and credit cards). Second, mobile payment solutions do not usually require consumers to sign a receipt or memorize a PIN code, which is more convenient than using a credit card. Third, many consumers use their cell phones while waiting (for example, to check social media or read news), which makes the payment method available directly upon payment (i.e., no need to search for a wallet). Finally, mobile payments have the fastest processing at the point of sale (Polasik, Górka, Wilczewski, Kunkowski, & Przenajkowska, 2012). However, we are cautious about assuming unconditional fitness that transcends mobile technology. Instead, we argue that not all consumers find mobile payment more convenient; instead, personal adoption "in the respective country market" is a prerequisite. Thus, we introduce the following hypothesis:

**H5:** Mobile payment convenience effects the use of ATMs.

## 3.4. Perceived Mobility

In mobile computing, mobility refers to the characteristics of a device that can handle access to information, communications, and business transactions while it is in motion (Ou et al., 2009). Mobility is one of the typical features of mobile payment, which makes it easy for users to use wireless mobile devices anywhere and anytime and provide information between different wireless devices without the need for a wired network, thus increasing the value of users (Clarke, 2001). However, empirical research into the acceptance of mobile technology has not

given sufficient attention to the effect of mobility on the adoption of information systems, for example (Kumar et al., 2020). Therefore, we assume that

**H6:** ATM use is influenced by perceived mobility.

## 3.5. Economizing

Pricing is the most important factor in customer satisfaction; customers are sensitive to pricing when evaluating products and services (Anderson, Fornell, & Lehmann, 1994). From the customer's perspective, price is what the customer pays to obtain the product or service (Sleiman et al., 2021). Cost has a direct impact on customer satisfaction [53], as well as customer dissatisfaction and disloyalty (Mittal, Scholar, Kukreti, & Scholar, 2018). According to (Sleiman et al., 2021), more than 50% of the e-customers changed the retailer due to pricing.

The emergence of mobile (m-service) services has gained attention as a tool for providing financial services, such as balance checking, money transfer, and bill payment, through a mobile smartphone (Zhang & Mao, 2008). Mobile financial services reduce the cost of each transaction, reduce transaction errors for the bank (Jeong & Yoon, 2013). Mobile payment reduces the traditional cost of other companies. In traditional payment, each company has its own fees, such as credit card usage fees, which makes the transaction more expensive. Mobile payment can provide low-priced services for businesses and users. Furthermore, the mobile phone payment platform reduces bank operating expenses (Huang, 2017). Considering the above, the following hypothesis is defined:

H7: Mobile payment economizes affect ATM use

#### 3.6. Increase Use of Mobile Payment

China has become the world digital currency leader, by building infrastructure that enables digitization (Huang, 2017). Mobile payments are dominated by Alipay and WeChat Pay, which transfer the consumer from cash payment to cashless payment through a digital system that combines social media, commerce, and banking (The Global Economy, 2018). This can be seen through the report of mobile payment service usage in China February 2017 by the service provider.

According to the survey conducted by (Statista, 2018), 39% of the respondents used Alipay, while 33% used WeChat payment services. Based on the preceding discussion, we developed the following hypothesis:

**H8:** Increase use of mobile payment affects the use of ATM

For the balance of the research and to achieve the objectives of this work, the following hypothesis were defined:

**H9:** the use of ATM affected the mobile payment use

## 4. The Methodology

#### 4.1. Data Collection

To achieve the objectives of this study, the online survey was conducted, the ini-

tial questionnaire was designed, and the samples of 210 were collected and found to be useful after careful data analysis. The final questionnaire includes two parts. The first part includes personal information, the second part includes question related to experience of using m-payment and ATM, there was 38 question in the second part according to 9 hypotheses and each question was measured according to 5-point likert scale from strongly disagree to strongly agree which has shown good internal consistency in most studies (Sleiman et al., 2021). The collected samples deem to be enough, according to

 $S = X^2 NP(1-P) \div d^2(N-1) + X^2 P(1-P)$  (Zulkipli & Ali, 2018). This study has been conducted in Shaanxi province, Xian City, among the Chinese people. **Table 1** is showing the demographic data.

## 4.2. Instrument

The research has been based on perceived usefulness, perceived ease of use, convenience, mobility, security, trust, economizing, use of mobile payment, use of ATM. The questionnaire was written in English and Chinese and contained 38 items. Each item was measured depending on the 5 point Likert scale. Starting with strongly disagree (1) and ending with strongly agree (5), the questionnaire has been reviewed by two experts, and it has been modified based on their comments. The first application involves 50 users having been randomly selected to fill out the questionnaire for testing the validity and reliability of each item specifically, and then some items were improved accordingly.

## 4.3. Results: Reliability and Validity

Cronbach's alpha measurement has been used for testing the reliability and validity of display validity coefficient according to (Nunnally & Bernstein, 1994).

Table 1. Demographic data.

Demographic	Elements	No of samples	%
Gender	Males	83	40
Gender	Females	127	60
	20-low	43	20
A ~ a	26 - 30	62	30
Age	31 - 35	54	26
	Above 36	51	24
	Diploma	28	13
	Females       127         20-low       43         26 - 30       62         31 - 35       54         Above 36       51         Diploma       28         Bachelor       75	36	
Highest education	MS	50	24
	Ph.D	22	10
	Others	35	16

Source: Authors (2021).

As follow in **Table 2** also the results of the reliability and validity refer to there are high values for each dimension in the current study questionnaire. The data has been collected based on the final measurement.

Cronbach's alpha and CR were used to assess construct reliability with a cut-off value of 0.70 [7]. We also tested the (CR), as shown in **Table 2**, thereby supporting the reliability and internal consistency [69]. The AVE was also calculated [70]. The results showed AVEs were above 0.50, as shown in **Table 2**. **Table 3** provides the results from the discriminant validity analysis. Moreover, the result of the *t*-test, as it appears in **Table 4**, showed that the ease of use of mobile payment positively affects automated teller machine use. Perceived

Table 2. Reliability and validity.

Contents	No of items	CR	Cronbach's Alpha (α)	AVE
Ease of use	4	0.963**	0.929**	0.86
Usefulness	4	0.933**	0.871**	0.75
Security	4	0.843**	0.711**	0.50
Trust	4	0.864**	0.748**	0.55
Convenience	3	0.887**	0.788**	0.62
mobility	3	0.862**	0.744**	0.55
Economizing	4	0.913**	0.835**	0.69
Use of mobile payment	5	0.884**	0.783**	0.61
Use of automated teller machine	7	0.882**	0.778**	0.60

Source: Authors (2021).

Table 3. Discriminant validity.

	1	2	3	4	5	6	7	8	9
Ease of use	-								
Usefulness	0.436**	-							
Security	0.659**	0.630**	-						
Trust	0.714**	0.563**	0.754**	-					
Convenience	0.169*	0.539**	0.347**	0.432**	-				
mobility	0.241**	0.571**	0.437**	0.423**	0.667**	-			
Economize	0.283**	0.602**	0.398**	0.409**	0.659**	0.817**	-		
Use of mobile payment	0.201**	0.439**	0.296**	0.446**	0.730**	0.734**	0.702**	-	
Use of ATM	0.061	0.047	0.047	0.011	0.161*	0.287**	0.302**	0.255**	-

Source: Authors (2021). \*\* ( $\rho \le 0.01$ ); \*( $\rho \le 0.05$ ).

**Table 4.** *t*-test for equality of means.

		df			CE.	95% CI		
Variable	t	ar	ρ	M	SE	Lower	Upper	
Ease of use of mobile payment on automated teller machine	6.869	208	0.000	2.48365	0.36156	3.19645	1.77086	
Usefulness of mobile payment on automated teller machine	3.163	208	0.002	0.89712	0.28364	1.45630	0.33793	
Security of mobile payment on automated teller machine	3.905	208	0.000	1.74615	0.44713	2.62764	0.86467	
Trust of mobile payment on automated teller machine	5.869	208	0.000	2.33365	0.39760	3.11749	1.54982	
Convenience of mobile payment on automated teller machine	2.861	208	0.005	1.58462	0.55393	2.67666	0.49257	
mobility of mobile payment on automated teller machine	2.496	208	0.013	1.02019	0.40873	1.82598	0.21441	
Economizing of mobile payment effect automated teller machine use	3.722	208	0.000	1.45962	0.39218	2.23277	0.68646	
Use of mobile payment affect the use of automated teller machine	1.268	208	0.206	0.56442	0.44528	1.44226	0.31342	
Use of automated teller machine affect the use of mobile payment	1.496	208	0.136	0.98942	0.66147	2.29347	0.31462	

Source: Authors (2021).

usefulness positively affects the use of ATMs. Moreover, security, trust, convenience, mobility, and economizing positively affect the use of automated teller machines (ATM). However, the use of mobile payments has affected the use of ATMs recently.

## 5. Discussion

In China, nearly every person has a smartphone, which means that everyone can complete payment through QR-Code payment. Most people prefer to use mobile payment since there is no need to get other equipment to support the smartphone completing the payment. A smartphone and a QR-code picture can complete a transaction, and both the user and the merchant can scan the QR-code to pay or receive money, which is convenient and efficient. Alipay and WeChat

Payment are the two most popular QR-Code payment programs. The functions of these two applications are nearly the same. However, people may choose them according to their consumption habits. WeChat payment launched "No Cash Day" in 2015 as the world's first mobile payment day, and it was scheduled to be held every year in August. The day encourages people to use mobile payment, using mobile payment as a low-carbon and timely payment method, as well as advocating a fashionable and intelligent life.

Users' intentions to accept and embrace mobile payment systems are influenced by their perceived usefulness more than ATMs (Kim et al., 2007). One of the reasons individuals utilize m-payments is that the systems are useful for their transactions and save them time. Banks also see benefits from reducing the number of branches, which lowers the cost per transaction. Numerous studies have found that perceived usefulness is the most important indicator of information technology utilization (Davis et al., 1989; Kamal, Sleiman, Lan, Cai, & Wang, 2021).

A system that is viewed as being easier to use will encourage increased system use and will be more likely to be adopted by users (Venkatesh, Morris, & Ackerman, 2000). Customers may be uneasy about using mobile payment and ATM services if the system is difficult to learn and utilize. Information such as product or service specifics, benefits, and usage directions should be supplied to make it easier for consumers to accept m-payment. Furthermore, the perceived ease of use of mobile payment aids in the development of trust; the perceived ease of use of mobile payment is higher than that of ATMs, so the effect of using mobile payment is greater than that of continuing to use ATMs.

Security plays a vital role in forming trust during online transactions (Chellappa, 2002). It is also found to be a critical success factor in online shopping in the Serbian market (Vasić, Kilibarda, & Kaurin, 2019). Security is an important factor for e-commerce sustainability and an influential factor for customers' intention to use mobile payments (Friedman, Khan, & Howe, 2000; Shaw, 2014). In the mobile payment context, it represents the user's conception of safety and reliability of the institutional structures (Zhou, 2014). In this study trust and security are founded well by the service provider.

Perceived financial resources are defined as the extent to which a person believes he or she has the financial resources required to use m-banking. Convenience comes at a cost, and m-banking is no exception. Customers must have not only a suitable mobile handset but also wireless connectivity in order to use m-banking services. Given that the cost of accessing mobile and wireless services (subscription, service charge, and communication costs) is higher than that of obtaining wire-based internet service, financial factors may impact users' behavioral intentions (Ling, Chen, Ho, & Hsiao, 2021; Wu & Wang, 2005).

The use of mobile payment recently, is more people prefer to use mobile payment instead of ATM due to usefulness and ease of use of mobile payment comparing to ATM, also because mobile payment has enabled online commerce

people can buy things online regardless of time and place.

#### 6. Limitation and Future Research

The current paper has two main contributions. First, this research examined a range of significant factors that help us understand the influence of mobile payments on automated teller machines. The exact impact of these factors on automated teller machines is still unexplored. Second, this study has applied a technology acceptance model with consideration of new additional factors.

Furthermore, this study, like previous studies, has several limitations that present potential for further research. We collected data from the offline demographic using an online survey strategy. As a result, certain paths may become irrelevant, and for research that incorporates an evaluation of internet access, the offline form of data collection will assure a decent mix of respondents from diverse strata. People who are not digitally literate will get paper surveys, and hurdles to using IT, such as mobile payments, will be more visible to these respondents. As a result, when it comes to access or understanding of technology, we strongly encourage collecting data offline, particularly in low-income regions, since the bulk of the population would be excluded if the survey is given online. This study was done in Xian, China, and the sample size was just 210 people, which does not allow for generalization. Furthermore, the data were collected in the urban region; a future study should collect data from rural areas where technical progress, access to technology, education, and income are lower than in urban areas; additionally, using mobile payment may be more important for rural residents. Future research may be undertaken in various nations to see whether the findings can be generalized. Future studies may also take users' culture and income into account as moderators in a theoretical model to investigate diverse behaviors and focus on other factors such as accessibility, habit, pleasure, and so on, in order to increase consumers' willingness to utilize m-payments.

## 7. Conclusion and Recommendations

The purpose of this article was to investigate the impact of mobile payment on automated teller machine (ATM) use based on a report. This study is based on a report of the ATM market in China (Global ATM Machine Sales Market, 2018) that says the demand for installed ATMs will increase in China. From the observation, people can see that the majority of people are using mobile payment instead of cash and other payment methods, even some other stores refuse to accept cash. This paper is to investigate the most important factors that users take into consideration when using mobile payment, and how mobile payment affects the use of ATMs. By investigating some important factors related to mobile payment systems and automated teller machines (ATM) (perceived ease of use and usefulness), security, trust, convenience, economize, mobility, use of mobile payment and use of ATM on customers' use of mobile payment and ATM services in China Bank service providers should re-evaluate the situation

of the new ATM, taking into account the use of cash in the era of digital payment. Despite the fact that this article provides a fair explanation for the influence of the aforementioned variables on users of mobile payment and ATM services, the model proposed that certain external variables might also be used to research their effect on electronic linked systems. As a result, variables like social influence, subjective norm, knowledge efficacy, and reputation could be evaluated to determine their impact on customers' use of mobile payment services. This article gives context for establishing a sociological paradigm on the amount of customer use of mobile payment services. As a result, future research should look into more sociological theories to back up the use of banking sector products and services (ATM).

## **Funding**

This research was supported by the Shaanxi Provincial Philosophy and Social Science Foundation Project in 2021: Research on "Embedded Climbing" of Agricultural Industrial Cluster in the context of Rural Revitalization Strategy (No. 2021D033).

#### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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