

**-RESEARCH ARTICLE-**

**MOVING FROM BRICKS TO CLICKS: MERCHANTS' ACCEPTANCE  
OF THE MOBILE PAYMENT IN MALAYSIA**

**Rana Altounjy**

Manipal International University  
E-mail: ra\_altounjy@hotmail.com  
Orcid ID: 0000-0001-7182-219X

**Omar Alaeddin**

Universiti Kuala Lumpur  
E-mail: omar.alaeddin@unikl.edu.my  
Orcid ID: 0000-0002-9850-923X

**Hafezali Iqbal Hussain**

Taylor's University  
E-mail: hafezali.iqbalhussain@taylors.edu.my  
Orcid ID: 0000-0002-9381-7743

**Sebastian Kot**

North-West University  
E-mail: sebacat@zim.pcz.czest.pl  
Orcid ID: 0000-0002-8272-6918

**Citation (APA):** Altounjy, R., Alaeddin, O., Hussain, H. I. & Kot, S., (2020), Moving from Bricks to Clicks: Merchants' Acceptance of the Mobile Payment in Malaysia, International Journal of eBusiness and eGovernment Studies, 12 (2): 136-150. **Doi:** 10.34111/ijepeg.202012204

**—Abstract—**

In the hustle and bustle of modern life, everyone wants to enhance and advance their working and personal life and mobile phones have become the favoured technology to achieve that aim. In light of this trend, most financial service providers have taken steps to meet this new lifestyle demand by developing mobile applications so that people can manage their financial matters on the go. This movement has also motivated many merchants around the world to adopt mobile technology as part of their aspiration to provide a better experience for their customers. This study explores the factors influencing Malaysian merchants' acceptance of mobile payment as an additional payment method to the traditionally accepted payment methods of cash and credit/debit cards. The aim of this study is to figure out the factors affecting merchants' decision to use mobile payments to help the provider companies shape their own marketing plans and consider the weak points that may turn the merchants against this market. This empirical study uses a survey method and AMOS to test and analyse the perceptions of a sample of 125 food and beverage providers located in food courts in 10 shopping malls at the Klang Valley in Malaysia. The study found that perceived usefulness has a significant positive impact on mobile payment acceptance, while the perceived ease of use has no significant impact on the merchants' decision to offer this payment method, which is not compatible with the technology acceptance model (TAM). In addition, this study added a further two factors to the TAM to investigate their effects on merchants' acceptance of mobile payments and found a significant positive effect for compatibility with customers' needs but no significant effect for perceived risk, which can be justified by the nature of this industry. This study, therefore, provides invaluable insights into the factors affecting merchants' acceptance of mobile payments, especially food and beverages providers in food courts located in shopping malls of Malaysia.

**Key Words:** Mobile payment, TAM, Cashless society, Merchants behaviour

**JEL Classification:** O33, Z13

## **1. INTRODUCTION**

Nowadays, the phrase ‘lack of cash is no longer an obstacle’ is one of the most popular welcoming tags used by merchants to convince their customers to use the mobile payment option while buying products or services. In parallel with the thousands of mobile wallets that have been introduced to the market, mobile payments have become a trend among young smartphone users as most of them subscribe to one or more mobile payment application as they consider these apps to be a more comfortable and faster way to complete their purchasing activities.

With an eye on the worldwide growth in the mobile payment market, Malaysian banks have joined this movement and are offering different types of mobile payment methods such as the CIMB wallet, Maybank wallet and Maybank QrPay, which are used mostly for small transactions (not exceeding 200 Malaysian Ringgit (RM) which equals to 50 USD). Given the growth already seen in this market and its potential to grow further, the banks as payment service providers (PSPs) need to work in harmony with merchants to offer the best possible mobile user experience.

In light of the above, this research aims to study the factors affecting the acceptance of mobile payment methods among merchants in the food and beverages sector.

## **2. BACKGROUND: STATISTICS OF MOBILE PAYMENT IN MALAYSIA**

Rheedera and Mashaba (2016) highlights the importance of the global banking industry and that it is identified as very competitive with a variety of products and services offered by various financial institutions. The concept of going cashless is a hot topic in most of the newly published insights on the consumer experience. In the fourth consumer payment attitude survey undertaken by Visa Inc., which has focused on engaging consumers in Southeast Asia, it has been reported that 43 percent of consumers believe that their country will go completely cashless by 2024 (VISA, 2017). The same report shows that 61 percent of the respondents are confident about going cashless for 24 hours, while 42 percent of them have the confidence to go completely cashless for three days. In addition, on average, consumers in Southeast Asia spend over five hours on their mobile phones per day. In Malaysia, specifically, the report highlights that 73 percent of the respondents have stated that they shop on

their mobile at least once a month and that the percentage of device-initiated payments, as a total of all transactions, stands at 69 percent. (VISA, 2017) Additionally, 17 percent of the respondents in Malaysia have stated that they use physical banking; whereas, 64 percent have reported that they use mobile banking. Malaysia is ranked sixth in Southeast Asia in terms of the percentage of mobile banking usage with Thailand coming first with more than 80 percent of respondents using mobile banking (VISA, 2017).

Meanwhile, based on the latest report published by the New Straits Times on 20 September 2017, Malaysia is currently racing to catch up with the top-ranking countries in terms of cashless transactions, such as Singapore, the Netherlands, France, China and India. The cashless trend is now penetrating cash-based sectors such as the retail, restaurant, travel and tour-related sectors, which are now slowly migrating away from paper bills and coins to cashless transactions (Times, 2017).

It is valuable to note that Malaysia reported as having a high rate of mobile phone penetration of 59.20 percent in 2016, which is expected to reach 69 percent by 2022 (Alaeddin, Altounjy, Zainudin & Kamarudin, 2018). Additionally, the latest statistics have shown that the expected annual growth rate of mobile wallet point-of-sale around Malaysia during the years 2018-2022 equals 41.4 percent, which will result in a total amount of USD 1,141m in 2022 (Statista, 2017).

Based on the latest statistics about the mobile point of sale (POS) payments in Malaysia, the transaction value in the mobile POS payments segment reached USD 893m in 2019. Moreover, the transaction value is expected to show an annual growth rate (CAGR 2019-2023) of 29.1 percent resulting in the total amount of USD 2,482m by 2023. Additionally, in this segment, the number of users is expected to amount to 4.8m by 2023 and the average transaction value per user in the mobile POS payments segment amounts to USD 251.1 in 2019.

The latest statistics by Statista, February 2019 show that the mobile payment market is highly auspicious (“Mobile POS Payments,” 2019), as mentioned by Mandeep Singh, the head of global liquidity and cash management at HSBC bank Malaysia, who states that “the outlook for mobile payment in the country looked promising”. Furthermore, he notes that if business owners are looking to expand their market, it

is advisable to adopt the mobile payments method or “mobile commerce” as this could be deemed a potential barrier to business growth is not in place (Wadhwa, Dabas & Malhotra, 2017, Meyer et al., 2016, Gąsiorowski, 2016).

*The above-mentioned information and forecasting clearly show the need to follow the mobile payment trend, not to lose a wide range of possible markets connected through this small device (smartphone).*

## **2.1. Technology acceptance model**

In this paper, to identify the factors affecting merchants’ acceptance of the mobile payment, the TAM was adopted. TAM was introduced by Davis more than 30 years ago and derived from the theory of reasoned action (TRA). The theory of planned behaviour (TPB) became a superior model in inspecting factors affecting users’ acceptance of technology. TAM continued developing over the years, becoming TAM2 (Venkatesh & Davis, 2000), followed by TAM3 (Venkatesh & Bala, 2008).

The wide range of the literature on information technology acceptance has confirmed the ability and effectiveness of TAM to anticipate customers’ acceptance to use the innovation (Ahadzadeh & Sharif, 2017; Haseeb, Hussain, Ślusarczyk, & Jermstipparsert, 2019; Lin & Kim, 2016; Planing, 2014; Tripopsakul, 2018; Xu, Li, & Ahmad, 2018). Various studies extended the model by adding more factors either individually or adopted from other theories, such as self-efficiency (Davis & Venkatesh, 1996; Hernandez, Jimenez & Martín, 2009), compatibility (Kim & Qu, 2014), trust and perceived risk (Featherman & Pavlou, 2003; Kesharwani & Bisht, 2012; Pavlou, 2003).

As the number of studies about the acceptance of mobile payment is not high, most of those studies have focused on the individuals’ acceptance while a limited number examined the merchants acceptance for this method of payment (Guo & Bouwman, 2016; Hayashi & Bradford, 2014; Liébana-cabanillas, Lara-rubio, Liébana-cabanillas & Lara-rubio, 2017). Therefore, the mobile payment technology needs to be more critical for some usage-context factors while comparing to other technologies, so this paper has used an extended version of TAM, which includes the perceived usefulness and perceived ease of use. Also, it has another two constructs, namely compatibility

with customers' needs and perceived risk and the targeted respondents are the merchants.

## **2.2. Hypothesis development**

This research is built based on the TAM, which has two main inclusive constructs, namely perceived usefulness, which is defined as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, Bagozzi & Warshaw, 1989, p.320) and perceived ease of use, which is defined as the degree to which a person believes that using a particular system would be free of effort (Davis et al., 1989, p.320).

However, perceived usefulness and perceived ease of use alone are not able to explain the covariance in the merchants' intention towards this technology. Therefore, this study proposed another two constructs as predictors for the customers' intention, namely perceived risk and compatibility with customers' needs.

Therefore, hypotheses for this study are:

**H1:** There is a significant relationship between perceived usefulness and merchants' intention to use mobile payment.

**H2:** There is a significant relationship between perceived ease of use and merchants' intention to use mobile payment.

**H3:** There is a significant relationship between perceived risk and merchants' intention to use mobile payment.

**H4:** There is a significant relationship between compatibility with customers' needs and merchants' intention to use mobile payment.

### **3. METHODOLOGY**

#### **3.1. Conceptual framework and measurements**

The conceptual framework of this study was based on the TAM. This framework includes four constructs, namely perceived usefulness, perceived ease of use, perceived risk and compatibility with customers' needs as exogenous variables and the merchants' intention to use mobile payment as an endogenous variable.

A self-administrated questionnaire was used to collect the respondents' point of view regarding this study's constructs. The items of study adopted and adapted from the literature use a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. This questionnaire does not include a demographic section due to the nature of the respondents as food and beverages shops or stalls located in shopping malls, but it includes a question about whether they are offering a mobile payment choice for their customers.

#### **3.2. Sampling**

As the mobile payments are to be used for small amounts (250RM to 10 00RM) and fast transactions, the type of merchants who can use it to provide products and services are supermarkets, shops and food and beverages providers. While the trend of Malaysians' food behaviour is to eat in restaurants while still considering choosing clean and good places, most people prefer food providers located in malls around the country where they can find a wide range of choices with reasonable prices.

Based on the above and while the main aim of our study is to figure out the factors can explain the variances of merchants' intention of mobile payments, and while the most suitable population for this aim are malls food and beverages providers so we choose our respondents from the food and beverages providers located at the food courts of 10 big shopping malls around Klang Valley.

There were 250 questionnaires distributed and only 196 were returned, with only 164 fully answered, giving a response rate of close to 65 percent.

## **4. DATA ANALYSIS AND RESULTS**

As the first question intended to uncover the percentage of users of mobile payment among the respondents, the results show that 74 percent of them already offer one or more types of mobile payments among their payments methods.

### **4.1. CFA of the measurement model**

To test the hypotheses of this model, structural equation modelling (SEM-AMOS) was used and the two-stage approach was applied as recommended by Anderson (1998). The first stage includes testing the casual relationship between the items and the variables by doing a confirmatory factor analysis (CFA) test.

According to Hair Jr, Hult, Ringle, & Sarstedt, (2016) values items factor loading are less than 0.5 that has a low effect on the variable, while those that range between 0.5 and 0.7 have a moderate effect, and values higher than 0.7 have a higher effect, therefore, some items have been dropped because the factor loading of them is less than 0.5.

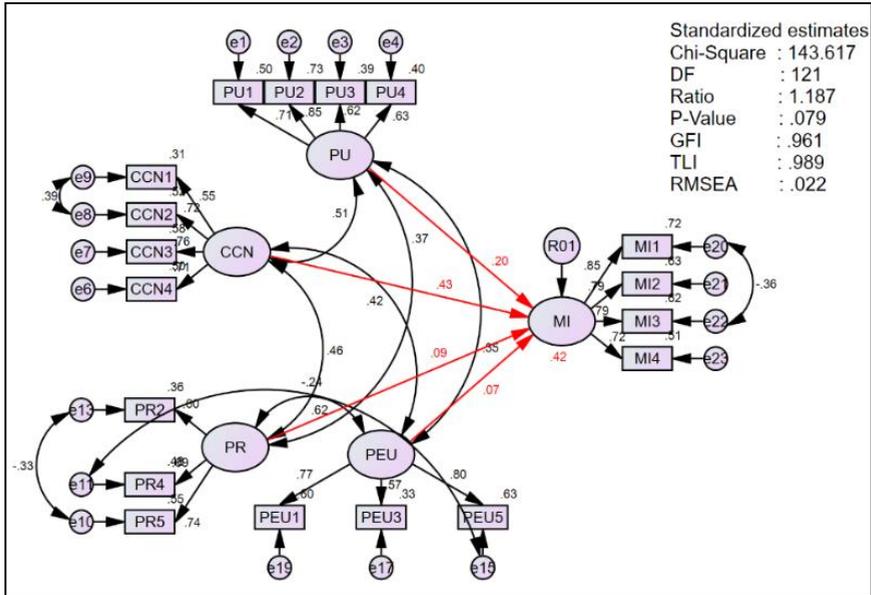
In this study, the authors have used the most common indexes to measure the model fit and the results showed that the model fulfils the required values (Figure1).

### **4.2. Analysing the structural model**

After applying the CFA on the measurement model, the study gets the re-specified structural model, while some items have been deleted from the hypothesised model to reach the goodness of fit indices. Figure 1 shows the re-specified model, which has been generated from the literature based on the theory, then it has been modified based on the statistics results.

The re-specified model shows the latest version of the relations among the variables. In addition, it shows the R<sup>2</sup>, which is measuring the ability of the exogenous variables to measure the variances in the indigenous variable.

**Figure-1: The re-specified model**



To test the hypotheses, Table 1 shows the P-value of each hypothesised relation:

**Table 1: Hypotheses testing**

Hypo.	Relation	Estimate	S.E.	C.R.	P-Value	Label	Directi on	Hypothesis result
H1	PU → MI	0.205	0.063	3.285	0.001	Significant	Positive	Supported
H2	CCN → MI	0.427	0.112	5.438	0.000	Significant	Positive	Supported
H3	PR → MI	0.092	0.064	1.185	<b>0.236</b>	Not significant	positive	Not supported
H4	PEU → MI	0.070	0.064	0.945	<b>0.345</b>	Not significant	Positive	Not supported

From Table 1, it can be identified that the first and second hypotheses are supported from the respondents' point of view while hypotheses 3 and 4 are not. Which means perceived usefulness and compatibility with customers' needs are significantly important for the merchants while considering offering the mobile payment as one

of the payment methods accepted in their stores, while perceived risk and perceived ease of use considered are not significantly important while taking this decision.

Additionally, based on the factor loading of the items with the variables, it can be concluded that the most important item of the compatibility with customers' needs is the mobile payment that fits well with the way customers like to pay. This shows high value for the customers' favourite behaviour. While for the perceived usefulness, it is identified that PU2 item has the highest factor loading, which means the merchants believe that mobile payment is useful for them because it will increase their productivity.

Furthermore, the squared multiple correlations  $R^2$  show that the perceived usefulness and compatibility with customers' needs can explain 42 percent of the variances in merchants' decision towards adopting mobile payments in their stores. While comparing with the perceived usefulness, the compatibility with customers' needs has a higher path coefficient.

## **5. Discussion**

The financial sector is the heart of any economy and the key driver for any improvement, and this era is considered the digital one and the trend moving towards digitalising everything, Although the financial matters are very sensitive for customers, this leads to making a bulk of researches to study the customers' acceptance for those movements.

Based on the above mentioned, the main objective of this study is to figure out the variables are affecting merchants' decision to offer the mobile payment as one of the payment methods available for their customers. By collecting the responses from people in charge in the selected merchants, it is found that main factor in making this decision in the compatibility with customers' needs, this result comes along with most previous researches which have found that the most important factor in any decision the merchants do is complying with customers' needs as they are the main targeted people in any business and their satisfactions are the most important (Guo & Bouwman, 2016; Wang, Li, Li, & Zhang, 2016). Also, this result is highly matching with the people wide adoption for mobile and mobile services

especially the mobile payments (Alaeddin et al., 2018; Phonthanukitithaworn et al., 2016; Wadhera et al., 2017; Williams, Roderick, Davies & Clement, 2017).

The second effective factor is the perceived usefulness for the merchants, which positively affects their decision that also similar to previous researches results (Thakur & Srivastava, 2014) but this result comes in contradict with another study which has found the perceived usefulness has no direct effect on behavioural intention of consumers (Phonthanukitithaworn et al., 2016). The usefulness has been measured using five items at the beginning then the PU5 has been deleted due to low factor loading. This means the merchants looking for usefulness as the role of this payment method to improve their performance, increase their productivity and effectiveness and make their job easier, while from other hands they are not looking into this method as a way to have more control on their payment activities.

Furthermore, the other two factors, which are the perceived risk and perceived ease of use, have no significant effect on the merchants adopting decision for the mobile payment, similar result of having no effect of perceived ease of use on the consumer behaviour has been found in the study conducted in Thailand 2016 (Phonthanukitithaworn et al., 2016). But this result is opposite of the individuals' point of view and it has been shown in previous studies results (De Kerviler, Demoulin & Zidda, 2016; Thakur & Srivastava, 2014).

## **6. Conclusion**

This result shows that while focusing merchants more on the customers' needs and how this service can satisfy those needs, they ignore the risky part of this service, which may come due to their trust on the service provider or the low risk associated with this service compared to the high benefits coming from it. In addition, the non-effect of the perceived ease of use may come due to the wide expectation among users that mobile apps are mostly user-friendly ones.

While this study covered a wide number of merchants, it is still limited to those in food courts of the selected 10 big shopping malls around Klang Valley. Further studies can cover the restaurants outside malls or in different cities, which could

reach similar or different results due to the different types of customers or cultures they may have.

Finally, this study shows that two factors, namely compatibility with customers' needs and perceived usefulness are able to explain 42 percent of the variation in the merchants' decision to offer the mobile payments as one of the payments methods for their customers.

The results of this study open the door for further research to work more into justifying the merchants' opinion to offer a new method of payment, as this study focuses on food and beverages industry with its financial nature of small amounts and fast payments, while for other services providers may the factors are varying.

## REFERENCES

- Ahadzadeh, A. S., & Sharif, S. P. (2017). Online health information seeking among Malaysian women: Technology acceptance model perspective. *SEARCH*, 9(1), 47–70.
- Alaeddin, O., Altounjy, R., Zainudin, Z., & Kamarudin, F. (2018). From physical to digital : investigating consumer behaviour of switching to mobile wallet. *Polish Journal of Management Studies*, 17(2), 18–30.
- Anderson, E. W. (1998). Customer satisfaction and word of mouth. *Journal of Service Research*, 1(1), 5–17.
- Davis, F. D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance model: Three experiments. *International Journal of Human-Computer Studies*, 45(1), 19–45.
- Davis, Fred D, Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982–1003.
- De Kerviler, G., Demoulin, N. T. M., & Zidda, P. (2016). Adoption of in-store mobile payment: Are perceived risk and convenience the only drivers? *Journal of Retailing and*

*Consumer Services*, 31, 334–344.

Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human Computer Studies*, 59(4), 451–474.

Gąsiorowski, J. (2016). Managing security in electronic banking—legal and organisational aspects. *Forum Scientiae Oeconomia*, 4(1), 123-136.

Guo, J., & Bouwman, H. (2016). An analytical framework for an m-payment ecosystem: A merchants' perspective. *Telecommunications Policy*, 40(2–3), 147–167.

Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.

Haseeb, M., Hussain, H. I., Ślusarczyk, B., & Jermsittiparsert, K. (2019). Industry 4.0: A solution towards technology challenges of sustainable business performance. *Social Sciences*, 8(5), 154.

Hayashi, F., & Bradford, T. (2014). Mobile Payments: Merchants' Perspectives. *Economic Review*, 99, 5–31.

Hernandez, B., Jimenez, J., & Martín, M. J. (2009). Adoption vs acceptance of e-commerce: Two different decisions. *European Journal of Marketing*, 43(9), 1232–1245.

Kesharwani, A., & Bisht, S. S. (2012). The impact of trust and perceived risk on internet banking adoption in India: An extension of technology acceptance model. *International Journal of Bank Marketing*, 30(4), 303–322.

Kim, M., & Qu, H. (2014). Travelers' behavioral intention toward hotel self-service kiosks usage. *International Journal of Contemporary Hospitality Management*, 26(2), 225–245.

Liébana-cabanillas, F., Lara-rubio, J., Liébana-cabanillas, F., & Lara-rubio, J. (2017). Predictive and explanatory modeling regarding adoption of mobile payment systems

Technological Forecasting & Social Change Predictive and explanatory modeling regarding adoption of mobile payment systems. *Technological Forecasting & Social Change*, 120(July), 32–40.

Lin, C. A., & Kim, T. (2016). Predicting user response to sponsored advertising on social media via the technology acceptance model. *Computers in Human Behavior*, 64(October 2017), 710–718.

Mobile POS Payments. (2019). Retrieved from <https://www.statista.com/outlook/331/100/mobile-pos-payments/worldwide>

Meyer, N., Meyer, D.F. & Molefe, K.N. (2016). Barriers to small informal business development and entrepreneurship: The case of the Emfuleni Region. *Polish Journal of Management Studies*, 13(1), 121-133.

Pavlou, P. a. (2003). Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. *International Journal of Electronic Commerce*, 7(3), 69–103.

Phonthanukithaworn, C., Sellitto, C., & Fong, M. W. L. (2016). An investigation of mobile payment (m-payment) services in Thailand. *Asia-Pacific Journal of Business Administration*, 8(1), 37–54.

Planing, P. (2014). *Innovation acceptance: the case of advanced driver-assistance systems*. Springer Science & Business Media.

Rheeder, N. & Mashaba, N. (2016). Exploring how service failure severity affects behavioural intention in the banking industry. *Journal of Contemporary Management*, 13(1), 1037-1063.

Statista. (2017). Mobile POS Payments, Malaysia. Retrieved from <https://www.statista.com/outlook/331/122/mobile-pos-payments/malaysia#>

Thakur, R., & Srivastava, M. (2014). Adoption readiness, personal innovativeness, perceived risk and usage intention across customer groups for mobile payment services in India. *Internet Research*, 24(3), 369–392.

Times, new straits. (2017). Strong consumer demand driving cashless payments. Retrieved from <https://www.nst.com.my/business/2018/09/410444/strong-consumer-demand-driving-cashless-payments>

Tripopsakul, S. (2018). Social media adoption as a business platform: an integrated TAM-TOE framework. *Polish Journal of Management Studies*, 18(2), 350–362.

Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences*, 39(2), 273–315.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.

VISA. (2017). Rise of the Digitally Engaged Consumer, 30.

Wadhera, T., Dabas, R., & Malhotra, P. (2017). Adoption of M-Wallet: A way Ahead. *International Journal of Engineering and Management Research (IJEMR)*, 7(4), 1–7.

Wang, Y. S., Li, H. T., Li, C. R., & Zhang, D. Z. (2016). Factors affecting hotels' adoption of mobile reservation systems: A technology-organization-environment framework. *Tourism Management*, 53, 163–172.

Williams, M. D., Roderick, S., Davies, G. H., & Clement, M. (2017). Risk, Trust, and Compatibility as Antecedents of Mobile Payment Adoption.

Xu, J. X., Li, N., & Ahmad, M. I. (2018). Banking performance of China and Pakistan. *Entrepreneurship and Sustainability Issues*, 5(4), 929–942.