

A Model of Factors Influencing Consumers' Intention to Use e-Wallet System in Malaysia: A Systematic Review

Jasmine Vivienne Andrew^{1*}, Sylvia @ Nabila Azwa Ambad¹ and Karen Esther Tan²

¹Universiti Teknologi MARA, Sabah Campus, Manggatal, Sabah, Malaysia

²Tunku Abdul Rahman University College, Sabah Campus, Penampang, Sabah, Malaysia

*Corresponding author's email:
kakakJas@yahoo.com

Received: 15 April 2019

Accepted: 10 May 2019

Keywords: e-wallet, behavioural intention, mobile payment, perceived security, UTAUT2

ABSTRACT

Mobile payment technology specifically e-wallet is receiving growing attention recently in light of the government's initiative to build a cashless society. The e-wallet phenomena are becoming more apparent in Malaysia, however, it is growing at a rate slower than its regional peers. Due to the rapid development of this technology, organisations and consumers are also concerned about rising security issues. Technological advancement in the e-commerce industry and the ubiquity of smartphones has helped to propel the need to study the intention to use e-wallets. As the e-wallets markets further expected to increase exponentially in Malaysia, it is crucial to study the consumers' behavioural intention to use e-wallets for the benefits of the e-wallets service provider in Malaysia. Correspondingly, this paper presents a review of the literature aimed at advancing the body of knowledge by proposing a conceptual model combining the theories of; the extended unified theory of acceptance and use of technology (UTAUT2) with perceived security and behavioural intention. This paper is built upon a systematic literature review method and it is expected that researchers can have a more precise justification of the consumer behavioural intention to use e-wallet in Malaysia. This paper provides practical implications for the extension of UTAUT2 theory with perceived security and subsequently assist e-wallet service provider when devising appropriate strategies in planning and increasing consumer's intention to use the e-wallet.

INTRODUCTION

The e-wallet is an app-based technology which allows users to make payments of their purchases, receive and transfer funds and top-up funds via their mobile devices, replacing the physical wallet. Its function is similar to a credit or debit card and it requires to be linked with the individual's bank account to make payments. The convenience element of an e-wallet provides value offerings which defeat the purpose of traditional wallet of having to carry many so many cards and cash. It allows the user to use their mobile phones to manipulate their bank accounts, store value in an account linked to their handsets, transfer funds or even access credit or insurance product (Donner & Tellez, 2008).

The exponential growth of e-commerce has resulted in more consumers to move away from the brick-and-mortar channels, consequently contributed to the need for having e-wallets as a medium of payment. A survey by DATAREPORTAL (2019) reported that 58% of consumers in Malaysia has made an online purchase via a mobile device, 66% use mobile banking and 42% make mobile payments. The data also revealed that consumers' e-wallets share of e-commerce spend accounted for 7% and e-wallets' share of point-of-sale spend accounted for 1% of the total respondents. Another survey conducted by Nielsen's Malaysia revealed that 67% of consumers in Malaysia use some form of cashless payment which includes 57% use online banking, 27% use credit/debit cards and even fewer use mobile wallets at 8% (Nielsen's Payment Landscape 2019). The advancement of this emerging technology in Malaysia has affected consumers in a huge way specifically in terms of managing their transactions and purchases. The impact of this growing trend will require improvement and change of the payment landscape processes and systems to become more effective and efficient.

Despite the convenience aspect of e-wallets and high awareness on e-wallet in Malaysia, concerns on security and fraud are the biggest barrier to adoption with 50% of non-users citing security as the main reason for not making the switch to e-wallets (Nielsen's Payment Landscape 2019). Niranjnamurthy and Dharmendra suggested that solutions prevent or minimize such threats need to be developed. This leads to the importance of perceived technology security factor to be included in this study. The consumer market in Malaysia is still in the transition process towards an emerging market. It was noted by United Nations Statistics Division that the majority of consumers in Malaysia, with 29.6% under the age of 15, 65.4% between 15 – 64 and 5% aged 65 and above are still using physical cash.

The e-wallet market in Malaysia is still growing and currently, there are over 40 e-wallet players in the market. The e-wallet market is experiencing a hype with the main reasons for use are mostly because of the attractive promotions like cashback, the convenience aspects and the digital receipts. The key concerns raised from the use of e-wallets are the low merchant and consumer adoption, security risks and poor user interface (PwC Research & Analysis Malaysia, 2018). This is evident through the findings from a survey conducted by PwC Research & Analysis Malaysia (2018) whereby Malaysia is still behind its regional players like China, India and Singapore given its low adoption rate.

Based on the above problem, the aim of the current paper is to present a systematic literature review of the factors influencing consumers' behavioural intention to use the e-wallet. The result of the review is aimed at proposing a conceptual model to extend UTAUT2 with perceived security. At present, there is a limited number of study that has focused on the constructs of UTAUT2 with perceived security and behavioural intention to use the e-wallet. In a nutshell, this paper aims

at answering this research question: (1) What are the current improvements in the e-wallet (mobile payments) studies according to the year of publication? (2) What are the most active countries that undertake e-wallet (mobile payment) adoption studies? (3) What are the research methods undertaken in the analyzed studies? (4) What are the most frequent factors that were extended in the UTAUT2 model? The steps followed the systematic review analysis is structured as follows: (1) an electronic literature search was performed; (2) papers corresponding to the mobile payment theme (specifically focused on e-wallet, behavioural intention, perceived security and UTAUT2 model) were selected; (3) findings from the papers selected were extracted and compared; (4) discussion of the review.

PAST STUDIES ON E-WALLET (MOBILE PAYMENT)

The topic of e-wallet adoption is generally published under the mobile payment theme. The mobile payment literature has seen growth in a number of publications and has gained the interest of researchers over the years. One of the most notable publications on mobile payment was written by Tomi Dahlberg, Jie Guo and Jan Ondrus (2008), where the authors have published a comprehensive review of the literature based on their cumulative understanding of mobile payments investigated in several years. From their findings, the mobile payment issues were not fully explored by academia and it was found that most publication on mobile payment focused mainly on issues of technology and consumer adoption. In their more recent publication, the authors have investigated mobile payment adoption studies from the year 2007 onwards and found that all the mobile payment adoption studies that were published during this period have covered on consumer adoption topics (Dahlberg et al., 2015). Based on these findings also, it was found that conceptual and empirical studies on mobile payment adoption

during this period had used models of information technologies such as Technology Acceptance Models (TAM), the unified theory of acceptance and use of technology (UTAUT) and diffusion of innovation (DOI) theory. Studies on consumer adoption of mobile payments have continued to expand from the year 2007 until 2014 whereby use of other established adoption and diffusion theories are contributed to the body of mobile payment literature like task-technology fit (TTF) theory, the theory of planned behaviour (TPB) and the theory of reasoned action (TRA). Following the previous theories, a widely accepted model used in mobile payment studies is the UTAUT2 model. The UTAUT2 model is a combination of dispersed literature to develop a single theory for technology acceptance specifically focused on consumers. There has been an extensive increase in the number of studies that use UTAUT2 in the context of technology adoption. However, Dahlberg et al. 2015 have argued that consumer adoption studies after 2007 have failed to introduce innovative constructs or approaches into mobile payment research. One important recommendation that Dahlberg et al. 2008 have proposed is to encourage researchers to identify relevant factors to extend UTAUT2. Thus, it is essential to outline studies that have been done on e-wallet (mobile payment) adoption and the theories and constructs that have been employed in the e-wallet context.

DATA SOURCES AND SEARCH STRATEGY

This paper gathered and analyzed data from the mobile payment literature between 2015 to 2019 by employing a systematic literature review of the e-wallet (mobile payment) adoption studies. The basis for compiling data from this period is because there has been an increase in the number of published articles/journals on e-wallet (mobile payment) adoption studies which are more focused on understanding the actual meaning of each adoption factor for consumers and

their relationship with each other. This paper review will show the current improvement in the publication of mobile payment adoption studies. The article will take into account keyword searches that include “e-wallet”, “mobile wallet”, “digital wallet”, “UTAUT2”,

behavioural intention”, “perceived security” and “mobile payment system” to provide a more insightful result. The article searches were gathered from trustworthy online databases as listed in Table 3.1.

Table 1 Online database sources

| Online databases | Count |
|------------------|-------|
| Google Scholar | 8 |
| Emerald Insight | 25 |
| Scopus | 33 |
| ScienceDirect | 27 |
| Total | 93 |

SEARCH RESULTS

Based on Table 1, a total of 93 papers were retrieved from the online database search. The criteria for inclusion in the paper must be related to the mobile payment adoption and the result have not failed to empirically validate the proposed model. The selected articles from the initial search are refined by screening based on the title, availability of the study (articles with limited access), duplicated titles and the subject area. Out of the 93 number of papers retrieved, 10 were excluded for reasons of duplication, and 7 for papers that have limited full-text access and not related to mobile payment adoption. Thus, only 76 papers were selected for the final review.

DISCUSSIONS

Current Improvements in the e-wallet (Mobile Payment) Studies According to Year of Publication

The e-wallet (mobile payment) adoption research papers search has resulted in 93 number of papers which were published between the year 2015 to 2019 (Figure 1) with 2018 became the peak in mobile payment adoption research. This is evident with the fast-growing global e-wallet market with transaction volume estimated to 41.8 billion, which about 8.6% of global non-cash transactions as reported by World Payment Report 2018.

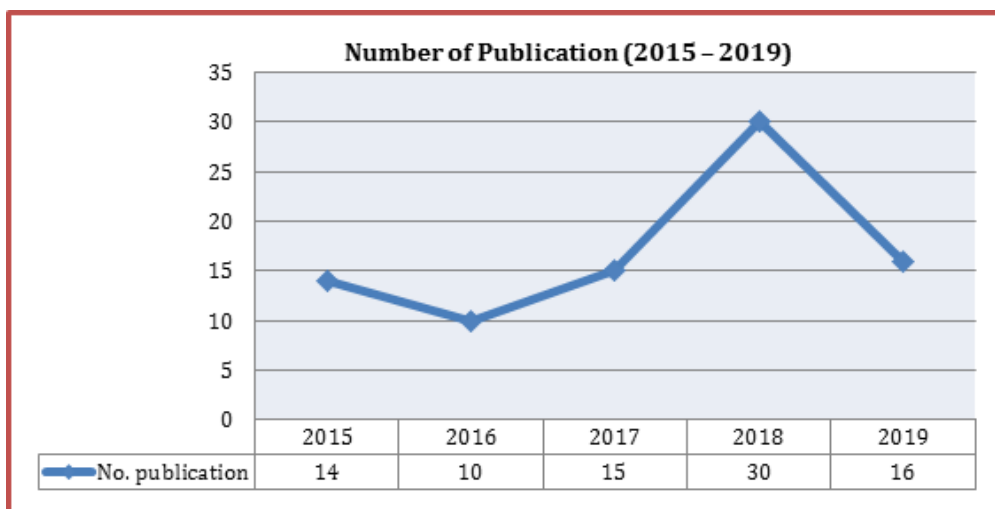


Figure 1 Number of publication (2015 – 2019)

Most Active Countries in the e-wallet (Mobile Payment Studies)

With regards to the number of studies on e-wallet (mobile payment) adoption by country, 22 different countries were analysed between 2015 – 2019. It was found that India was the country with the most studies

conducted on the adoption of mobile payment adoption with 13 studies followed by China with 11. From the result, it is clear that the study on e-wallet adoption is still in its infancy stage in Malaysia with only 3 studies that have been done between 2015 – 2019 as illustrated in Figure 2.

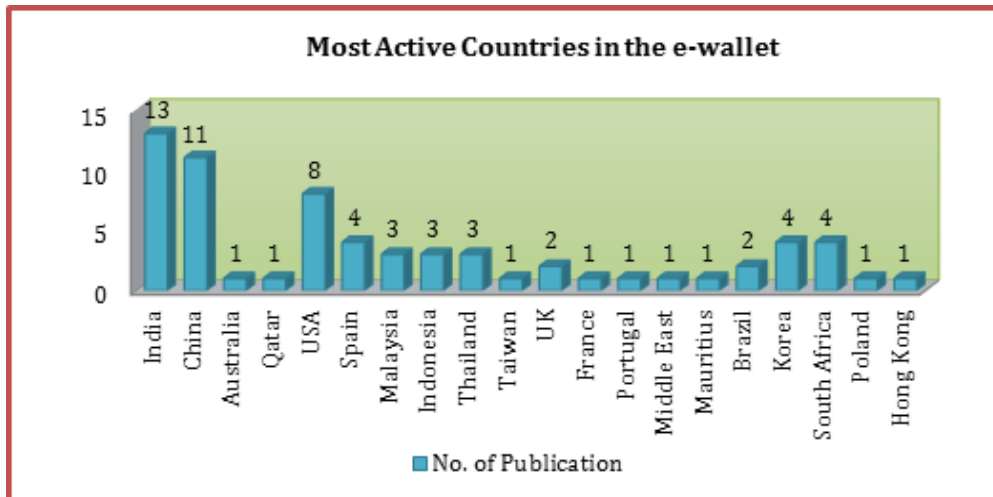


Figure 2 Most active countries in the e-wallet (mobile payment) studies

Focus of Studies by Research Methods

The most preferred methods used in the mobile payment adoption studies is the questionnaire survey with 60 studies were conducted using surveys as the main instrument in their research. There were 11 studies conducted

using secondary data which consisted of qualitative study and review. Additionally, only 3 studies were found using the case study method and 2 studies that use mixed-method, a combination of qualitative method and survey. Figure 3 illustrates the mobile payment studies by research methods.

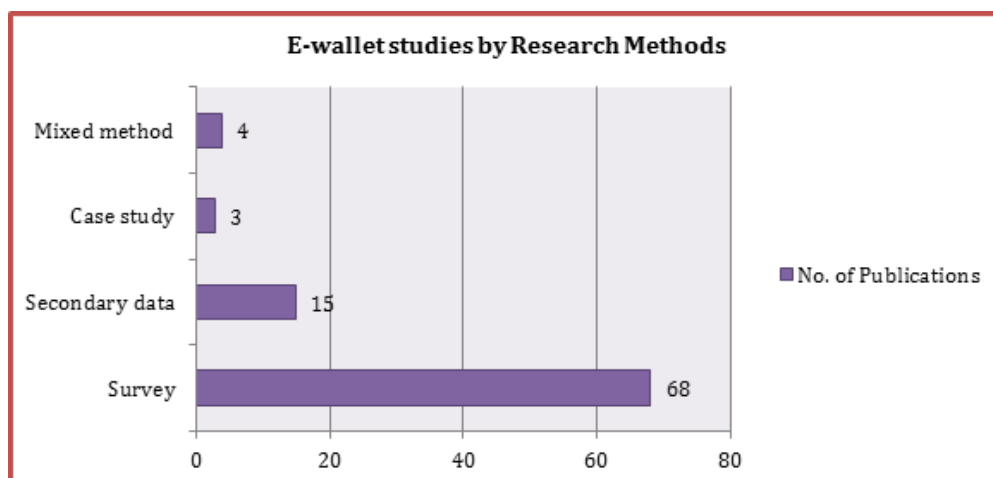


Figure 3 E-wallet studies by research methods

Focus of Studies by Participants

The majority of studies focused on consumer as a participant with 60 studies and 7 studies that focused on merchants. This clearly shows how consumer adoption studies are still one of the preferred topics of interest in the mobile

payment field. Despite the vast number of papers published on consumer adoption, Dahlberg et al. (2008) recommended understanding the actual meaning of each adoption factor for consumers and their relationships to each other in future research.

Table 2 Focus of studies by participants

| Online databases | Count |
|------------------|-------|
| Consumer | 60 |
| Merchants | 7 |
| Total | 67 |

Most Frequent Factors Extended in UTAUT2

As discussed in the earlier section, the UTAUT2 model had been tested and extended with new variables or constructs to assess the intention to adopt e-wallet (mobile payment). Based on the analysis of 76 studies conducted

from 2015 – 2019, it was found that perceived security and risk are the most frequent factors extended in the UTAUT2 model to study mobile payment adoption as shown in Table 3. This is based only on mobile payment studies that employ UTAUT2 as the theoretical model from the 76 studies reviewed.

Table 3 Most frequent factors extended in UTAUT2

| Factors | No. of publication |
|------------------------------|--------------------|
| Perceived security | 4 |
| Risk | 2 |
| Trust | 1 |
| Self-efficacy | 1 |
| Privacy | 1 |
| Technology | 1 |
| Task characteristics | 1 |
| Perceived regulatory support | 1 |
| Promotional benefits | 1 |

Perceived security reflects consumers' perception that a certain system is secure to conduct transactions (Shin, 2010 as cited in Morosan & DeFranco, 2016, p.21). This factor had appeared in 25 studies conducted between 2015 – 2019. However, there were only 4 studies (one conceptual paper) where perceived security had been extended in the mobile payment studies of which UTAUT2 is used as the baseline model. The findings from these studies have revealed the importance of perceived security in influencing consumers' behavioural intention to adopt a mobile

payment system. The conceptualization of perceived security in the IS literature was based on individuals' subjective perceptions of security, rather than objective metrics of security (Morosan, 2014). A total of 2 studies have found perceived security to have a significant positive effect on behavioural intention to use mobile payment systems (Oliveira et al., 2016; Wu & Lee, 2017). A study by Morosan and DeFranco (2016) however showed a non-significant relationship with intention to use mobile payment. Therefore, based on the existing findings and limited

evidence of the effect of interaction terms in the context of mobile payments, perceived security is deemed as an appropriate extension to UTAUT2 in mobile payment studies. Although the remaining factors in Table 3 may appear to be less frequently used to extend UTAUT2 studies on mobile payment, it is by no means implying that the factors are less important. These factors may present a future study for a possible extension of the model which affect consumers' intention to adopt mobile payment system.

CONCLUSION

This paper provided a systematic literature review on mobile payment studies conducted between 2015-2019 with a specific focus on UTAUT2 as the baseline model. The analysis of 76 studies had revealed that most mobile payment system studies published from 2015 to 2019 focused on consumers as participants and surveys were the preferred methods of collecting data. India is the most active country in the mobile payment adoption studies with the analyzed period. The study on e-wallet (mobile payment) in countries like Malaysia is still underrepresented. Perceived security is the most frequent factor extended in UTAUT2 in the mobile payment adoption studies.

RECOMMENDATION

This paper provides a systematic literature review on e-wallet (mobile payment) studies that were conducted and published from the year 2015 – 2019. The general idea is to emphasize on current studies to provide an overview of the constructs and models used in the mobile payment studies that have been conducted so far. For future research, it is essential to look deeper on the impact of perceived security towards the intention to use e-wallet (mobile payment) in future studies. Given the findings by Wang and

Idertsog (2015), it was found that security has a significant direct relationship with intention to use mobile payment. Such result could assist e-wallet (mobile payment) providers to give more priority to mobile commerce initiatives and further devise appropriate strategies in planning and increasing consumers' use of e-wallet.

REFERENCES

- Amoroso, D. L., & Ackaradejruangsri, P. (2018). The mobile wallet explosion in Thailand: Factors towards predicting consumer loyalty. *Asia Pacific Journal of Information System*, 28 (4), 290 – 307.
- Bailey, A. A., Pentina, I., Mishra, A. S., & Ben Mimoun, M. S. (2017). Mobile payments adoption by US consumers: An extended TAM. *International Journal of Retail and Distribution Management*, 45 (6), 626 – 640. DOI: <https://doi.org/10.1108/IJRDM-08-2016-0144>
- Nielsen. (2019). Cash or cashless? Malaysia's shifting payment landscape. *Markets and Finances, Nielsen.com*. Retrieved from <https://www.nielsen.com/apac/en/insights/article/2019/cash-or-cashless-malysias-shifting-payment-landscape/>
- Chaveesuk, S., Wutthirong, P., & Chaiyasoonthorn, W. (2018). The model of mobile payment system acceptance on social networks in Thailand: A conceptual framework. *ICIME 2018: Proceedings of the 2018 10th International Conference on Information Management and Engineering* (pp. 35–39). New York: Association for Computing Machinery.
- Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – An empirical study. *International Journal of Bank Marketing*, 37 (7), 1590 – 1618. DOI: <https://doi.org/10.1108/IJBM-09-2018-0256>
- Khan, H. U., Musa, A., & Alshre, K., M. (2015). Factors influence consumers' adoption of mobile payment devices in Qatar. *International Journal of Mobile Communications*, 13 (4), 670 – 689.
- Dahlberg, T., Mallat, N., Ondrus, J., & Zmijewska, A. (2007). Past, present and future of mobile payments research: A literature review. *Electronic Commerce, Research and Applications*, 7 (2), 165 – 181. DOI: <https://doi.org/10.1016/j.elerap.2007.02.001>

- Dahlberg, T., Guo, J., & Ondrus, J. (2015). A critical review of mobile payment research. *Electronic Commerce, Research and Applications*, 14 (5), 265 – 284. DOI: <https://doi.org/10.1016/j.elerap.2015.07.006>
- DATAREPORTAL. (2019, January 31). *Digital 2019: Malaysia*. Retrieved from <https://datareportal.com/reports/digital-2019-malaysia>
- Donner, J., & Tellez, C. A. (2008). Mobile banking and economic development: linking adoption, impact, and use. *Asian Journal of Communication*, 18 (4), 318 – 322.
- Fathalikhani, S., Hafezalkotob, A., & Soltani, R. (2018). Cooperation and coopetition among humanitarian organizations. *Kybernetes*, 47 (8), 1642 – 1663.
- Gao, F., Rau, P. P., & Zhang, Y. (2017). Perceived mobile information security and adoption of mobile payment services in China. *International Journal of Mobile Human Computer Interaction*, 9 (1), 45 – 62. DOI: <https://doi.org/10.4018/IJMHCI.2017010104>
- Gao, L., & Waechter, K. A. (2015). Examining the role of initial trust in user adoption of mobile payment services: An empirical investigation. *Information Systems Frontiers*, 19 (3), 525 – 548. DOI: <https://doi.org/10.1007/s10796-015-9611-0>
- Gupta, K. P., Manrai, R., & Goel, U. (2019). Factors influencing adoption of payments banks by Indian customers: Extending UTAUT with perceived credibility. *Journal of Asia Business Studies*, 13 (2), 173 – 195. DOI: <https://doi.org/10.1108/JABS-07-2017-0111>
- Hunafa, K., Hidayanto, A. N., & Sandhyaduhita, P. (2017). Investigating mobile payment acceptance using technological-personal-environmental (TPE) framework: A case of Indonesia. *2017 International Conference on Advanced Computer Science and Information Systems (ICACSIS)*, Bali, Indonesia.
- Humbani, M., Wiese, M., Humbani, M., & Wiese, M. (2019). An integrated framework for the adoption and continuance intention to use mobile payment apps. *International Journal of Bank Marketing*. DOI: <https://doi.org/10.1108/IJBM-03-2018-0072>
- Johnson, V. L., Kiser, A., Washington, R., Torres, R., Kiser, A., & Torres, R. (2017). Limitations to the rapid adoption of m-payment services: Understanding the impact of privacy risk on m-payment services. *Computers in Human Behavior*. DOI: <https://doi.org/10.1016/j.chb.2017.10.035>
- Jun, J., Cho, I., & Park, H. (2018). Total Quality Management & Business Excellence Factors influencing continued use of mobile easy payment service: An empirical investigation. *Total Quality Management*, 3363, 1 – 15. DOI: <https://doi.org/10.1080/14783363.2018.1486550>
- Kalinic, Z., Marinkovic, V., Molinillo, S., & Liébana-cabanillas, F. (2019). Journal of Retailing and Consumer Services A multi-analytical approach to peer-to-peer mobile payment acceptance prediction. *Journal of Retailing and Consumer Services*, 49 (December 2018), 143 – 153. DOI: <https://doi.org/10.1016/j.jretconser.2019.03.016>
- Lau, M. M., Lam, A. Y. C., Cheung, R., & Leung, T. F. (2019). Understanding determinants of customer behavioral intention in using mobile payment at convenience stores. *IC4E '19: Proceedings of the 10th International Conference on E-Education, E-Business, E-Management and E-Learning* (pp. 357 – 362).
- Lee, J., Ho, M., & Lee, D. (2019). Journal of Retailing and Consumer Services A study on the reciprocal relationship between user perception and retailer perception on platform-based mobile payment service. *Journal of Retailing and Consumer Services*, 48 (November 2018), 7–15. DOI: <https://doi.org/10.1016/j.jretconser.2019.01.007>
- Li, J. U. N., Wang, J., Wang, S., & Zhou, Y. U. (2019). Mobile Payment with Alipay : An application of extended technology acceptance model. *IEEE Access, PP* (May 2017), 1. DOI: <https://doi.org/10.1109/ACCESS.2019.2902905>
- Liébana-cabanillas, F., & Luna, I. R. De. (n.d.). Technology analysis & strategic management user behaviour in QR mobile payment system: The QR Payment Acceptance Model, (August 2015). DOI: <https://doi.org/10.1080/09537325.2015.1047757>
- Liébana-cabanillas, F., Molinillo, S., & Ruiz-montañez, M. (2018). Technological Forecasting & Social Change To use or not to use, that is the question: Analysis of the determining factors for using NFC mobile payment systems in public transportation. *Technological Forecasting & Social Change*, (August), 1 – 11. DOI: <https://doi.org/10.1016/j.techfore.2018.11.012>

- Lim, S. H., Kim, D. J., Hur, Y., Park, K., Hun, S., Kim, D. J., ... Park, K. (2018). An Empirical Study of the Impacts of Perceived Security and Knowledge on Continuous Intention to Use Mobile Fintech Payment Services. *International Journal of Human-Computer Interaction*, 1 – 13. DOI: <https://doi.org/10.1080/10447318.2018.1507132>
- Liu, Z., Ben, S., & Zhang, R. (2019). Factors affecting consumers' mobile payment behavior: a meta-analysis. *Electronic Commerce Research*, (0123456789). DOI: <https://doi.org/10.1007/s10660-019-09349-4>
- Ma, L., Su, X., Yu, Y., Wang, C., Lin, K., & Lin, M. (2018). What Drives the Use of M-payment? An Empirical Study about Alipay and WeChat Payment. *2018 15th International Conference on Service Systems and Service Management (ICSSSM)*, (71471118), 1 – 6.
- Matemba, E. D. (2018). Consumers' stickiness to mobile payment applications: An empirical study of WeChat Wallet, 29 (3). DOI: <https://doi.org/10.4018/JDM.2018070103>
- Morosan, C., & Defranco, A. (2016). It's about time: Revisiting UTAUT2 to examine consumers' intentions to use NFC mobile payments in hotels. *International Journal of Hospitality Management*, 53, 17 – 29. DOI: <https://doi.org/10.1016/j.ijhm.2015.11.003>
- Nie, J., & Amarayoun, W. (2018). The factors influence the intention use of mobile payment in Thailand e-commerce. *2018 5th International Conference on Information Science and Control Engineering (ICISCE)* (pp. 561 – 568). DOI: <https://doi.org/10.1109/ICISCE.2018.00122>
- Niranjanamurthy, M., & Chahar, D. (2013). The study of e-commerce security issues and solutions. *International Journal of Advanced Research in Computer and Communication Engineering*, 2 (7), 2885 – 2895.
- Nizam, F., Hwang, H. J., & Valaei, N. (n.d.). *Measuring the effectiveness of e-wallet in Malaysia*. Springer International Publishing. DOI: <https://doi.org/10.1007/978-3-319-96803-2>
- Ondrus, J. (2003). Mobile payments: A tool kit for a better understanding of the market. *Universidade de Lausanne*, 1 – 38. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.86.971&rep=rep1&type=pdf>
- Patil, P. P., Dwivedi, Y. K., & Rana, N. P. (2017). Digital payments adoption: An analysis of literature, 61–70. <https://doi.org/10.1007/978-3-319-68557-1>
- Patil, P. P., Rana, N. P., & Dwivedi, Y. K. (2018). *Digital Payments Adoption Research: A Review of Factors Influencing Consumer's Attitude, Intention and Usage*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-02131-3>
- [PDF] A Study on User's Intention of Using Mobile Payments. (n.d.). Retrieved from <https://www.semanticscholar.org/paper/A-Study-on-User%E2%80%99s-Intention-of-Using-Mobile-Bolortsetseg-Wang/91dabf3b1b8c161a1dd459921aaaa2c8ce748f24>
- PricewaterhouseCoopers. (n.d.). PwC Malaysia. Retrieved from <https://www.pwc.com/my/en/assets/publications/2018/gcismy-9july.pdf>
- Ramadan, R., & Aita, J. (2018). A model of mobile payment usage among Arab consumers. *International Journal of Bank Marketing*, 36(7), 1213–1234. <https://doi.org/10.1108/IJBM-05-2017-0080>
- Ramos, I., Luna, D., Liébana-cabanillas, F., Sánchez-fernández, J., & Muñoz-leiva, F. (2018). Technological Forecasting & Social Change Mobile payment is not all the same: The adoption of mobile payment systems depending on the technology applied. *Technological Forecasting & Social Change*, (August), 1–14. <https://doi.org/10.1016/j.techfore.2018.09.018>
- Raza, A., & Qureshi, M. S. (2018). A Conceptual framework for Measuring Acceptance of Contactless Payment Methods. *2018 IEEE 5th International Conference on Engineering Technologies and Applied Sciences (ICETAS)*, 1–5.
- Shaw, N. (2015). The Mediating Role of Perceived Security: An Empirical Study of Mobile Wallet Adoption in USA, 358–369. <https://doi.org/10.1007/978-3-319-20895-4>
- Singh, N., Sinha, N., & Liébana-cabanillas, F. J. (2020). International Journal of Information Management Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*, 50(April 2019), 191–205. <https://doi.org/10.1016/j.ijinfomgt.2019.05.022>
- Sinha, M., Majra, H., Hutchins, J., Saxena, R., Sinha, M., & Hutchins, J. (2018). Mobile payments in India: the privacy factor. <https://doi.org/10.1108/IJBM-05-2017-0099>

- Slade, E. L., Dwivedi, Y. K., Piercy, N. C., & Williams, M. D. (2015). Modeling Consumers ' Adoption Intentions of Remote Mobile Payments in the United Kingdom : Extending UTAUT with Innovativeness , Risk , and Trust, *32*(August), 860–873. <https://doi.org/10.1002/mar>
- Sobti, N. (2019). Impact of demonetization on diffusion of mobile payment service in India: Antecedents of behavioral intention and adoption using extended UTAUT model. *Journal of Advances in Management Research*. <https://doi.org/10.1108/JAMR-09-2018-0086>
- Su, P., Wang, L., & Yan, J. (2017). Technology Analysis & Strategic Management How users ' Internet experience affects the adoption of mobile payment : a mediation model. *Technology Analysis & Strategic Management*, *0*(0), 1–12. <https://doi.org/10.1080/09537325.2017.1297788>
- Sun, S., Law, R., & Schuckert, M. (2020). International Journal of Hospitality Management Mediating e ff ects of attitude , subjective norms and perceived behavioural control for mobile payment-based hotel reservations. *International Journal of Hospitality Management*, *84*(July 2019), 102331. <https://doi.org/10.1016/j.ijhm.2019.102331>
- Surja, S. (2018). Factors Influencing Mobile Payment Adoption in Indonesia, (September), 373–377.
- Tan, K. (2019). Intention to Use Mobile Payment System by Ethnicity : A Partial Least Squares Multi-group Approach, *9*(1), 36–59. <https://doi.org/10.14707/ajbr.190055>
- Teo, A., Tan, G. W., Tunku, U., Rahman, A., Universiti, J., Barat, B., & Lin, B. (2015). Why consumers adopt mobile payment? A partial least squares structural equation modelling (PLS-SEM) approach Keng-Boon Ooi, *13*(5), 478–497.
- Trojanowski, M., & Kułak, J. (2019). *Understanding Mobile Purchase Intentions in Poland: Extension of the Technology* (Vol. 2). Springer International Publishing. <https://doi.org/10.1007/978-3-319-99981-4>
- Wiese, M., Humbani, M., Wiese, M., & Humbani, M. (2019). Exploring technology readiness for mobile payment app users. *The International Review of Retail, Distribution and Consumer Research*, 1–20. <https://doi.org/10.1080/09593969.2019.1626260>
- Wu, R., & Lee, J. (2017). The Comparative Study on Third Party Mobile Payment Between UTAUT2 and TTF, *11*, 5–19.
- Yan, H., & Yang, Z. (2014). An empirical examination of user adoption mobile payment. *2014 International Conference on Management of e-Commerce and e-Government*, Shanghai, China. <https://doi.org/10.1109/ICMeCG.2014.40>
- Yang, Y., Liu, Y., Li, H., & Yu, B. (2015). Understanding perceived risks in mobile payment acceptance. *Industrial Management & Data Systems*, *115* (2), 253 – 269. DOI: <https://doi.org/10.1108/IMDS-08-2014-0243>
- Yu, L., Cao, X., Liu, Z., Gong, M., & Adee, L. (2016). Understanding mobile payment users' continuance intention: A trust transfer perspective. *Internet Research*, *28* (2), 456 – 476.
- Zhang, Z., Choi, J. E., & Kim, M. S. (2018). Chinese female consumers' intention to use mobile payment services. *Journal of Distribution Science*, *10*, 23 – 30.