

A Conceptual Framework of Digital Payment Adoption: Integrating Technology Readiness Index and Technology Acceptance Model

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ABSTRACT

Digital payments have revolutionized the way the financial transactions are conducted and expanded rapidly in a brief timeframe, yet there is significant variation in adoption of digital payment technology among different population groups. This study intends to understand the theoretical foundations of the digital payment adoption among consumers and proposes the conceptual framework by integrating two distinct and previously established technology adoption models Technology Readiness Index (TRI) and Technology Acceptance Model (TAM) to identify the principal determinants of digital payment adoption behaviour. While TAM focuses on the attributes of the technology such as Perceived Ease of Use and Perceived Usefulness, TRI enriches the model by accounting of individual readiness factors such as optimism and innovativeness which posits the digital payment adoption behaviours and discomfort and insecurity which are considered as limiting factors for the adoption of digital payment. The integration of technology attributes from TAM and individual readiness attributes of TRI in the proposed framework would also increase the predictive ability of model. This study offers a holistic understanding of user behaviour towards digital payment adoption.

Keywords: TAM, TRI, Digital Payment, Technology Adoption, Conceptual Framework.

Introduction

Technological advancements in the banking and financial industry have contributed significantly to its growth particularly in the digital payment space. Digital payment technologies lead to the rapid shift in the way people conduct their financial transactions. (Aye, & Im, 2024). Among these advancements, digital payments encompassing mobile wallets, contactless cards, QR code transactions, and online banking have emerged as pivotal instruments reshaping both consumer behaviour and business operations (Aye & Im, 2024; Chea & Hang, 2023). Accelerated by increased smartphone penetration, heightened internet accessibility, and shifting socioeconomic dynamics, digital payment systems offer the promise of greater convenience, enhanced security, and financial inclusion (Easwar & Sharma, 2025; Tang & Ngo, 2023). Governments, fintech innovators, and traditional banks are actively championing digital uptake, positioning digital payments as crucial enablers for the transition toward cashless and digitally-integrated economies (Chea & Hang, 2023).

Despite the apparent benefits and steady growth in adoption rates, the journey toward ubiquitous acceptance of digital payments is neither linear nor uniform. Factors influencing adoption are multifaceted, ranging from individual psychological predispositions and sociocultural context to perceived risk, privacy concerns, and enabling infrastructure (Wang & Liu, 2025; Isnaini & Yuliana, 2024; Zhou, et al., 2018). Classical models of technology adoption (TAM, UTAUT, DOI, and others) have provided foundational insights into technology adoption patterns by outlining the various aspects and determinants of adoption intention such as perceived usefulness, ease of use, socioeconomic factors and facilitating conditions (Isnaini & Yuliana, 2024; Aye & Im, 2024). However, the emergence of multidimensional digital ecosystems and the fusion of diverse stakeholders (consumers, merchants, regulators and technology service providers) demand an expanded theoretical perspective that integrates cross-disciplinary lenses and contextual validations (Cai & Zheng, 2022; Miguët & Domi, 2023).

This study endeavours to unravel the complexity behind digital payment adoption by proposing a novel integrated framework that leverages multidimensional technology acceptance theories. By synthesizing constructs from information systems, behavioural economics, and sociotechnical paradigms, the framework seeks to address critical research gaps, such as the interplay between innovation and perceived usefulness, the impact of discomfort on ease of use and intention to use, and the progressive role of optimism on intention to adopt technology.

In aiming to decode the digital shift, this paper contributes both theoretical advancement and actionable insights for policymakers, digital payment providers, and financial inclusion advocates. This paper emphasises on the requirement of an integrative model which could combine the contextual, technical and psychological factors and suitable for various demographic environment and different markets (Miguët & Domi, 2023; Shen & Ma, 2021). At the end, the proposed framework of digital payment adoption tries to give a holistic pathway for the better understanding of several factors which impact the adoption behaviour and help in understanding the measure antecedents as well as inhibiting determinants of digital payment adoption.

Theoretical Background

Before proposing a new theoretical framework or the developing a conceptual model for the new study it is very important to understand the existing theories or models proposed in the similar and related area of research (Chawla & Joshi, 2019). For instance, technology adoption is studies are carried out in various contexts by many researchers from the inception of the era of technology. The establish theories gives the direction to the new research and also establish the strong foundation for establishing the relation between new study and the old one.

This part of the study conducts the comprehensive review of the established theories of technology adoption and tries to identify the key factors which impact digital payment adoption among various stakeholders. The study tries to establish how determinants of digital payment adoption act at organization level and firm level adoption behaviour. The careful examination of various theories on technology adoption is carried out and a framework is built by integrating most suitable theories as per the scope of the study. Each theory is providing the distinctive insight for examining the critical drivers and inhibitors of digital payment adoption. Below is a detailed theoretical background of prominent technology adoption theories that underpin research on digital payment adoption.

Technology Acceptance Model (TAM)

The "Technology Acceptance Model" (Davis et al., 1989) explains individuals' acceptance and use of information technology. At its core, TAM posits that two belief constructs—"Perceived Usefulness" (PU) and "Perceived Ease of Use" (PEU)—are the primary determinants of technology adoption behaviour. Perceived usefulness is an individual's perception about specific technology with respect to its usefulness whether the technology will improve his/her performance and productivity, whereas perceived ease of use is the individual's perception towards simplicity of the technology to understand and adopt.

TAM was based on prior theoretical foundations, especially the Theory of Reasoned Action (TRA), but specifically adapted to the IT domain to enhance predictive ability regarding technology usage (Davis, 1989). Most of the studies related to technology adoption employed TAM model as it is simple to understand and can be applied in various contexts like digital marketing as well as studies related to digital banking and e-money adoption. It is widely used to predict behavioural intention and actual system usage. Its simplicity and empirical robustness have made it a seminal model for technology adoption research (Davis et al., 1989; Venkatesh & Davis, 2000).

Unified Theory of Acceptance and Use of Technology (UTAUT & UTAUT2)

The UTAUT model, proposed by (Venkatesh et al., 2003), empirically compared the eight models of user acceptance and found differences and similarities in the constructs. Later they integrated the prominent factors of these models and developed an integrated framework and proposed a new model named Unified Theory of Technology Acceptance and Use of Technology. The UTAUT model reviewed TAM, TRA TPB, ITD, including Social Cognitive Theory, The Motivational Model, Mixed model of TAM and TPB and the model of PC utilization. The UTAUT combined the elements of 8 models into four key constructs of technology acceptance: Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions. The Model also tested the moderating effect of the Age, Gender and experience on the individual constructs. An extended version, UTAUT2 (Venkatesh et al., 2012) was proposed in which along with previous four factors Price Value, Hedonic Motivation, and Habit are also incorporated in understanding consumer's behaviour towards technology acceptance. UTAUT and UTAUT2 are been extensively utilized in studies related to digital payment adoption, financial inclusion, e- commerce and mobile commerce studies (Widyanto, et al., 2022).

Theory of Planned Behaviour (TPB) & "Theory of Reasoned Action" (TRA)

One of the most widely used theories of social psychology used to explain the human behavioural intention at individual level, Theory of reasoned Action (Fishbein & Ajzen, 1975) emphasizes on impact of individual's attitude that is positive or negative feeling and other people's perception on the intention to perform the task. This theory applied by Davis et al. (1989) to study acceptance of technology by individuals. The TRA extended to TPB by adding one more construct of perceived behavioural control as an additional determinant of behavioural intention. Behavioural control refers to various constraints on individual behaviour. These controls either hinder or facilitate the behaviour intention to adopt the new technology. The TPB was further extended to decomposed theory of planned behaviour where all the elements are decomposed into subconstructs.

Technology Readiness Index (TRI)

Parasuraman's Technology Readiness Index (2000) captures individuals' willingness to accept and use new technologies, with emphasis on psychological drivers. TRI identifies four dimensions: Innovativeness (technology pioneer tendencies), Optimism (positive view of technology), Discomfort (feeling of limited control of power over something), and Insecurity (feeling of insecurity and distrust while using a technology). This model broadens adoption analysis by including dispositional readiness, which influences both individual acceptance and organizational decisions regarding technology use. TRI has been employed in studies of individual as well as firm-level adoption, helping to explain organizational variance in digital payment system uptake and diffusion (Parasuraman, 2000).

Diffusion of Innovation Theory (DOI)

Rogers' Diffusion of Innovation Theory (1995) conceptualizes adoption as a social process where new technologies spread over time through communication channels DOI recognizes five main attributes which influence technology adoption rate. The attributes are named as Relative Advantage, which says how the new technology is better than the existing methods with which the people are already used to it. Compatibility, how much compatible the technology is for the use. Complexity, how much complex is the new technology to understand by adopters. Trialability, whether the technology can be tried out and then go for further acceptance. and Observability, to what extent the technology can be imbibed of observable by adopters. It divides adopters into categories (innovators, early adopters, early majority, etc.) and emphasizes stages from knowledge to confirmation of adoption. DOI provides a macro-level perspective, useful in understanding how digital payments diffuse across communities and organizations (Rogers, 1995)

Technology-Organization-Environment (TOE) Framework

The TOE framework (Baker, 2012) explains organizational technology adoption based on three contexts: Technological (internal and external technologies applicable to the firm), Organizational (size, framework and human resources), and Environmental (industry characteristics, competition, regulation). It highlights the importance of external pressures and internal readiness, helping to assess firm-level adoption decisions of digital payment technologies in changing environments (Baker, 2012)³. TOE complements individual-focused models by emphasizing organizational and environmental influences.

Perceived E-Readiness Model (PERM)

Proposed by Molla and Licker (2005b), Perceived e-readiness model assesses technological adoption readiness by encompassing the readiness levels inside the organization as well as the readiness of external environment which impact the adoption of technology by supporting it. The two constructs named as: "Perceived Organizational E-Readiness" (POER) and "Perceived External E-Readiness" (PEER). POER reflects the internal capacity, competencies, and infrastructure needed for e-technology use, while PEER measures external factors like market readiness and regulatory frameworks. This model is particularly useful for studying digital payment adoption in developing countries where both internal capabilities and external ecosystem readiness critically shape technology uptake (Molla & Licker, 2005b).

Table 1: Theories of Technology Adoption

Theories of Technology adoption		Level of Adoption	Factors
TAM	Technology adoption Model, (Davis et al., 1989)	Individual Level	Perceived Ease of Use (PEU), Perceived Usefulness (PU)
UTAUT	Unified Theory of Acceptance and Use of Technology, (Venkatesh et al., 2003)	Individual Level	Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition, Behavioural Intention
UTAUT2	Extended Version of UTAUT, (Venkatesh et al. 2012)	Individual Level	Price Value, Hedonic Motivation, Habit
TPB	Theory of Planned Behaviour, (Ajzen, 1991)	Individual Level	The actual behaviour of individuals is driven by their intentions which are influenced by persona beliefs, social structure and environmental framework.
TRA	Theory of Reasoned Action, (Fishbein, et al., 1975)	Individual Level	Attitude, Subjective Norms, Behavioural Intention
TRI	Technology Readiness Index, (Parasuraman, 2000)	Organization Level	Innovativeness, Optimism, Discomfort, Insecurity
DOI	Diffusion of Innovation Theory, (Rogers, 1995)	Organization Level	Three stages of Innovation -(1) Invention, (2) Innovation, and (3) Diffusion
TOE	Technology -Organization - Environment (Baker, 2012)	Organization Level	Technology Readiness, Organizational aspect, External Environment
PERM	Perceived E readiness Model, (Molla & Licker, 2005b)	Organization Level	Two constructs POER Perceived organization e readiness, PEER- Perceived External e-readiness

Conceptual Framework

Recent studies in digital payment, mobile banking, and fintech adoption consistently show that psychological readiness precedes and impacts the key TAM beliefs, and both are necessary for predicting behavioural intentions in real-world contexts.

The study proposed the conceptual framework to understand the determinants of digital payment adoption at individual level that is from the consumers' perspective (Chawla & Joshi, 2019).

By employing the constructs of Technology Readiness Index and TAM together this study tries to provides a multidimensional view that reflects not just surface-level evaluations of technology, but also deep-rooted psychological factors. This integrated approach yields richer insights for digital payment adoption because it explains not only *what* drives acceptance (TAM) but also *why* those beliefs form (TRI).

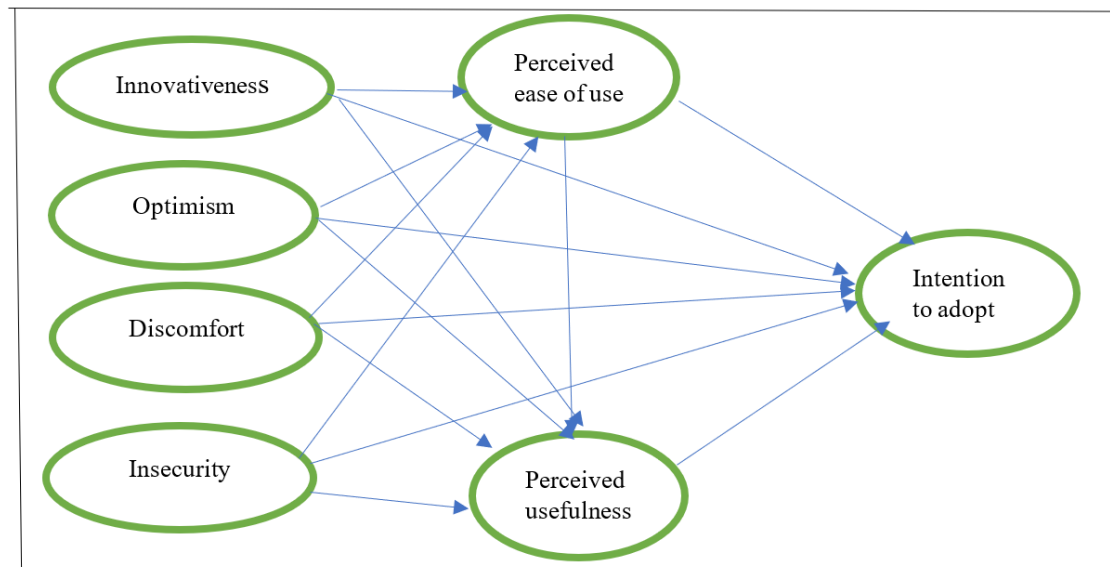


Figure 1: Proposed Conceptual Model

Conclusion and Implications for Future Research

Technology adoption is been widely studies phenomena and various theories and models are been proposed. The theories in the past researches studies the reveal the various determinants of technology adoption which impact the intention to adopt (Banerjee & Jhavar 2025) and accept the new technology. The determinants are from technology, behavioural or societal and psychological nature.

The proposed model integrated the two major and widely adopted theories of technology adoption which is fit to study the determinants of digital payment adoption among consumers. The Technology Readiness Index constructs like Optimism, Innovativeness are studied as antecedents of digital payment adoption while discomfort and insecurity are inhibitors of digital payment adoption. The model proposes the moderating role of TAM constructs on each of the TRI elements and at the end on Intention to adopt digital payment as dependent variable. The model will be empirically tested for understanding the impact of the enablers like optimism and Innovativeness and inhibitors like discomfort and Insecurity of digital payment on perceived ease of use and usefulness of the digital payment technology (Balakrishnan & Shuib, 2021) which finally led to intention to adopt. This theoretical framework is proposed after careful examination of various antecedents of digital payment adoption and it provide the elements which are fit to the current scenario where the major factors which impact the non- adoption behaviour can be examined.

Future Research Implications

The proposed model is the theoretical framework and requires an empirical validation across various consumers and under different settings. Especially non-adopters and those who are yet to accept the digital payments as there way of making financial transactions. From the previous studies it's been evident that many non-adopters are either from bottom of pyramid (Easwar & Sharma, 2025) or those who are old enough to adopt a new habit of changing from traditional ways to innovative technologies (Chea & Hang, 2023) The future investigation can also include the demographic characteristics of the users and study their impact on the outcome of the proposed constructs (Chea & Hang, 2023).

Longitudinal studies can also be carried out to understand the evolution of the technology adoption behaviour and see if there is any evident change in the behavioural of individual's perception towards technology acceptance. The above model can also be empirical tested on different geographical settings to understand the cross- cultural aspect of technology adoption and to see if the outcome can be generalized for larger group of population (Al, et.al., 2020; Zhou, & Wang, 2018). The empirical validation of the model can be supported by combining both qualitative and quantitative methods for the test of accuracy. Further the study can also undergo triangulation by combining the impact of digital payment adoption on various stakeholders.

References

1. Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
2. Al-Okaily, M., Lutfi, A., Alsaad, A., Taamneh, A., & Alsyoud, A. (2020). The determinants of digital payment systems' acceptance under cultural orientation differences: The case of uncertainty avoidance. *Technology in Society*, 63, 101367.
3. Antonio, B. O., Juan, L. R., Ana, I. D., & Francisco, L. C. (2024). Examining user behavior with machine learning for effective mobile peer-to-peer payment adoption. *Financial Innovation*, 10(1), 94.
4. Aye, K. O., & Im, K. S. (2024). From cash to clicks: A systematic review of digital payment adoption using the ADO framework. *Global Business Review*, 25(6), 1–20. <https://doi.org/10.1177/09711023241312523>
5. Baker, J. (2011). The technology–organization–environment framework. *Information Systems Theory: Explaining and Predicting Our Digital Society*, Vol. 1, 231-245.
6. Balakrishnan, V., & Shuib, N. L. M. (2021). Drivers and inhibitors for digital payment adoption using the Cashless Society Readiness-Adoption model in Malaysia. *Technology in Society*, 65, 101554.
7. Banerjee, A. K., & Jhavar, A. (2025). What if I shy away from cash payments during travel? The changing dynamics of intentions to use digital payment systems. *Loisir et Société/Society and Leisure*, 1-20.
8. Cai, Y., & Zheng, J. (2022). Institutional intervention in technology innovation: The struggle to increase mobile payment adoption. *Digital Policy, Regulation and Governance*, 24(1), 74–92. <http://www.emerald.com/dprg/article/24/1/74-92/52406>
9. 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.
10. Chea, S., & Hang, S. (2023). Consumer perceptions and behaviors on digital payment adoption among older Generation Z and younger Millennials in Phnom Penh, Cambodia. *Journal of Business Review*, 7(2), 31–51. <https://openaccess.ojs.com/JBReview/article/view/3647>
11. Dao, D., & Nguyen, M. (2025). An extension of Trust and TAM model with TPB in the adoption of digital payment: An empirical study in Vietnam. *F1000Research*, 14, 127. <https://f1000research.com/articles/14-127/v3>
12. Davis, F. D. (1989). Technology acceptance model: TAM. *Al-Suqri, MN, Al-Aufi, AS: Information Seeking Behavior and Technology Adoption*, 205(219), 5.
13. Davis, FD 1989, 'Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology ', *Mis Quarterly*, vol. 13, no. 3, pp. 319-40
14. Easwar, D., & Sharma, H. (2025). Digital payment adoption and its challenges among Kirana stores in the post-pandemic era. *International Journal of Scientific Research and Engineering Management*, 9(6), 1–10. <https://ijsrem.com/download/digital-payment-adoption-and-its-challenges-among-kirana-stores-in-the-post-pandemic-era/>
15. Fishbein, M & Ajzen, I 1975, Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, *Philosophy and Rhetoric* 10 (2):130-132.
16. Isnaini, A. N., & Yuliana, N. (2024). Adoption dynamics of digital payments: An urban case study on e-money using the technology acceptance model. *Infotel*, 16(2), 184–192. <https://ejournal.ittelkom-pwt.ac.id/index.php/infotel/article/view/1174>
17. Jucevski, M., Ghezzi, A., & Arvidsson, N. (2020). Exploring the growth challenge of mobile payment platforms: A business model perspective. *Electronic Commerce Research and Applications*, 40, 100908.
18. Kieffer, C. H. (1984). Citizen Empowerment: A Developmental Perspective. *Prevention in Human Services*, 3(2–3), 9–36. https://doi.org/10.1300/J293v03n02_03

19. Kumar, A., Mishra, S. K., & Saini, A. (2024). Predicting NFC-based mobile payments usage intention with perceived usefulness as mediator: a dual-stage PLS-SEM and NCA analysis. *Journal of Advances in Management Research*, 21(4), 556-583.
20. Kursan Milaković, I., & Ahmad, A. (2023). Online impulse buying and cognitive appraisal theory: two countries comparison. *International Journal of Retail & Distribution Management*, 51(12), 1637-1655.
21. Libaque-Saenz, C. F., Ortega, C., Rodriguez-Serra, M., & Chong, M. (2024). The role of interoperability and inter-side benefits on merchants'e-wallet adoption: the case of Peruvian nanostores. *Industrial Management & Data Systems*, 124(1), 64-84.
22. Ma, Y., Al Mamun, A., Masukujjaman, M., & Ja'afar, R. (2025). Modeling the significance of unified theory of acceptance and use of technology in predicting the intention and usage of eCNY. *Financial Innovation*, 11(1), 24.
23. Manrai, R., Goel, U., & Yadav, P. D. (2021). Factors affecting adoption of digital payments by semi-rural Indian women: extension of UTAUT-2 with self-determination theory and perceived credibility. *Aslib Journal of Information Management*, 73(6), 814-838.
24. Manrai, R., Yadav, P. D., & Goel, U. (2024). Factors affecting adoption of digital payments by urban women: Understanding the moderating role of perceived financial risk. *Technology Analysis & Strategic Management*, 36(10), 2385-2397.
25. Mathew, S. G. (2024). Consumer inertia to continued use of mobile payment services for retail transactions: A grounded theory study. *International Journal of Mathematical, Engineering and Management Sciences*, 9(6), 1411-1432.
26. Miguët, J., & Domi, Y. (2023). The adoption of open banking concept to regulate Arab countriesdigital payment. *Journal of Law, Economics and Technology*, 2(4), 55–74. <https://jolets.org/ojs/index.php/jolets/article/view/146>
27. Molla, A., & Licker, P. S. (2005). eCommerce adoption in developing countries: a model and instrument. *Information & management*, 42(6), 877-899.
28. Molla, A., & Licker, P. S. (2005). Perceived E-Readiness Factors in E-Commerce Adoption: An Empirical Investigation in a Developing Country. *International Journal of Electronic Commerce*, 10(1), 83–110. <https://doi.org/10.1080/10864415.2005.11043963>
29. Molla, A., & Licker, P. S. (2005). Perceived e-readiness factors in e-commerce adoption: An empirical investigation in a developing country. *International journal of electronic commerce*, 10(1), 83-110.
30. Parasuraman, A & Colby, CL 2001, *Techno-Ready Marketing: How and Why Your customers Adopt Technology*, Free Press, New York.
31. Parasuraman, A 2000, 'Technology Readiness Index (TRI): A Multiple-Item Scale to Measure Readiness to Embrace New Technologies', *Journal of Service Research*, vol. 2, no. 4, pp. 307-20.
32. Ponsree, K., & Naruetharadhol, P. (2025). Unveiling the determinants of alternative payment adoption: exploring the factors shaping generation Z's intentions in Thailand. *International Entrepreneurship and Management Journal*, 21(1), 45.
33. Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. In *An integrated approach to communication theory and research* (pp. 432-448). Routledge.
34. Rogers, EM 1995, *Diffusion of Innovations*, 4th Edition edn, Free Press, New York
35. Rogers, EM 2003, *Diffusion of Innovations*, 5th Edition edn, Free Pres., New York.
36. Shen, H., & Ma, Q. (2021). The adoption of mobile payment technologies, social interactiveconsumer-oriented applications, and online purchasers'decision-making process. *SHS Web ofConferences*, 113, 05015. https://www.shs-conferences.org/articles/shsconf/pdf/2021/03/shsconf_glob20_05015.pdf
37. Sheng, M. L., & Fauzi, A. A. (2023). Institutional behavior mechanism: Exploring the impacts of macro-environmental stimuli on continued digital payment adoption behavior. *Computers in Human Behavior*, 149, 107923.

38. Shrestha, A., Poudel, A. S., Luitel, Y. U., Koirala, A., Humagain, R., Shrestha, S., & Poudel, P. (2025). Enhancing usability and reliability in digital payment platforms: Overcoming the adoption challenges. *International Journal of Human–Computer Interaction*, 41(8), 4822-4832.
39. Sivathanu, B. (2019). Adoption of digital payment systems in the era of demonetization in India: An empirical study. *Journal of Science and Technology Policy Management*, 10(1), 143-171.
40. Suttichertchart, J., & Rakthin, S. (2023). Determinants of digital wallet adoption and super app: A review and research model. *Management & Marketing*, 18(3).
41. Tang, L., & Ngo, K. D. (2023). Financial technology as an innovation strategy for digital paymentservices in the millennial. *International Journal of Multidisciplinary Perspectives in Research*, 5(4), 1–12. <https://ijmpr.org/index.php/IJMPR/article/view/186>
42. Thoumrungroje, A., & Suprawan, L. (2024). Investigating m-payment intention across consumer cohorts. *Journal of Theoretical and Applied Electronic Commerce Research*, 19(1), 431-447.
43. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
44. Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178.
45. Visconti-Caparrós, J. M., & Campos-Blázquez, J. R. (2022). The development of alternate payment methods and their impact on customer behavior: The Bizum case in Spain. *Technological Forecasting and Social Change*, 175, 121330.
46. Wang, X., & Liu, S. (2025). Rural residents'digital payment: The use and its impact on creditavailability – Evidence using extended UTAUT2. *SAGE Open*, 15(1), 1–14. <https://journals.sagepub.com/doi/10.1177/21582440251321861>
47. Widyanto, H. A., Kusumawardani, K. A., & Yohanes, H. (2022). Safety first: extending UTAUT to better predict mobile payment adoption by incorporating perceived security, perceived risk and trust. *Journal of Science and Technology Policy Management*, 13(4), 952-973.
48. Xu, Y., Ghose, A., & Xiao, B. (2024). Mobile payment adoption: An empirical investigation of Alipay. *Information Systems Research*, 35(2), 807-828.
49. Zhou, T., Lu, Y., & Wang, B. (2018). What makes people actually embrace or shun mobile payment: A cross-culture study. *Mobile Information Systems*, 2018, 7497545. <https://downloads.hindawi.com/journals/misy/2018/7497545.pdf>.

