



# A REVIEW ON SUSTAINABILITY ON M- PAYMENT APPS BY CONSUMERS

**Dr. Sunil Atulkar** <sup>1<sup>st</sup></sup>

Associate Professor, School of Management, SAGE University Bhopal, India

**Dr. Monika Sharma** <sup>2<sup>nd</sup></sup>

Associate Professor, Department of Management, MCEE-MIM, Bhopal, India

## Abstract

This research is focused on the mobile based payment services for financial inclusion and sustainability in developing countries. Owing to their differences from more usual mobile-based banking and payment services, such technology is being aggressively promoted by providers of network telecommunication companies. However, the factors influencing its sustainable acceptance remain largely unknown. Study shows Technology Acceptance Model (TAM), by reviewing the different research published on TAM and its relationship with the Sustainability on M-Payment Apps. The research study is assessed with secondary data and prospective Mobile Payment user's approach. Based on the previous research study the perceived ease-of-use is the most significant factor influencing consumers' attitudes to use M-Payment Apps for sustainable development. While perceived usefulness and influence adoption decisions, their impact is much lower. Similarly, the consumer attitudes and intentions were found to have a significant relationship with TAM. These findings will be useful to retain prevailing users and attract new ones, that ultimately helps in sustainable development.

**Keywords:** M-Payment Apps, Sustainability, Technology Acceptance Model (TAM)

## Introduction

The business environment has become dynamic and has experienced a rapid shift due to the introduction of new technologies and innovations, together with increased demand from customers. With this advancement of information and communication technology (ICT) and the advent of 3G and 4G services by telecom companies, mobile technology has become an integral part of our everyday human life. Mobile services have been introduced into various areas like banking, commerce, government, and healthcare. As businesses become complex with changing conditions and unpredictable economic climates, innovation is inevitable if a business is to remain competitive.

The widespread adoption of mobile phones, particularly in developing countries, has brought about the rise of Mobile Payment services considered as one type of banking services. Mobile Payment is a crucial recent technological innovation in mobile communication technology. The introduction of Mobile Payment has brought new challenges and opportunities for businesses and individuals. Mobile users see Mobile Payment services as an added value to them for carrying various banking as well as non-banking activities in real-time in a highly competitive world. Mobile Payment, regarded as an innovative and effective means to achieve financial inclusion, is expected to provide financial services to two billion unbanked adults in emerging economies that lack access to financial services. The unbanked are defined as adults who are not bank

account holders or do not have access to a financial institution.

For the last ten years, access to financial services by unbanked individuals has been expanding partly because of the rapid growth in the adoption of Mobile Payment services. Mobile Payment bridges the gap between the cash and digital economies, enabling those without access to banks to load cash in a mobile wallet and transact digitally using money transfers, deposits, withdrawals of money, and paying bills, to mention a few, through a mobile phone network. Mobile Payment services have had a tremendous positive impact on people's lives, and have contributed to increasing financial inclusion and economic growth, absorbing financial shocks, and reducing poverty.

In this paper, the adoption and usage of Mobile Payment are examined in one of the emerging economies. The adoption of products and customer engagement are the main indicators of the sustainability of the designated products (i.e., Mobile Payment services), such that the number of active accounts is employed to comprehend how customers are accepting the services. A service such as Mobile Payment can be availed without internet connectivity by employing basic mobile phones, and it is viewed as convenient and safe. Despite the inherent benefits of such services, the Mobile Payment adoption rate and has remained somehow low, a phenomenon which requires further investigation. It is then rational to merely presume that Mobile Payment should provide significant input to nurture the rate of mobile financial services usages.

## Literature Review

Regarding the environment and sustainability, the mobile payment financial inclusion (2021), mobile phone subscribers currently represent almost 80% of phone users, while the penetration rate of m- payment accounted only for almost 45%. These phenomena create a challenge both for established players and for new participants. Whereas Mobile Payment has stimulated financial inclusion a lot and its Mobile Payment acceptance rate [3]. Early studies have investigated consumer adoption of Mobile Payment services, however limited studies have probed the factors that contribute to the continued usage of mobile-based money technology and services within the under banked and unbanked user segment and beyond.

Moreover, Mobile Payment services are yet to focus on traditional offers such as money transfers, bill payments, and airtime top-ups and are not tailored enough to the demands of the low-income population. There is still a large group of customers who are reluctant to espouse such services due to uncertainty and technology anxiety issues about mobile financial services in general. Nevertheless, such services have been well accepted in similar emerging economies. Today the customers are not adequately empowered to be active players in the ecosystem [12].

Since, it is unclear how less Mobile Payment users perceive technology usage, the motivation behind this research is to assess and predict key antecedents influencing behavioral users' attitudes towards adopting Mobile Payment services. This study attempts to bridge the gap in the existing literature by analyzing the perceptions that users have towards this technology while presenting a strategic framework for policymakers and practitioners to use the inherent advantages offered by Mobile Payment [13].

## Mobile Payments in the context of Mobile Financial Services

The interest manifested in the growth of inclusion has been captured by the advent of money transfer services offered over mobile phones and the further potential that this technology has provided for financial service development [1]. Mobile Payment services accelerate the speed of money transfer as funds move in electronic instead of the physical form [2]. Mobile Payment transfer is viewed as a service for transferring money through mobile phone-based [3]. Mobile Payment employs IT tools and channels that are non-banking for extending financial services access to subscribers who cannot be attained by banks [4].

In the context of mobile banking, there are also various applications provided by banks, which can be installed on a wide range of mobile platforms and can easily be utilized. The transactions are done between the customer and the bank, or alternatively, between a customer to another third party, with the bank intermediating between the two [5]. The channel of communication might be different, such as the customer, and the third party may be subscribers to different internet mobile service companies. Mobile payment involves the transfer of money (e-money) from one party (e.g., consumer) to another party (e.g., merchant or seller) employing a mobile-based device [6]. It is an add-on service on mobile technology to ease fund transfers between individuals and/or merchants. Considering mobile banking as well as and mobile payments, consumers need to have a bank account in the back end.

Monetary transactions occur between two parties (users and merchants) where both of them are subscribers to a similar Mobile Payment service in the same telecom service provider's domain. For transferring money, a mobile phone user registers with a Mobile Payment agent and then deposits cash that will be used for later transaction [7]. The authorized agent handles the monetary transactions between the parties. This cash is shown as e-money in a mobile wallet on the sender's phone [8]. The customer can then use her/his electronic money to perform transactions like sending money and paying bills [9]. Once a user transfers money to another mobile phone, the receiver obtains prompt notification with a unique code through short message service (SMS). The recipient can visit the closest agent to collect the cash, or keep the money as a deposit in her or his e-wallet for future transactions [10]. Regarding Mobile Payment, customers typically are not required to have bank accounts in the back end. Therefore, the costs to access the designated service and switch between service providers are significantly lower than that of mobile banking and mobile payment, which might have theoretical implications for user demands.

Within the Information Systems (IS) literature, models such as the TAM have been employed to explore the factors of technology acceptance empirically. Grounded on the objectives of this study, and due to the importance concerning the explanation of online consumer behavior, we have employed these attitudinal models and theories based on social psychology, like TAM [4]. TAM is one of the most widely used theories in IS research. It has been considered as the most robust, parsimonious and persuasive model in innovations acceptance behavior, thus, we consider this theoretical model as a background for the drive of the present study. The TAM model positioned attitude toward the use of new technology as a construct may be explained by two perceived variables: usefulness and ease-of-use. Various studies apply the TAM model to predict intentions to adopt new technology by individuals, groups, or organizations [5]. Drawing on the theory of reasoned action (TRA) [14] and in its simplest form, TAM suggests that perceived ease-of-use, perceived usefulness, attitude regarding use, and behavioral intention will predict actual usage of technology.

Despite recent and various extensions of the Davis et al. [1989] technology acceptance model (TAM), just a few studies have focused on the factors that influence the acceptance of the mobile-based money services from a holistic approach integrating several principles. In order to bridge the gap, the propose tested model in this research integrates individual difference factors.

## **Mobile Payment Self-Efficacy**

Self-efficacy denotes a self-confidence regarding the possession of the required skills to complete a task; it is people's judgment of their capabilities to organize and execute courses of action required to attain designated types of performances. The concept of self-efficacy, it is the clue that this personal belief remains the main basis and a direct element of an individual's behavior and actions. It conceptualizes the individual perception of internal control. This implies that Mobile Payment services consumers are more likely to pursue activities within their arrays of perceived competencies, and is an important factor in understanding individual responses to new technology.

## **Perceived Ease-of-Use (PE), Perceived Usefulness (PU)**

The traditional TAM integrates perceived ease-of-use (PE) of technology and perceived usefulness (PU) of the technology as two main constructs. Alike with the concept in Davis et al. [1989], PU in this research denotes the extent to which a person believes that using Mobile Payment will enhance his or her performance. Mobile Payment is supposed to provide diverse benefits to its users, such as general convenience, simplification of payment as compared to other forms of payments, all of which might endorse a positive attitude towards and a higher intention to use mobile-based money transfer payment [6]. PE of Mobile Payment denotes the consumers' perception of the effort and time that has to be expended in to use Mobile Payment service and the degree to which the technology is understandable or not. The Mobile Payment interface should be simple and easy to comprehend, considering the low rate of technological sophistication and literacy rates. Previous studies have consistently recognized PE to have direct effects on PU and attitude. A study employing TAM reveals that there is a positive relationship between PU and PE. The ease-of-use of a Mobile Payment system can impact its usefulness and user's attitude.

## **Attitudes (AT) and Intentions of Use (IU)**

The relationship between attitude and intention emphasized in the TAM proposes that attitude acts as an evaluative predisposition to behavior. The attitude towards using Mobile Payment transfer has been considered as the extent to which an individual perceives a positive or negative feeling related to mobile technology. Prior studies on TAM and in other consumer fields have found a link between attitudes and intentions [8]. A plethora of studies have established that consumers with a positive attitude towards a technology are more inclined to use it. Indeed, past studies have confirmed attitude as the most influential predictor of intention to use IT in the original TAM. From this perspective, it is highly important to educate users of Mobile Payment at the point of sale.

## **Relationships between PE, PU, and PI on AT**

PE is the most significant factor in determining AT as well as the one having the highest normalized value, followed by PU and PI. A probable explanation is that Mobile Payment services remain a relatively new phenomenon in the field of e-business, and most mobile financial companies are still in an early stage of diffusion. When a technology has emerged recently, it is probable that users delay espousing it due to their concern with the efforts involved in using the technology and its intricacy. Similarly, users will be unwilling to welcome the novel technology if they do not know how it works.

Mobile Payment services as it is consistent with the existing TAM research. For many studies, the perception of usefulness has been viewed as a perceived relative advantage. Due to this motive. Study [9] explains the relative advantage as the way a product is perceived as being preferable than its predecessor. The present finding suggests that this factor is relevant for Mobile Payment services are considered innovative within mobile financial services, and the usefulness offers to users is closely associated with the advantages that it provides. Therefore, if people are alerted to Mobile Payment's usefulness, including transferring money quickly and safely at low cost, it will offer a push for its usage as significance leads momentum according to researcher [10]. The service providers should ensure that there should be conscious and focused efforts on spreading the message of the usefulness of Mobile Payment to its potential users through a focused marketing strategy.

Regarding the fundamental constructs of TAM, such as perceived ease-of-use and perceived usefulness, it was detected in the previous literature and the outcome that these two factors impact attitudes significantly towards the application of Mobile Payment. The outcomes signpost that Mobile Payment users in are not only attracted by the usefulness of Mobile Payment services, but are also concerned with the ease of use in its operations. Furthermore, the innovativeness of the services finds to be one of the factors that influence the usage of Mobile Payment, which is supported by earlier results in the context of web survey [11].

## Conclusions

Mobile Payment transfers are among the latest innovative financial applications of mobile technologies. Due to the lower acceptance of Mobile Payment, this research grasped the importance of understanding and assessing key determinants affecting Mobile Payment acceptance. Therefore, the research aimed to study beliefs and behavioral variables that impact the acceptance and sustainability of Mobile Payment application from the developing country perspective, as well as offering conclusions beyond mere descriptive analysis. To reach this objective, the traditional TAM model has been used, to which relevant constructs were added in the adoption of an innovation such as self-efficacy, new technology anxiety, personal innovativeness allied with the proposed methodological application. A survey was conducted among the users and potential users of mobile-based money services for the analysis of the proposed theoretical model. The predictive analytical approach of the neural network was employed to assess the data, and the outputs from the data were utilized to compare with the ones from structural equation modeling analysis. Such an integrated methodology provides a rigorous and comprehensive reference for future research work in the area of Mobile Payment transfer from the developing countries perspectives. These mobile financial service providers may develop appropriate business policies and strategies for Mobile Payment transfer system, which enhance the overall business performance.

Given the importance of financial inclusion and sustainable development, Mobile Payment transfer services might go a long way in solving the concerns of the non-existent banking network. Banks have been reluctant to open branches in far-reaching zones because of security and viability issues. Thus, services such as Mobile Payment transfers can effectively fill that need, and can be an effective instrument with which to achieve greater financial inclusion. This study reveals that perceived usefulness of the Mobile Payment services impacts the consumer's attitude regarding the decision to adopt this technology, including its ease of operations. The developers of Mobile Payment apps require to focus on the development of the user-centric apps to create the awareness of usefulness together with ease in operations of users in their view. Then, in turn, should lead to an increase in financial transactions conducted on mobile devices.

It is important to stress the influential role of personal innovativeness on the users' attitude and intention to use Mobile Payment. For the scholars' conceptualization of personal innovativeness, a person is described as being innovative if he or she is early to adopt an innovation. Therefore, personal innovativeness acts as an enabler of user behavior, and company providers need to stimulate this factor to facilitate the usage of Mobile Payment services. This signpost that for the usage of such services, users are seeking not only basic functionality, but also innovations. Service providers may ponder directing some of their advertising campaigns to the segment of more innovative users. As per the suggestion of Moore, innovators offer companies with great feedback early in the design cycle and start building a supporter who will impact buyers.

## References

1. Kapoor, K.K.; Dwivedi, Y.K.; Williams, M.D. Examining the role of three sets of innovation attributes for determining adoption of the interbank mobile payment service. *Inf. Syst. Front.* 2015, 17, 1039–1056.
2. Connor, Y.O.; Reilly, P.O. Examining the infusion of mobile technology by healthcare practitioners in a hospital setting. *Inf. Syst. Front.* 2018, 20, 1297–1317.
3. Gbongli, K. A two-staged SEM-AHP technique for understanding and prioritizing mobile financial services perspectives adoption. *Eur. J. Bus. Manag.* 2017, 9, 107–120.
4. Hew, J.J. Hall of fame for mobile commerce and its applications: A bibliometric evaluation of a decade and a half (2000–2015). *Telemat. Inform.* 2017, 34, 43–66.
5. Klapper, L.; El-Zoghbi, M.; Hess, J. *Achieving the Sustainable Development Goals—The Role of Financial Inclusion*; CGAP & UNSGSA: Washington, DC, USA, 2016.
6. Demircuc-Kunt, A.; Klapper, L.; Singer, D.; van Oudheusden, P. *The Global Findex Database 2014: Measuring Financial Inclusion around the World*; World Bank Group: Washington, DC, USA, 2015.

7. Davis, F.D.; Bagozzi, R.P.; Warshaw, P.R. User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Manag. Sci.* 1989, 35, 982–1003.
8. Pavlou, A.P. Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. *Int. J. Electron. Commer.* 2003, 7, 101–134.
9. Ajzen, I.; Fishbein, M. *Belief, Attitude, Attitude, Intention and Behavior: An Introduction to Theory of Research*; Addison-Wesley: Reading, MA, USA; Boston, MA, USA, 1975.
10. Viswanath, V.; Michael, G.M.; Gordon, B.D.; Fred, D.D. User Acceptance of Information Technology: Toward a Unified View. *MIS Q.* 2003, 27, 425–478.
11. Balapour, A.; Reyhav, I.; Sabherwal, R.; Azuri, J. Mobile technology identity and self-efficacy: Implications for the adoption of clinically supported mobile health apps. *Int. J. Inf. Manag.* 2019, 49, 58–68.
12. Park, J.K.; Ahn, J.; Thavisay, T.; Ren, T. Examining the role of anxiety and social influence in multi-benefits of mobile payment service. *J. Retail. Consum. Serv.* 2019, 47, 140–149.
13. Venkatesh, V. Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model. *Inf. Syst. Res.* 2000, 11, 342–365.
14. Taylor, S.; Todd, P. Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *Int. J. Res. Mark.* 1995, 12, 137–155.

