

## A REVIEW ON THE FACTORS AFFECTING USAGE AND ADOPTION OF MOBILE PAYMENT IN INDIA

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### ABSTRACT

*Mobile payments are defined as transactions made using a mobile device. Due to the extensive use of mobile devices, mobile payment services are evolving into an innovative kind of banking that allows users to conduct all banking transactions between individuals and businesses online. However, many challenges or barriers still impact the adoption of mobile payment. Thus, a study is conducted to know the various factors that influence the behavior of users toward the adoption of mobile payment. Using the systematic literature review (SLR) technique, various past studies that influence the users' behavior towards mobile payment are reviewed. The data for the study is gathered from the Scopus database, and after proper screening, 39 documents are found relevant to the area of this study. The analysis shows that many factors influence users' adoption behavior. Thus, these factors are combined into the six themes: convenience, security and trust, usefulness and ease of use, societal influence, performance and effort expectancy, and other facilitating conditions. Given the dearth of studies on the variables impacting Indian users' attitudes toward mobile payments, it can be considered that there is room for more research in this field.*

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**Keywords:** Mobile Payment, Factors, Performance Expectancy, Security, Risk, Satisfaction.

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### Introduction

In the past few decades, the use of mobile devices has accelerated on an account of price drops of the smartphone, increasing the speed of the internet (Singh & Srivastava, 2020). In today's world, mobile phones are commonplace gadgets that provide access to entertainment, education, personal assistants, and a range of possibilities for making financial transactions (Singh & Srivastava, 2020). The mobile device has become a pivotal and efficacious tool for providing goods, services, and information owing to technological progress and strong integration with information technology (Shankar & Datta, 2018; Varshney & Vetter, 2002). The term "mobile commerce" implies doing business via a mobile device. Due to the burgeoning of advanced technology, M-commerce, or mobile commerce, has arisen as a novel platform for meeting the various recurring needs of consumers (Kim et al., 2010; Shankar & Datta, 2018). E-commerce has certainly made a significant impact by permitting users to buy whenever they want, from the comfort of their homes. It is frequently referred to as "anytime, anyplace" shopping. With the advent of mobile phones, consumers can now purchase anywhere. Without payment mechanisms, m-commerce would not be possible. There must be a method of payment available for customers before any transaction can happen. Hence, m-payments are defined as transactions made using a mobile device. With the escalation of the popularity of m-commerce, the adoption of m-payment has been surging profoundly (Kim et al., 2010). It is well said by 'Amartya Sen', a well-known

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development economist, stated that improved financial inclusion is one way to achieve "economic facilities," which are essential components for socioeconomic progress. The services of mobile payment provide the facilities for financial inclusion, especially in the underdeveloped and developed (Bhat, 2021; Pal et al., 2020). Worldwide acceptability of mobile payment technology is continuing, and it has been replacing debit cards, credit cards, and cash as a medium of the transaction (Bhat, 2021; Pal et al., 2020).. Mobile payment services are growing into an entirely novel type of banking due to the widespread usage of mobile devices, enabling users to execute all banking transactions among people and companies electronically (Luo et al., 2010; Pal, De', et al., 2020). Even though mobile payments are less expensive than traditional banking or cash, various developing nations, including Mexico, Nigeria, and South Africa, have not demonstrated any discernible acceptance of mobile payments (Evans & Pirchio, 2014; Pal et al., 2021) . India was also a late adopter until the historic banknote crisis brought on by demonetization, which led to the quick emergence of mobile payments from almost complete obscurity (Pal et al., 2021; Shankar & Datta, 2018). As per Statista 2021 (Rathore, 2022), in 2015, the mobile payment market was 80 billion in India, and it is projected that in 2025 the mobile payment market will be reached 245 trillion. The size of the global mobile payment industry was estimated to be USD 1.54 trillion in 2020, and it is anticipated to increase by USD 1.97 trillion in 2021 and USD 11.83 trillion in 2028, for a CAGR of 29.1% (FORTUNE BUSINESS INSIGHT, 2028).

### Literature Review

Nowadays, the topic of mobile payment has been burgeoning all the world. But still there are many challenges or barriers that impact the adoption of mobile payment. Based upon the past research it is analyzed that the usage, adoption, continuance intention and satisfaction of mobile payment have influenced by various factors like perceived usefulness, perceived use, social influence, convenience, trust, risk, security, operational constraints, and many more. There are various theories that revealed the various factors that impact the user's behavior to embrace the mobile payment.

| Author Name                   | Year | Factors Studied   |
|-------------------------------|------|---|
| (Neelam & Bhattacharya, 2023) | 2023 | Performance expectancy, Efforts expectancy, Convenience, Social Influence, Price value, Facilitating conditions, Hedonic motivation, Risk, Security trust, financial literacy, Behavioral Intention                                       |
| (Sharma & Mishra, 2022)       | 2022 | Mobility, Perceived Security, Empowerment, Perceived Risk, Design Constraints, Perceived Cost, Satisfaction, continued use  |
| (Chauhan et al., 2022)        | 2022 | Social Influence, Mobility, Perceived Risk, Reputation, Trust, Behavioral intention   |
| (Pal et al., 2021)            | 2021 | Information access, Convenience, Reflection opportunity, Perceived security, Perceived risk, Design constraints, Lack of support,   |
| (Pal, Herath, et al., 2020b)  | 2020 | Price benefit, Network externalities, Trust, Habit, Perceived risk, Unavailability of facilitating conditions, Operational constraints  |
| (Kar, 2020)                   | 2020 | Cost (price), Usefulness, Trust, Information risk, Security, Social Influence, Ease of use, Performance, Credibility, Reliability, Information privacy, Responsiveness, Customer attitude, Confidentiality, Assurance, Usage satisfaction |
| (Singh & Srivastava, 2020)    | 2020 | Performance Expectancy, Effort Expectancy, Perceived Security, Trust, Satisfaction.   |

### Methodology

The present study is based on a systematic literature review (SLR) of publications related to factors influencing the mobile payment adoption among users in India. The SLR method has been used in this research because it is a continuous, structured, repeatable, and open procedure (Abdullah & Naved Khan, 2021). This method gives the author a rationale for excluding studies of no interest to them. Moreover, it is simpler for scholars to conduct systematic studies quickly when computerized databases are more widely available (Abdullah & Naved Khan, 2021). For this study, the authors used the Scopus database to get the required number of articles. The Scopus database has been used as it is considered the largest source of all the peer-reviewed abstracts and references from the top publishers (Kaushik & Rahman, 2014).

Further, the keywords specific to the research area are entered, and after that, the exclusion and inclusion criteria are used to retrieve the sample set of research papers. The current SLR was made more accessible with the help of a detailed literature study, which looks at a research paper's complete content work. The data for the study was gathered from Scopus on 1 April 2023. The keywords that are used include:

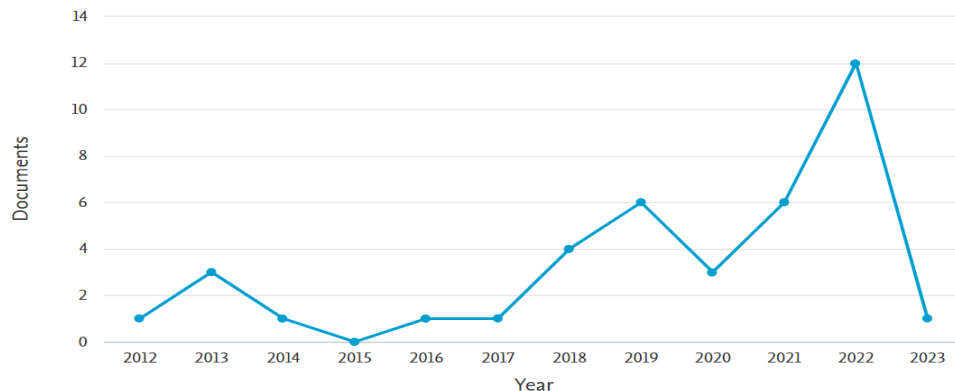
(TITLE-ABS-KEY ("mobile payment\*" OR "m-payment\*") AND TITLE-ABS-KEY ("factor\*" OR "driver\*") AND TITLE-ABS-KEY ("India")) AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "re"))

After using these keywords, 70 documents appeared. However, the data was further refined by limiting the document type to "articles" and "review" only, and language was also limited to "English" only. After doing all the data filtration and proper screening, 39 documents were found relevant for further analysis. In the last stage of this review, these 39 documents are appropriately studied and reviewed to fulfill the purpose of the study.

## Analysis

### Background of Reviewed Articles

Thirty-nine papers were found and chosen by the researcher for evaluation. Out of 39, twelve articles were released in 2022, six in 2021 and 2019, and three and four in 2020 and 2018, respectively, followed by one article in the following years: 2017, 2016, 2014, and 2012. It was found that articles related to drivers of mobile payment have yet to be published in the year 2015. The publication trend can be seen in Figure 1. However, as far as the area of concerned publication, the maximum articles are of Indian origin as this study is explicitly targeting Indian contribution to mobile payment.



### The Themes

Based on the 39 articles that are reviewed in this study, six themes are identified associated to the factors and drivers of mobile payment in India. These themes are discussed as follows:

- Convenience:** Convenience is considered similar to compatibility. Generally, when a new technology helps, benefits, and satisfies a consumer's requirements, they will use it repeatedly (Neelam & Bhattacharya, 2023). Mobile technology provides users with a flexible way of making payments and makes their lives easy. Mobile payments are convenient as users can easily transact money via mobile payment technology, which reduces the need to carry coins, paper money, or banknotes (Neelam & Bhattacharya, 2023; Pal et al., 2021). Moreover, it eliminates the need to bring cash and the inconvenience of waiting in long lines at ATMs. In addition, customers can make payments anytime and anywhere using mobile payment apps; thus, travel costs to banks are also reduced. Convenience has been identified as a significant driver influencing individuals to use mobile payments daily (Neelam & Bhattacharya, 2023; Pal et al., 2021; Sharma & Mishra, 2022).
- Security and Trust:** Security when using mobile payment apps is always important to users. Perceived security is how consumers perceive the security risks associated with using a payment app (Linck et al., 2007). A customer will use a particular system only when the provider fulfills all the security conditions (Neelam & Bhattacharya, 2023; Pal et al., 2021; Sharma & Mishra, 2022). When a customer finds a specific system to be secure, they start using it, and

slowly they will build trust in that system. Trust gives a purely subjective assurance that customers will have a favorable experience with the competence, reliability, and reputation of the mobile payment service provider(Shankar & Datta, 2018). This suggests that without trust, users will not have a successful experience. Additionally, it has been shown that a key motivator for people to use mobile payments is trust(Chauhan et al., 2022; Shankar & Datta, 2018; Singh & Srivastava, 2020). Moreover, trust is also considered a substantial variable in influencing the continuous intentions of users to use mobile payments(Shankar & Datta, 2018).

- **Usefulness and ease of use:** Perceived ease of use and perceived usefulness are the two significant constraints of the Technology Acceptance Model (TAM). These two variables significantly influence users' behavior toward mobile payments (Shankar & Datta, 2018). Perceived usefulness measures how much a customer thinks using a particular technology would enhance their performance. While the degree to which one believes that using a particular technology will be simple is known as ease of use(Davis, 1989). Mobile payment usefulness and ease of use have been mentioned as significant variables influencing users' perceptions and behaviors(Gana et al., 2018; A. S. Kumar & Arun Palanisamy, 2019; A. Kumar & Thakur, 2019; Thakur & Srivastava, 2013). Smooth operations, including online utility bill payment, mobile recharge, receiving and sending of money, mobile shopping, fund transfers, and booking of tickets, indicates a system's usefulness in m-payment. Before utilizing any novel technology, users consciously assess all the advantages they will experience once they use it (Shankar & Datta, 2018).
- **Societal Influence:** Influence from society shows the change in a user's behavior due to the responses they receive from their social surroundings (Venkatesh et al., 2003). These "social surroundings" include their close friends, relatives, and other reference groups.(Ajzen, 1991) asserted that an individual's decision to embrace technology is influenced by the beliefs and viewpoints of others. If a user lacks confidence in using new technology, social groups can help them build a sense of support for trying it out(Kar, 2020). Moreover, incidents like demonetization and the COVID-19 pandemic have also induced people to use mobile payments in a country like India. Thus, social influence is a critical element in influencing the behavior of users. Furthermore, it has been analyzed in various past studies that the perception of society or social influence has a significant impact on the behavior of users towards mobile payment(Kar, 2020; Singh, 2020; Thakur, 2018; Thakur & Srivastava, 2013).
- **Performance and Effort Expectancy:** Performance expectancy (derived from perceived usefulness) is "the degree to which an individual believes that using the system will help him or her to attain gains in job performance" (Venkatesh et al., 2003). Customers who use mobile payment systems benefit from greater convenience because they can perform financial transactions anytime, anywhere, using their mobile devices. Customers' expectations regarding the mobile payment system's efficiency rise as they become aware of its utility value(Singh, 2020; Thakur, 2018). Effort Expectancy (EE) (derived from Perceived Ease of Use) is "the degree of ease associated with the use of the system" (Venkatesh et al., 2003). Customers want a user-friendly interface that is easy to use and raises their system's utilitarian value. Easy-to-use payment methods encourage initial usage and significantly influence the desire to continue. Various previous studies have verified that performance and effort expectancy factors influence the behavior of customers to use and adopt mobile payment(Patil et al., 2020; Singh, 2020; Thakur, 2018; Upadhyay et al., 2022).
- **Other facilitating Conditions:** According to Venkatesh et al., 2003facilitating conditions are the extent to which a person believes that the institutional and technological environment exists to facilitate system use. The availability of required infrastructure, technical support, and resources influences the behavior of consumers. Moreover, it is also asserted that mobile payments are increasingly being driven by the availability of inexpensive mobile cell phones, cheap mobile tariffs, and expanding voice and data network service across the nation (Chandrasekhar & Nadagopal, 2013; Neelam & Bhattacharya, 2023). In addition to this, other price benefits (cash back and discount) and network externalities also act as significant facilitators that increase the usage of mobile payment applications(Pal et al., 2020a). It has been identified in many studies that the availability of these facilitating conditions strongly influences the behavior of users toward mobile payment adoption(Chandrasekhar & Nadagopal, 2013; Neelam & Bhattacharya, 2023; Patil et al., 2020; Upadhyay et al., 2022).

## Result and Conclusion

Mobile phones are widespread devices in today's society that offer access to entertainment, education, personal assistants, and a variety of options for conducting financial transactions. The usage of m-payment has been rapidly increasing as the popularity of m-commerce has increased. India is a late adopter of mobile payments, despite the fact that they are less expensive than traditional banking or cash. The mobile payments use has become increasingly popular in recent time. However, there are still a lot of difficulties or obstacles that prevent the widespread use of mobile payments. Therefore, by conducting a systematic review, the authors want to know the present status of publications related to factors influencing the adoption and behavior of users toward mobile payment in India. For accomplishing the purpose of the study, 39 documents were gathered from the Scopus database and reviewed thoroughly. After reviewing the available documents, six themes have been identified, which include convenience, security and trust, usefulness and ease of use, societal influence, performance and effort expectancy, and other facilitating conditions. Moreover, it can be concluded that there is a scope for further study in this field given the dearth of studies on factors influencing the behavior of users in India towards mobile payments.

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