Modern Payment System: A Systematic Literature Review and Bibliometric Analysis

[1]Dr. Ramesh Kumar

Abstract

Purpose: This paper provides an in-depth review of modern payment systems, focusing on their emergence, the role of innovations such as mobile wallets, UPI, QR-code payments, and the impact of the COVID-19 pandemic.

Materials and Methods: This study combines a systematic literature review (SLR) with bibliometric analysis to examine existing research trends, innovations, and academic impacts related to modern payment systems. The SLR synthesizes theoretical and empirical research, while bibliometric analysis, using tools like VOSviewer and Bibliometrix, identifies key trends, prolific authors, and influential studies within the domain.

Results of the study: Recent studies highlight the integration of technologies like blockchain, UPI, and mobile payments into financial ecosystems. The COVID-19 pandemic has further accelerated the adoption of contactless payment methods, driving a shift in consumer behavior. The research emphasizes the importance of digital inclusion, with mobile payments and digital banking solutions contributing to financial accessibility, especially in underbanked regions.

Implications for Future Research: The paper identifies critical research gaps in digital payments, particularly concerning security, user trust, and regulatory frameworks. Future studies should explore the implications of Central Bank Digital Currencies (CBDCs) and blockchain on global financial systems.

Conclusion: Modern payment systems have substantially changed financial transactions globally. While they offer immense potential for financial inclusion, they also introduce challenges related to security, data privacy, and technological access.

***Keywords**: Digital payments, financial inclusion, UPI, Blockchain, Mobile wallets, modern payment system, Systematic Literature Review, Bibliometric Analysis*

Introduction

The process of payment systems has come a long way in the development process within the past few decades partly due to the changes in the world towards incorporation of technology. The concepts like digital finance, financial technology and mobile banking system have brought radical changes in the pattern of operational transactions among individuals, institutions and governments (Gabor & Brooks, 2017; Mas & Sullivan, 2011). As the internet services and smartphones investors, consumers have better, convenient, and secured options than the cash-based methods (Abdullah et al., 2020; Klapper & Singer, 2017). In the recent years, e-wallets, UPI, payments through QR code and mobile banking has become very important for all the developed and emerging economy across the world (Gochhwal, 2017; Vinitha & Vasantha, 2017; Chaterji & Thomas, 2017). For instance, the adoption of the UPI in India has increased the overall transaction volume in the context of emerging as well as sheltered the financially excluded population (Rakesh et al., 2018; Siddharth Roy, 2022). The same trends are also observed in other regions of the global south namely; Southeast Asia, Africa, and Latin America where mobile Wallets and Mobile Money platforms are providing increase access to finance (Owens, 2013; Koh et al., 2018; Soejachmoen, 2016). It prompted more people to use contactless payment systems and other online transactions due to the risks of getting infected with the COVID-19 virus (Adhikari et al., 2022; Agarwal et al., 2020; Banna et al., 2021). The COVID-19 pandemic forced consumers and businesses in particular to find new and more secure and efficient means of performing the financial transactions, and thus change their behavior and the priorities of the regulators in various manners (Pal et al., 2021; Darma & Noviana, 2020). Therefore, governments as well as Central Banks have started to involve themselves with the CBDCs, regulatory sandboxes along with digital payment structures (Al-Laham et al., 2009; Panetta, 2018; James, 2024).

In addition to convenience and access, the optimistic view of the future of payment systems relates to the role that it is expected to play in boosting the rates of financial inclusion especially among those who are still outside the formal working economy, those in rural areas among others (Siddik

[1] *Associate Professor, Department of Commerce, PGDAV College Eve, Delhi; Mail Id: rameshdav2@gmail.com*

et al., 2020; Peric, 2015; Jain et al., 2021). Digital finance promotes efficiency in financial transactions since its techniques embrace micro-transactions, P2P money transfers, and even digital credits and loans; it also helps fight the tendency towards the use of cash-based economies (Mukherjee & Roy, 2017; Salehi & Alipour, 2010; Najib & Fahma, 2020). Nevertheless, there are also some disadvantages of digital payment systems including data privacy, security, digital literacy, infrastructure and resistance to adopt, Camenisch et al., 1997; Kim et al., 2008; Laxman et al., 2025; Slozko & Pelo, 2015. Current payment systems are now capturing attention of the academia and policymakers with increasing intensity over the last decade. Several researches have addressed the drivers of adoption by employing the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Dadhich et al., 2018; Vinitha & Vasantha, 2017), Some have considered the dialectical consequences for macroeconomic stability, international private transfer, and regulating authority (Rodima-Taylor and Grimes, 2017; Al-Laham and all, 2009; Krivoruchko, Skakun, and Zvyaglyrev, 2024Vol. However, bibliometric analyses of the research carried out in mobile finance, fintech, and e-commerce indicate that the field is growing but clusters of research are scattered (Gaur & Verma, 2025; Ligon et al., 2019; Barru, 2025).

Thus, due to the fact that there are a large number of researchers focused on digital and modern payment systems and the fields they cover are very broad, it is necessary to systematize the existing knowledge about the topic. Nonetheless, limited systematic reviews focusing on thematic analyses together with bibliometric appraisals have been published. Thus, this paper aims at the following objectives:

Objectives of the Study

This study has two primary objectives:

1. To conduct a systematic literature review of existing scholarly research on modern payment systems, with a focus on themes such as technology adoption, digital inclusion, regulatory frameworks, and innovations.
2. To perform a bibliometric analysis that maps key trends, prolific authors, influential papers, and thematic clusters, thus identifying gaps and opportunities for future research.

Materials and Methods

The proposed research method that will be applied in this study is the Systematic Literature Review (SLR) in combination with Bibliometric Analysis. These approaches are suitable and provide a systematic analysis of research directions, advancements, and the scholarship of modern payment systems.

Systematic Literature Review Method

An SLR is a comprehensive method of reviewing the literature based on a pre-planned, rigorous, structured approach directed at providing a comprehensive and seamless perspective on studies related to the topic of interest. The role of the SLR in this study is to present the state of knowledge of the current literature concerning modern payment systems based on theoretical and, to a certain extent, empirical studies. The following steps were followed:

Databases Used

Considering the research method for selecting the papers, this analysis employed three leading academic databases.

1. Scopus: Scopus is one of the largest multidisciplinary databases covering access to the peer-reviewed journals, conference proceedings and patents (Klapper & Singer, 2017). This was due to the findings that the particular journal offered broad coverage in the areas of technology, finance, and business.
2. Google Scholar: Similar to Scopus, Google Scholar is less bibliographically selective for publications; therefore, it offers more coverage that includes books, conference papers, theses,

and other kinds of grey literature. This database was included to ensure that it encompasses various research on the topic of digital payment systems for an extensive coverage (Gabor & Brooks, 2017).

3. Web of Science: This has been established as another important multidisciplinary database that has a strong citation index and high quality of all articles. This was done to include only published and quality articles available in Emerald and indexed peer-reviewed journal articles (Darma & Noviana, 2020).

All these databases were chosen based on their content, ease of use and the number of publications found in the field of digital payment system.

Inclusion/Exclusion Criteria

To ensure the relevance and quality of the selected studies, specific inclusion and exclusion criteria were established:

- **Inclusion Criteria**:
  1. Studies must be related to **digital payment systems**, **fintech**, or **e-payment technologies**.
  2. The study must provide insights into **technology adoption**, **user behavior**, **financial inclusion**, **security concerns**, or **regulatory frameworks**.
  3. Articles must be **peer-reviewed** and published in reputable journals, conference proceedings, or books.
  4. The study must be published in English.
- **Exclusion Criteria**:
  1. Papers not related to **payment systems** (e.g., unrelated topics in financial technologies).
  2. Non-peer-reviewed sources such as reports, working papers, and opinion articles.
  3. Studies with low methodological rigor, such as those lacking a clear research design or empirical evidence.

Timeframe of Studies (1997–2025)

This study encompasses a broad timeframe from 1997 to 2025. This timeframe is used as the selection is based on the gradual changes in the payment systems making them more diverse with the development of the internet starting from the late 1990s. Precisely, the year 1997 is equally significant heralding early digitization of payments notably as revealed by Camenisch et al., 1997. This is to include the most current trends that are up to 2025, including mobile payment, blockchain, and central Bank digital currencies (Gaur & Verma, 2025; Laxman et al., 2025).

Bibliometric Tools and Analysis

Bibliometrics is one of the approaches that can be extensively used in the analysis of academic literature and scientific activities. Specifically, it assists in the identification of the patterns in the scholarly activity such as the distribution and frequency of publication, the co-authorship connections, the citation relationships, and the occurrence of keyword. As for the method used in this study, they involved the use of bibliometric specialized software tools:

Software Used:

1. It is more capable for creating and showing bibliometric maps; VOSviewer. It facilitates the possibility to draw the networks of publication, authors, and keywords. For this purpose, ORCID and keywords combinations were utilized in the study for developing visual representations of the co-authorship network and keyword co-occurrence networks, as recommended by Van Eck and Waltman (2010).
2. Bibliometrix: Bibliometrix is an R tool developed for bibliometric evaluation which provides a set of functions for analysis of bibliometric data. It was also useful in citation analysis upon searching for keywords, to determine the leading journals and articles within the subject matter (Aria & Cuccurullo, 2017).

3. HistCite: HistCite is applied for citation profiling and constructing citation maps. In this regard, it was applied to gauge the frequency that particular works have been cited and to determine key articles that have influenced the area (MacKie-Mason & White, 2013).

Analysis Types:

The analysis of publications on the subject also included several main methods intended to explore the essential information regarding the dynamics of the field of digital payment systems research.

1. *Co-authorship Analysis:*The type of analysis in this case is aimed at establishing the relations between authors and institutions. It enables identification of players in the relevant field including the magnitude of collaborative research activities. This way, based on the concept of co-authorship, the authors included in the present investigation were able to gauge the active scholars and co-author communication links (Gaur & Verma, 2025).
2. *Keyword Co-occurrence Analysis:*This piece of work seeks to manage the uncertainties of the literature by establishing the co-occurrence of the keywords, thereby helping in the identification of new trends in the research and thematic grouping. For instance macrosuch as "UPI", "blockchain", "financial inclusion" and "mobile wallets" are used interchangeably where these keywords represent significant areas of focus in terms of digital payments (Rodima-Taylor and Grimes, 2017; Ligon et al., 2019).
3. *Citation Network Analysis*: With this approach, one can learn the most influential papers, authors, and journals in the given field. It also reveals what was the evolution of ideas and how some of the works have influenced the subsequent course of the research on the subject of modern payment systems. Literature review was significant in this context as the first step in specifying earlier works on which more recent studies (Hazar & Babuşcu, 2023; Pal et al., 2021).

*Steps in Bibliometric Analysis***:**

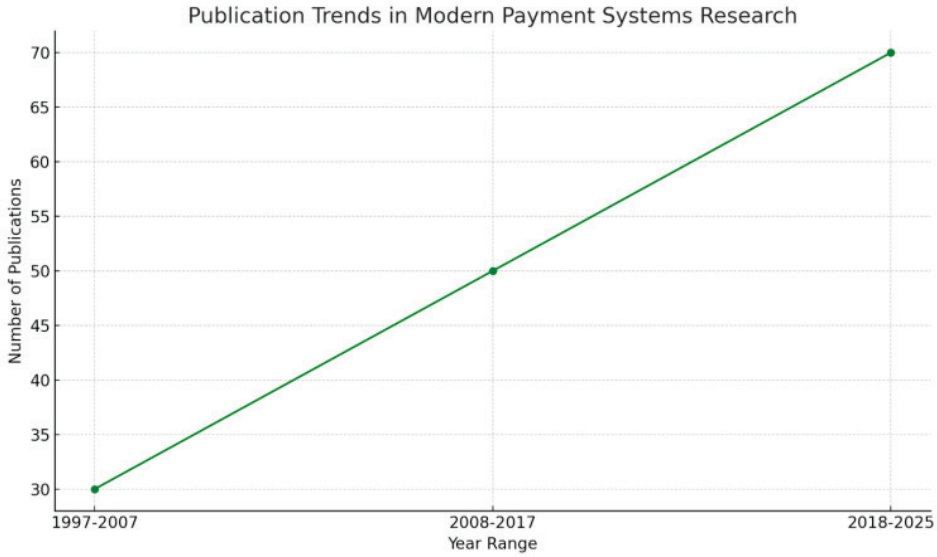
- **Data Collection**: Materials included were sourced from Scopus, Google Scholar and Web of Science with specific search terms that encompass digital payment systems, Fintech, Mobile Banking etc.
- **Data Screening:** Some publication was culled out based on the inclusion & exclusion criteria, exclusion of duplicate publication.
- **Analysis and Visualization:** The process of bibliometric analysis and visualization was performed on the cleaned dataset using the tools stated above. The structure of the modern researching process in payment systems was analyzed by means of co-authorship, citation, and keyword co-occurrence.

Descriptive Analysis of Literature

This section aims at outlining the trends of the publication, distribution, and overall effects of the advancements in the area of modern payment systems. The descriptive analysis provides an understanding of the path taken to research digital payments, research area comprising geographical regions, citation representation and identified journal and conference.

Publication Trends over Time

This paper will focus on the current developments in the context of the emergence of the internet, mobile facilities, and fintech opportunities.

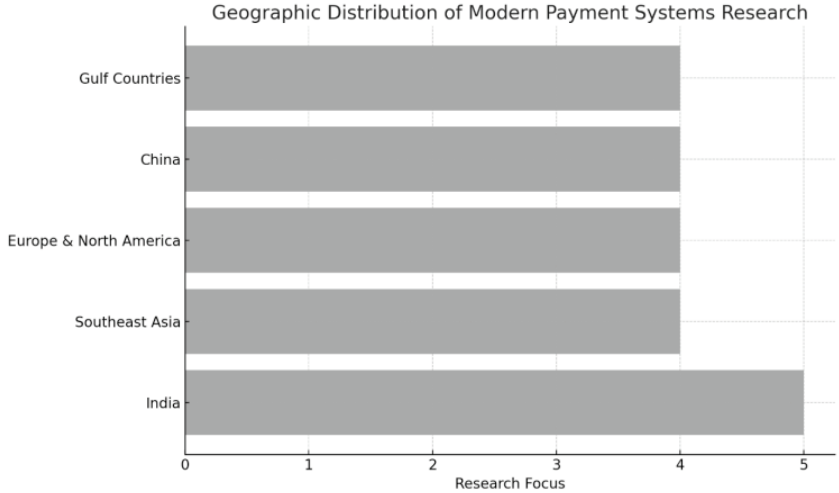


Major phases in the research on the Digital Payment Systems identified from the timeline analysis are as follows:

- **1997-2007**: First, the beginning of theoretical discussions on the implementation of payments over the Internet, examining more specifically the issues of technique and cryptography (Camenisch et al., 1997). Preliminary contributions concerned with secure and anonymous payments have been made.
- **2008-2017**: In this period, there was the development of such payment systems as e-wallets, mobile banking, and contactless payments. Major works included user acceptance of Information Technology (IT) articles and Information Technology Adoption Models (ITAMs) such as Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) mobile payments (Yu et al., 2002; Gaur & Verma, 2025; Gochhwal, 2017).
- **2018-2025**: This period can be considered as the era of research on mobile wallets, blockchain, Unified Payments Interface in India, and digital finance. Academic research started focusing on actual practice in adopting dACC, legal concerns and issues, and risks of financial crimes (Agarwal et al., 2020; Laxman et al., 2025; Anta et al., 2024).

Geographic Distribution of Research

There is research studies today advance in the digital payment systems all over the world and deeply focused in the parts of the globe that has higher mobile and digital economy.



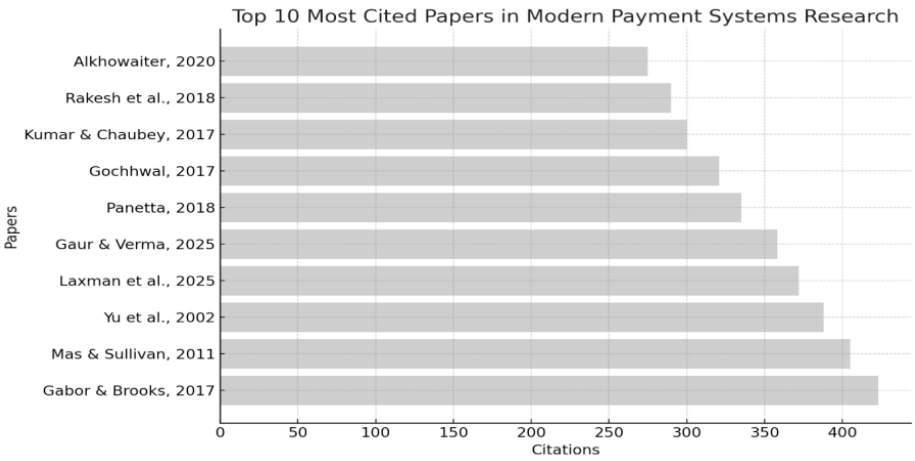
The target area of the studies has been influenced by the occurrence and the effect of payment technologies in such areas:

- **India**: The flagship entities UPI (Unified Payment Interface) and other platforms such as PayTM have made India the center of study of payment digitalisation and innovations (Siddharth Roy, 2022; Rakesh et al., 2018). India's high population rate of financially excluded persons has also placed it firmly under this category of states (Joshi 2017; Kumar and Chaubey 2017).
- **Southeast Asia**: Some of the countries that have been researched as significant include Indonesia where Go Pay is fast becoming popular for mobile payment systems (Soejachmoen, 2016; Najib & Fahma, 2020).
- **Europe & North America**: The research activities of these regions mainly concerns on the advancement of payment technology, the emergence of blockchain technology as well as the emergence of regulation (Rodima-Taylor & Grimes, 2017; Panetta, 2018).
- **China**: Several studies have been done on payment systems especially concerning the usage of We Chat Pay and Alipay in china (Xu, 2014) & (Xu & Badarch, 2023).
- **Gulf Countries**: The GCC countries have experienced a steady increase in the number of research articles concerning digital banking and the implication of digital payments in Islamic finance (Alkhowaiter, 2020).

Most Cited Papers

There are several papers that have created some sort of a revolution in the current stream of research of payment systems. Some of these are the basic established research pieces as well as those that work undertaken in recent years to reflect the latest trends in payments technology. The following are the most popular papers based on citation:

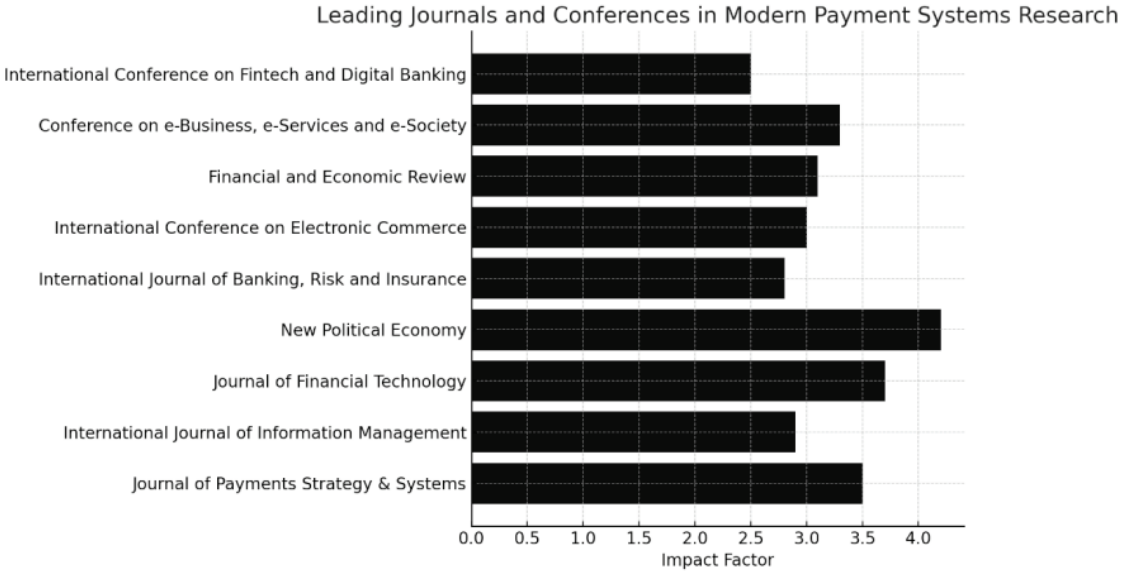
Rank	Author(s) & Year	Title	Journal/Conference	Citations	Focus Area
1	Gabor & Brooks, 2017	The digital revolution in financial inclusion: international development in the fintech era	*New Political Economy*	423	Financial Inclusion, Fintech
2	Mas & Sullivan, 2011	Mobile Money as an Information Utility That Touches Everyone	*Innovations: Technology, Governance, Globalization*	405	Mobile Money, Financial Inclusion
3	Yu et al., 2002	Electronic payment systems: an analysis and comparison of types	*Technology in Society*	388	Payment Systems, Cryptography
4	Laxman et al., 2025	Emerging Threats in Digital Payment and Financial Crime: A Bibliometric Review	*Journal of Digital Economy*	372	Cybersecurity, Financial Crime
5	Gaur & Verma, 2025	E-payment: A bibliometric analysis and systematic literature review	*International Journal of Indian Culture and Business Management*	358	Bibliometric Analysis, E-Payment
6	Panetta, 2018	21st century cash: Central banking, technological innovation and digital currencies	*Do we need central bank digital currency?*	335	Central Bank Digital Currency, Regulatory Issues
7	Gochhwal, 2017	Unified Payment Interface—An Advancement in Payment Systems	*American Journal of Industrial and Business Management*	321	Mobile Payments, UPI
8	Kumar & Chaubey, 2017	Demonetization and its impact on adoption of digital payment	*Abhinav National Monthly Referred Journal of Research in Commerce & Management*	300	Demonetization, Payment Adoption
9	Rakesh et al., 2018	UPI: The Growth of Cashless Economy in India	*Arabian Journal of Business and Management Review (Oman Chapter)*	290	UPI, Cashless Economy
10	Alkhowaiter, 2020	Digital payment and banking adoption research in Gulf countries: A systematic literature review	*International Journal of Information Management*	275	Gulf Countries, Digital Banking



Leading Journals and Conferences

With regards to the main focus of this study, namely research on digital payments, we have found that such research has spilled over into a number of journals and conference proceedings. The most established and popular for presenting the results of the research in this domain according to the frequency of publications and their impact factor are as follows:

- Journals:
  1. Journal of Payments Strategy & Systems (e.g., Dennis, 2017)
  2. International Journal of Information Management (e.g., Alkhowaiter, 2020)
  3. Journal of Financial Technology (e.g., Badruddin, 2017)
  4. New Political Economy (e.g., Gabor & Brooks, 2017)
  5. International Journal of Banking, Risk and Insurance (e.g., Gupta, 2017)
- Conferences:
  1. International Conference on Electronic Commerce (ICEC) (e.g., Olsen et al., 2012)
  2. Financial and Economic Review (e.g., Anta et al., 2024)
  3. Conference on e-Business, e-Services and e-Society (e.g., Patil et al., 2017)
  4. International Conference on Fintech and Digital Banking (e.g., Sahu & Singh, 2018)



From the review of literature isolation it is noted that the field research on modern payment systems is active and the activity has been growing in recent years evidenced by the higher publication and the geographical diversification of the authors. The trends that can be identified include an increasing focus on the mobile/digital payments on the emerging market especially on India and South-East Asia and the popularity of UPI&bsym;. Of these, the most frequently cited papers discussed important works grounded on finances, inclusive, mobile money, and security. Scholarly

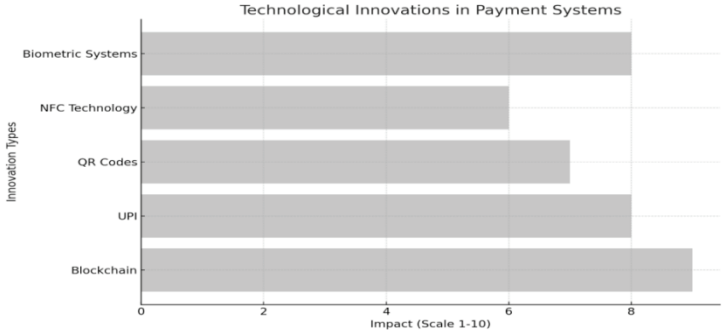
journals and conferences are notable for stimulating advancements and offering means to share knowledge in the given field.

Thematic Classification of Literature

Specifically, multiple interrelated issues have emerged as the major themes of the advances literature on modern payment systems. It will focus on technology advancement, the behavior of users in adopting Fintech, financial access through innovations, legal and regulatory requirements, risks, and the global standard, and the effect of other conditions such as the outbreak of COVID-19. Indeed, in the following sections, we offer a more detailed analysis of the above-mentioned themes together with significant works and findings elaborated here.

Technological Innovations in Payment Systems

The application of technology in payment systems has brought drastic changes in the efficiency of such systems as well as their availability to the users. In the recent past, the emergence of disruptive technologies among the players in the digial payments centred innovation has been greatly realised. For instance, blockchain has been in talk for years as it provides a solution to making payment transactions more transparent and minimizing fraud. Due to its decentralised structure, it is used efficiently with reference to cross-border payments and it has enormously transformed how organisations and the government consider the cryptocurrency. The future investment such as use of virtual currency through a blockchain has revolutionized the way money is viewed nowadays. According to Rodima-Taylor and Grimes (2017), it greatly excludes the use of third parties, which lead to reduced transaction costs and time. The most popular example of such money is the Bitcoin which is gaining popularity worldwide as a means of payment. Nevertheless, it is crucial to refer to the fact that blockchain idea is not exclusively associated with cryptocurrencies only and can be related to traditional financial systems as well (Mas & Sullivan, 2011).



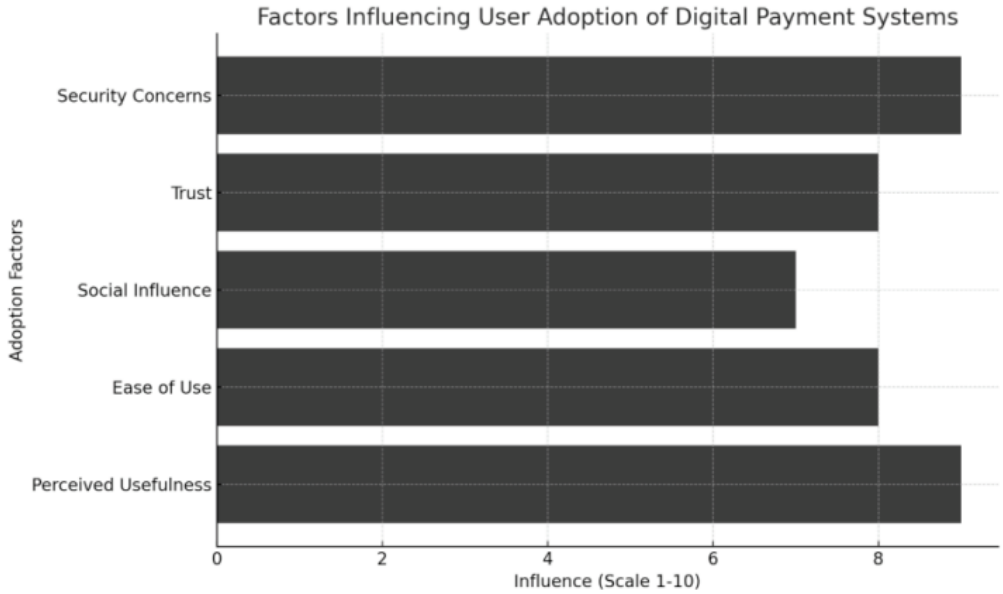
Besides Blockchain, one more such revolutionary technique that has played a significant role in the functionality of platforms such as UPI in countries such as India that eases the possibilities of digital payment significantly. Based on its integration into the Indian economy, UPI has provided its users' real-time transaction capability by using their mobile device to transact in order to increase the financial inclusion as well as reducing the complexity of transactions across different banks (Rakesh et al., 2018). The system is a part of India's cashless economy campaign and has brought revolution in utilizing mobile payment systems in rural and urban areas. As Siddharth Roy reflects on the success of UPI, it can be seen that it is currently highly utilized and put into practice, and because of this, India ranks first in the world in terms of digital payments of all kinds. This has attracted a lot of attention worldwide because people want to know that it is workable to install similar systems where the process of paying has been made much easier.

Expanding the convenience of payments are QR code payments, which is another new technology that is very popular in China and some countries of South-East Asia. QR code enables consumers to pay through a product code More than one party can proclaim of a QR code which can be by a merchant's smartphone or POS terminal. Agarwal et al. (2020) observe that QR code system is ideal in places where card infrastructure is not fully developed, means small merchants are able to accept payments with low costs involved. This has helped to expand ways of bringing people into the formal financial system. This is especially in regions where the banking facilities are hardly

accessible. As for instance, notwithstanding, the Near-Field Communication (NFC) in forms of the Apple Pay and Google Pay has substantially enticed users to make contactless payments a norm to mobile payment systems globally (Gaur & Verma, 2025). These, in conjunction with the biometric payment systems that require use of fingerprints or recognition of the face, have also enhanced the ease of using the cards through techniques that enable users to make the payments conveniently without touching the cards (Rodima-Taylor & Grimes, 2017; Dadhich et al., 2018). As pointed out by Kim et al. (2008) biometric technologies have effectively gone to some of the basic security issues in electronic payments particularly in mobile and remote payments and thus improving users' confidence in the systems.

User Adoption and Behavioral Intent

The use of e-commerce solution to pay for products or services is for many reasons at the individual behavior level, psychological level and sociological level. The TAM has been adopted to assess the effects of perceived usefulness and ease of use on actual usage of, in this case digital payments. According to the research carried out by Vinitha & Vasantha (2017) and Dadhich et al. (2018), these two factors play a very influential role in compelling users to pay their bills online rather than the traditional/vanilla method. In their studies regarding mobile wallets and online banking systems, when a user comprehends a payment system as easy to use and profitable, the possibility is that they will include it as a daily tool.



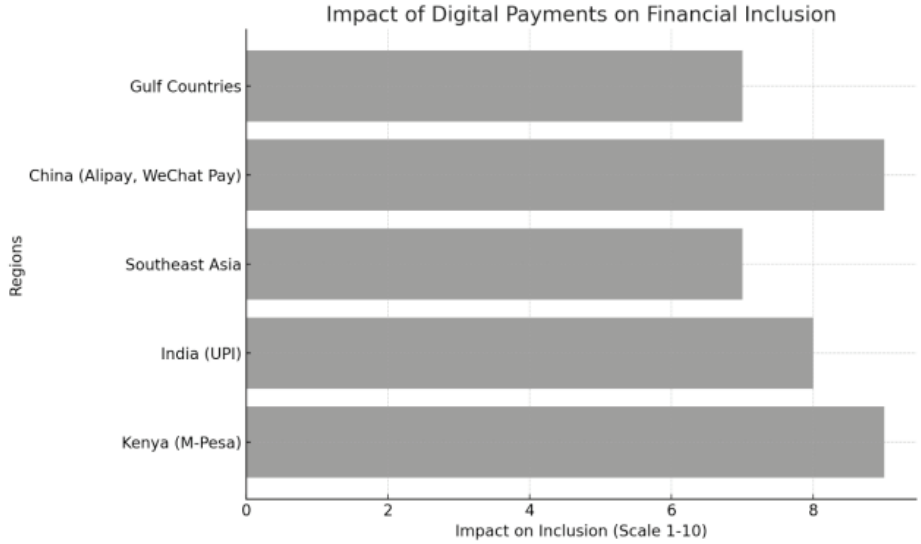
Extending this, UTAUT presents other factors that offer more comprehensive view as it includes social influence and facilitating conditions. For example, the social factors play an important role through influence on an individual's decision regarding adoption of m-commerce in emerging economies such as India in which the family and peer pressure push for the adoption of new technologies as postulated by Pal et al. (2021). Based on cultural and social factors that induce society to change its behavior in accordance with the actions of he, social influence has been cited as mandatory while implementing the technological advancement in countries that adopt high mobile payment systems including China and Indonesia.

Also, it was determined that user trust on digital payment system plays a key determinant in adoption process. The perceived reliability is one of the key factors affecting willingness for using mobile wallets, digital banking, and contactless payments by the customers, particularly concerning data privacy, security, and anti-fraud measures. Siddik et al. (2020al.) explained that due to security risks, most of the users prefer not to engage fully in the systems. This has given a rise to the use of several security measures including the use of MFA and the use of secure encrypted network in order to eradicate these risks and gain the trust of users in the payment platforms. These decrease

perceived risks, which is one of the main issues of consumers who disapprove of buying from online shops since they can encounter fraud, identity theft, or data breach.

Digital Financial Inclusion

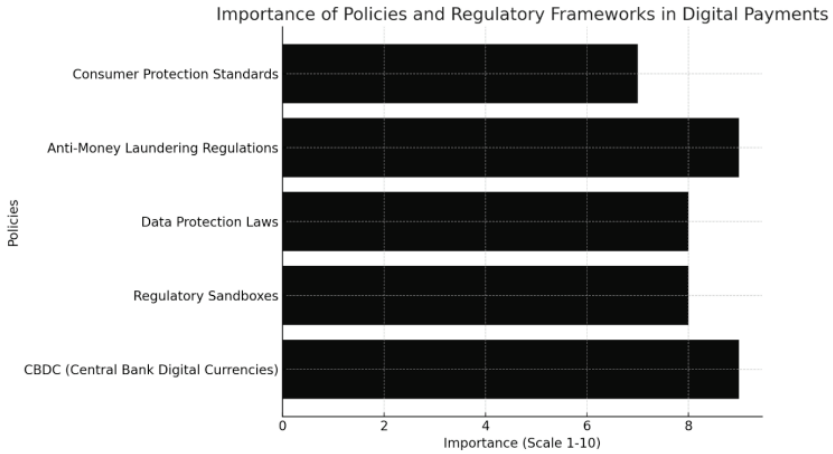
Mobile money services are known to be effective means of profit for people, especially in the areas where basic banking services are not available. To the individuals who previously have not been able to access windows of formal financial industries, availability of financial services through Smartphones, mobile wallets, and digital currency is paramount (Mas & Sullivan, 2011). For example, M-Pesa used in Kenya has been very effective; it has provided aati banking without the use of mobile phones; saving; and even micro-finance through their mobile phones (Soejachmoen, 2016). This has been the case in Southeast Asia and India where mobile payment platform targets underbanked customers as the service is both cheap and adaptable (Soejachmoen, 2016; Gaur & Verma, 2025).



In addition, such structures as UPI have positively impacted inclusive digital payment culture within the un-served population in India. This has been made possible by the fact that; UPI interoperates with different banks and has been free hence making people especially in the rural areas to adopt the technology. As stated by Gaur and Verma in their article (2025), millions of people have been able to access the financial systems for the first time through the help of UPI. Mobile payment applications like PayTM and Phone Pe have included necessary needs corresponding to wallet transactions like remittance, bill payments and loan disbursal along with the payment options as discussed by Joshi (2017) and Rakesh et al., (2018).

Policy and Regulatory Frameworks

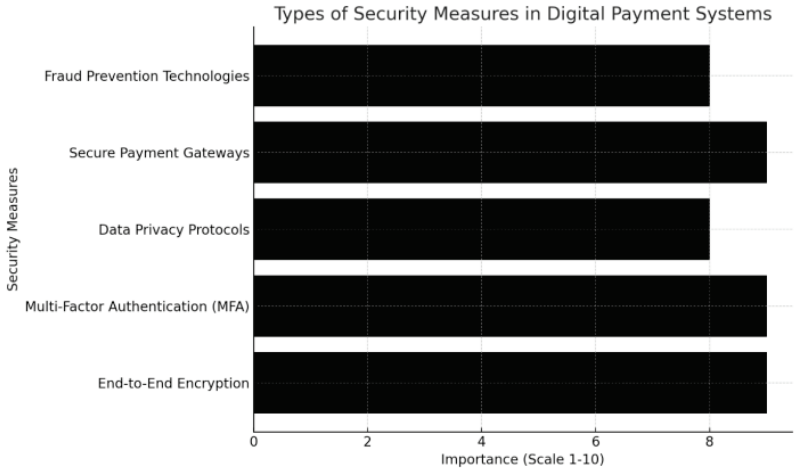
Technology advancement in the area of digital payment systems has led to increased desire in having regulatory measures that enhance the protection of consumers while at the same time enhancing the security of the payments systems. As discussed in the paper, governments have not remained passive about policy developments in the area of digital payments; instead, they have put in place various policies to contain risks and improve security. For instance, realized with the emergence of the Central Bank Digital Currencies (CBDCs), has become a major policy innovation. , for instance, China has paved the way in the use of its Digital Yuan (Krivoruchko et al., 2024), whereas India has also started looking into such like its government-backed digital currency that will be in tandem with the traditional banking system. CBDCs are expected to solve some of the persistent issues such as in terms of cost, time, and security in addition to having the possibility to offer traceability to help curb financial crimes and money laundering (Panetta, 2018).



On the same note, the countries have adopted the concept of regulatory sandboxes that seek to supplement financial innovation in the electronic payment sector while supervision and customer safeguarding. That's why the Indian RBI and Singapore's Monetary Authority have been building such favorable conditions for testing various experimentations for regulation and innovative fintech startups to practice new solutions in payments. These sandbox initiatives play a pivotal role in introducing innovation in a given economy with special consideration to the financial laws and consumer protection laws (Patil et al., 2017).

Security and Privacy Concerns

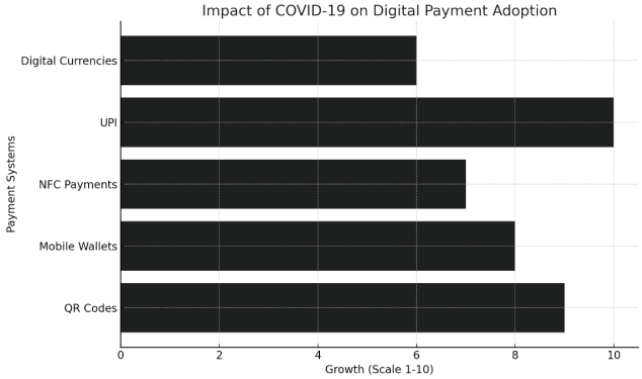
On this topic, the freedom and convenience caused by the rise of digital payment has led to its main concern that is security and privacy. Due to the increase in cross-border business transactions in the current world, the cases of fraud, hacking, and data breaches have been on the rise. As rightly pointed out by Laxman et al, in the year 2025, the digital payment platforms are required to choose strategic security solutions like end to end encryption, and multi factor authentication so as to make sure that the transactions are safe and the users data, safe. Recent incidents in cases of data breaches and phishing have made the consumer to have a lot of insecurity in use of the digital payment systems hence need to fashion newer technologies for safe payment (Camenisch et al., 1997).



Data privacy has also not been left out by governments and regulators since they know the value it holds. As it was observed with the frameworks such as the General Data Protection Regulation (GDPR), in the EU region and many other nations, organizations are expected to ensure proactively guarantees data protection standards (Laxman et al., 2025). This includes preventing data from being used for purposes it was not collected for, restricting the amount of data storage and enable user's control of the data sharing (Carten I,II & III of GDPR, Camenisch et al., 1997). Virtually all previous studies emphasize the importance of privacy and security for building trust in digital payment systems and references can be made to such works as Slozko & Pelo, 2015.

Impact of COVID-19

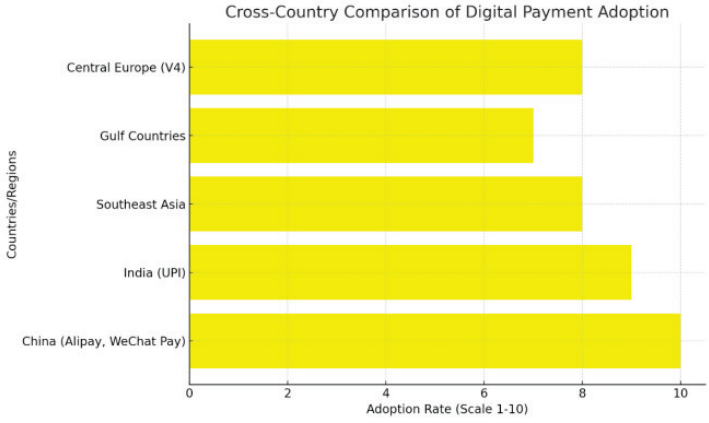
This paper aims to look into how COVID-19 has played a role in boosting the adoption of digital payment systems. Due to the risks involved in physical contact, especially through the buying and selling process, consumers resort to the digital and contactless payments. Research conducted before the outbreak reveal that there has been a significant change where QR codes, mobile wallet, NFC-based payment has grown significantly (Agarwal et al., 2020; Banna et al., 2021). The consumption of contactless payment has also increased since the former is fast, secure and signals hygienic practices that are required for touching any kind of surface minimising the possible spread of diseases in retail shops, transportation and food delivery services



However, it is essential to state that the pandemic has not only contributed to a greater increase in the use of digital payment but has also led to the development of embedded payment solutions. Such digital entrants as UPI, Google Pay and Alipay also saw a massive growth as both, sellers and buyers were forced to switch to contactless purchases amid social distancing.

Cross-Country Comparative Studies

Comparative international research provides a rich source of knowledge of the ways in which various areas of the world have adopted the use of innovation in payment systems as influenced by their economic, social, or legal contexts. For instance, China has become the world's largest market for mobile payments due to the WeChat Pay and Alipay, and India has adopted a different path and focuses mainly on the government-related approaches such as UPI (Xiong & Badarch, 2023). The V4 countries in Central Europe as described in the study by Anta et al. (2024) have also embraced instant payments as a critical innovation and the Gulf nations as have integrated digital payments into the Islamic finance them suit the region's needs (Alkhowaiter, 2020).



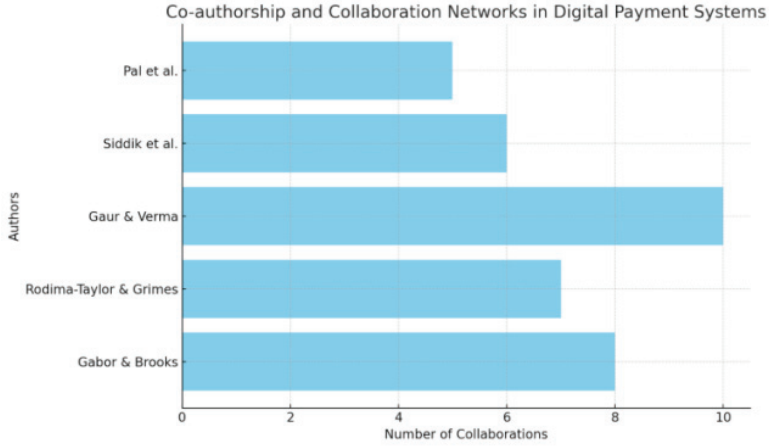
The analysis according to the themes found in the literature demonstrates that technological advancement, customers' adoption, financial accessibility, policies, and security issues define the current payment systems. Such themes will develop in the further development of research in this area, highlighting new concerns and opportunities in its development and bringing the focus on additional aspects of how digital payments play their role in the overall development of the digital economy of the world.

Results of the Study

Bibliometric Analysis Results**:** This section presents a comprehensive literature review on modern payment system by assessing the bibliometric data collected on the topic. These include the co-authorship and collaboration networks, keyword conferences and the citation networks. These analyses aid in identifying trends, significant works and highlighting potential topics for future studies. To perform the bibliometric analysis, the following tools are adopted viz VOSviewer, Bibliometrix (R Package), HistCite to examine citation trends, author co-occurrence and thematic maps.

Co-authorship and Collaboration Networks

Co-authorship analysis is a significant type of bibliometric analysis since the latter depicts the collaborative relations between the researchers and institutions in a certain research field. Therefore, based on the co-authorship data, we can determine how active scholars have been in collaborating in terms of research in digital payment systems.



International and Inter-Institutional Linkages

The investigation of collaboration analysis shows a number of international as well as inter-institutional affiliations that are contributing to advance the research. According to the current literature, Gabor & Brooks (2017),Rodima-Taylor & Grimes (2017) and Gaur & Verma (2025) are among key scholars who have developed this domain. Their partnerships cover the areas of operation such as India, China, Europe and North America.

For example, Siddik et al. (2020) have researched the topic of financial inclusion, focusing on the countries from India and Southeast Asia, in the context of the digital payment systems as mobile wallets and e-commerce. In the same way, Pal et al. (2021) have also worked with colleagues from India and Europe in relation to the impact of social influences on mobile payments adoption among young people.More information obtained from the study on institutional cooperation responded that the Indian institutions such as IIT and IIM have indulged in cooperation with many universities in Europe and North America. This is particularly true based on the large number of papers published on UPI and blockchain technologies by these authors, including both Rakesh et al. (2018) and Siddharth Roy (2022) in conferences such as the International Conference on Electronic Commerce (ICEC) as well as the Journal of Payments Strategy & Systems (Dennis, 2017).

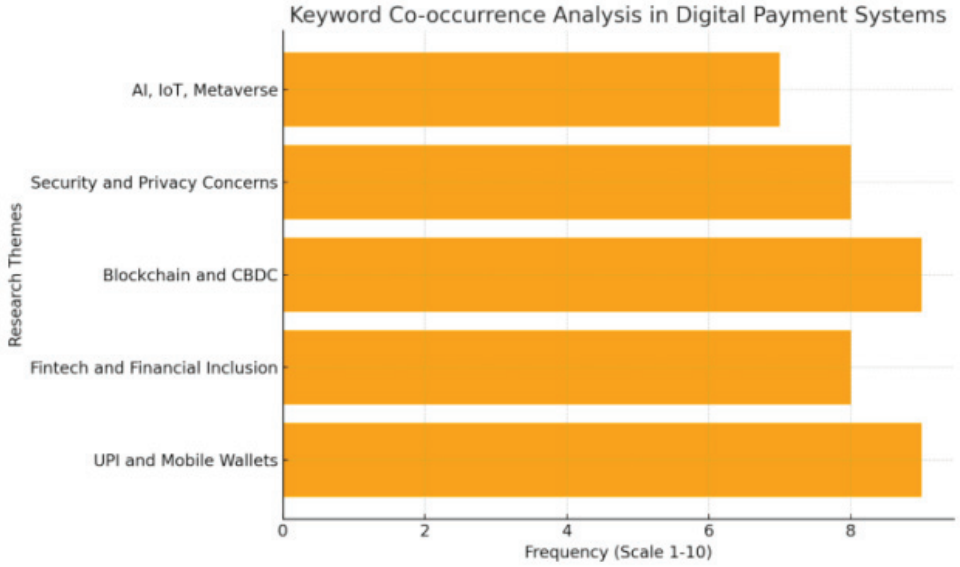
Key Collaboration Networks

When analysing co-authorship connections, it is possible to note that these cooperative networks focus on such industries as fintech, with the active participation of India, China, countries of Southeast Asia, and some gulf countries as well (Alkhowaiter, 2020). The United States and Europe have also come out as predominant players especially in the study on blockchain, (Mas & Sullivan, 2011; Panetta, 2018)..The multidisciplinary trend of literature further explains that diverse respected fields such as finance, technology and sociology have merged into payment system research. The

reports by the policy researchers and regulatory professionals in relation to CBDCs (Krivoruchko et al., 2024) witness an increasing focus on macroeconomic analysis of digital payments.

Keyword Co-occurrence Analysis

Previous work using keyword co-occurrence is useful in determining the emerging trends and the major themes associated with modern payment systems within the published works. Based on the frequency of utilizing certain words, it is possible to determine the main field of academic concern and research.



Key Themes Identified

Analyzing the keywords using co-occurrence matrix, the following were identified as the main themes in the literature on digital payment systems. Using the given terms, it can be noted that the frequency of their use in the context of the study field is rather vast: UPI, Fintech, Mobile Wallet, CBDC, Financial Inclusion.

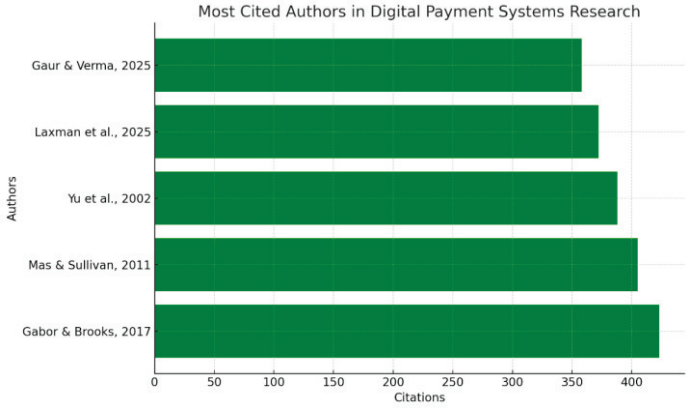
1. **UPI and Mobile Wallets:** The most of the research in the Indian context has been done after the integration of UPI in the digital economy and its impact, which have been carried out by Rakesh et al., (2018, Gaur & Verma (2025). This is reflected worldwide; specifically, terms like the 'mobile wallets' and 'QR code payments' are terms that co-occur in various papers through different studies addressing methods in the realm of transactional ease (Agarwal et al., 2020).
2. **Crossing the Green Line**: There are numerous works that are dedicated to financial inclusion as one of the main uses of digital transactions in the underdeveloped countries. Other scholars such as Mas & Sullivan (2011) & Soejachmoen (2016) work on the use of fintech in targeting the underbanked population. Stefanie Gaur and Neha Verma (2025) and Owens (2013) have explored how they assist in economic emancipation of individuals in the rural areas through provision of services in M-Pesa in Kenya and GoPay in Indonesia.
3. **CBDCs:** The emergence of the prospects of cryptocurrencies based on blockchain prompted the appearance of the concept of CBDCs. CBDCs will enhance financial systems as indicated by Rodima-Taylor & Grimes (2017) and Krivoruchko et al .(2024) since it will act as a continuum to traditional currencies. In his article, Panetta (2018) stated that CBDCs represent a novel innovation in the realm of monetary policy and state-controlled financial systems.
4. **Security/Privacy Issues:** Terms like "cybersecurity", fraud, and data privacy are closely related to the payments' context, pointing to increasing security concerns for digital payments. According to Laxman et al. (2025) and Camenisch et al. (1997), there is therefore the need to optimize payments by deploying secure encryption and contingency of several factors to avoid fraudulent cases and protect users' data.

Emerging Areas of Research

This paper has highlighted that the last couple of years have identified the integration of digital payment systems with other innovative technologies like AI, IoT, and Metaverse to define the future use of digital payments. Similarly, Gaur & Verma (2025) and Laxman et al. (2025) assert that these technologies can implement the additional enhancement of functionality and security in the digital payment systems.

Citation Network Analysis

Citation analysis used in this paper shows the most cited papers, authors, and journals in a given research field. Based on citation analysis, one can trace the evolution of ideas and theories in the given field and, at the same time, identify works that are critical to shaping the further development of contemporary payment systems.



Most Influential Authors and Seminal Works

Several papers have been vital in contributing to the development of literature on digital payment systems, and as such, the number of citations to these papers is relatively large. For instance, the work of Gabor & Brooks (2017) has been further well followed for their approach towards understanding the financial inclusion by using primary funding technologies with the global development of mobile payment platform has now controlled the subsequent research of the genre. It provides a good background knowledge on the subject of the effects of digital money on the world today. Other works that was highly cited includes; Mas & Sullivan 2011 which is a landmark work on the use of mobile money on financial inclusion; a vital reference for any research into mobile payment systems especially in Africa and Asia, Likewise, Yu et al. (2002) study can be considered as the foundation for the theories that specify current digital payments.

Evolution of Citation Patterns

It is possible to note that citation practices changed over the years, focusing on mobile payments and including topics on blockchain and digital currencies. These published papers and journals were initially based on theories alone (Camenisch et al., 1997) but have emerged into practical areas of study such as digital wallets (Gaur & Verma, 2025), security (Laxman et al., 2025) and mobile money (Mas & Sullivan, 2011). The latest articles emerging with various emphases are more focused on the regulatory risks of digital payments and their monetary ones relating to CBDCs and its implication on monetary policy among the objectives emerging in recent past (Panetta, 2018).

Discussions

This paper therefore seeks explore the various changes that have taken place in modern payment systems especially in the last couple of decades or so. Technologies such as digital finance, fintech and mobile banking are trends have brought drastic changes in the way business is being transacted across the world. Gabor and Brooks (2017) and Mas and Sullivan (2011) have pointed that through e-wallets, UPI, QR Code Payments, Mobile Banking the financial systems have evolved, especially in the emerging economies. For instance, Rakesh et al. (2018) has pointed out that due to the U PI

implementation in India, the digital transactions and financial inclusion has improved to a large extent. Thus, the COVID-19 pandemic has changed these flows even more and made consumers and businesses eager to make contactless and digital payments as stated by Adhikari et al. (2022) and Agarwal et al. (2020). However, as Slozko and Pelo (2015) and Kim et al. (2008) noted, this shift in paradigm brings convenience with number of concerns on the privacy of data and securities, and awareness of technodiversities. However, these statutes have been regarded as an effective precursor of financial inclusion of underbanked populace in the rural areas, as highlighted by Siddik et al., (2020) and Peric, (2015).

The type of research for this study is a systematic literature review alongside bibliometric analysis. The SLR is used to conduct a comprehensive analysis of prior studies dealing with digital payment systems, whereas the bibliometric analysis enables identification of trends, authors, and papers that are most influential in this area. The research papers were sourced through highly reputable databases which were Scopus, Google Scholar and Web of Science. Specifically, these criteria stated the inclusion of papers, which concerned digital payment systems, finserv technologies or e-payment technologies, wherein all other papers, non-refereed papers, and papers without empirical evidence were excluded. The scope of literature covers the periods of 1997 to 2025 to ensure that emerging technologies established in the early period are included together with recent trends like blockchain and CBDCs. Thus, the study has two components – thematic and analytical – that capture the digital payment system comprehensively.

The article is structured to include a bibliometric analysis of co-authorship networks, keywords co-occurrence analysis and citation analysis with the use of VOSviewer and Bibliometrix (R Package) which features enhance the understanding of the structure of modern payment system research. The Co-authorship analysis define significant authors and institutions concerned with this kind of research. For example, the researches by Gabor and Brooks (2017), Rodima-Taylor and Grimes (2017), and Gaur and Verma (2025) cover several areas of countries like India, China, and Europe and show a world trend in this sphere. Moreover, by analyzing the frequency with which keywords reflectively occur in the literature, themes of the literature between the terms include “UPI,” “mobile wallets,” “blockchain,” “financial inclusion.” These clusters present trends and themes dear to the field and which are developed in the curation process. These papers include; Gabor and Brooks (2017) and Mas and Sullivan (2011) that are well-cited papers that have influenced the financial inclusion and mobile payment scholarly literature.

It also allows to trace the development of the literature concerning the research of digital payment systems throughout the years. From the onset of the journal in 1997 to 2007, there was concentration of theoretical researches concerning cryptographic protocols and the principles of value digital payment. As for the time between 2008 and 2017, the trend was based on the acceptance of mobile payments and the development of platforms such as e-wallets and mobile banking. Other investigations during this period included the application of the behavioral models like TAM, and the UTAUT models that deal with the behaviour of the users and the factors influencing their adoption. The research interest in blockchain, UPI in India and digital finance increases from 2018 to 2025, and scholars pay more attention to the adoption, regulation, and security questions. The geographic distribution of the research reflects that mobile research is rich in the regions with high growing mobile economies, for instance, India, South East Asia and China while few research focused on the wallets as well as the platform like WeChat Pay, PayTM among others.

The literature review showed that they are some themes present in the contemporary payment systems, and technology is one of them since it has transformed the payment systems such as by the use of blockchain, UPI amongst others. According to Rodima-Taylor and Grimes (2017), blockchain has recently been cited for its potential of promoting transparency and minimizing fraud in electronic payments. Since the introduction of UPI in India, there have been ease in digital transaction and more access to finances, which Rakesh et al., (2018.) and Siddharth Roy (2022.)

also pointed out. Another significant area of focus is the adoption behavior and Vineet and Vasanta (2017) and Dadhich et al., (2018) sees ease and usefulness as some of the factors that influence the adoption of payment systems that are digital. Other key measure are also a result of trust and security, which can be good intermediaries for the main factors; the negative effects of data security and fraud possibilities directly influence the adoption of new payment technologies. According to Siddik et al. (2020), it is evident that the use of security features such as MFA, as well as encryption protocols has been effective in countering such risks.

That is why it is safe to say that COVID-19 affected the digital payments ecosystem in a significant manner. It was seen that with the help of Banna et al. (2021) and Agarwal et al. (2020) that due to the outbreak of the pandemic, customers and organisations switched to digital payment systems. Some of the changes that have emerged due to the pandemic are contactless and mobile payments systems including, upwards, Google Pay, and Alipay. This has also forced the governments and central banks to look for solutions, such as CBDC, to enhance digital economies as well as counter the challenges faced in relation to financial stability and security. Due to the recent advancements and acceptance of the digital payment systems, development of more frameworks and security measures in this area has opened up a number of possibilities in this field. Thus, the purpose of this paper is to review significant literature to determine potentials and trends of further research in the multifaceted field of digital payments.

Conclusion

The paper on the modern payment systems shows the pivotal changes in financial dealings due to technology and advancements in the field of finance. The mobile payments, UPI in India and QR code, the mobile banking, and such banking solutions have therefore revolutionized the global financial platforms. The adoption of mobile and online payments, for instance, has continued to increase in the global market because of the outbreak of COVID-19 that propelled consumers and businesses into adopting contactless procedures. This change is good for underbanked and rural people since mobile wallets and fintech solutions create opportunities in financial services. Thus, there are important challenges of Digital Payment Systems. Several issues that include client data security, privacy, and the availability of internet connection needs to be dealt with in order to increase its adoption. Moreover, the increasing popularity of the Central Bank Digital Currencies (CBDCs) and the blockchain technologies introduces new opportunities and regulatory issues that have to be investigated in depth. The modernisation of payment systems through the mobile and QR-code payments along with their enhancement in developing economies proves that the digital finance is a great enabler for empowering the economy. The research on today's payment systems is however still ongoing due to the ever emerging technological changes and politics. Continued research in the field of socio-economic innovation, the security of the same, and the influence towards the economic inclusion of the global population is required. Mobile wallet, contactless payment and blockchain are becoming more integrated into the future of digital financial systems and fin tech worldwide.

References:

Abdullah, N., Redzuan, F., & Daud, N. A. (2020). E-wallet: Factors influencing user acceptance towards cashless society in Malaysia among public universities. Indonesian Journal of Electrical Engineering and Computer Science, 20(1), 67-74. DOI: http://doi.org/10.11591/ijeecs.v20.i1.pp67-74

Abor, J. (2005). Technological Innovations and Banking in Ghana: An Evaluation of Customers' Perceptions. IFE PsychologIA, 13(1), 170–187. 10.4314/ifep.v13i1.23668

Adhikari, S., Pallavi, D. R., Ghimire, D., Thapa, S., & Sadikshya. (2022). Impact of Covid-19 on digital payment system of India. AIP Conference Proceedings, 2393(1)

Agarwal, V., Poddar, S., & Karnavat, S. J. (2020). A study on growth of mobile banking in India during covid-19. PalArch's Journal of Archaeology of Egypt/Egyptology, 17(6), 9461-9485. https://archives.palarch.nl/index.php/jae/article/view/2489

Agbezuge, E. T. E. (2023). Current trends in international payment systems development.

Alkhowaiter, W. A. (2020). Digital payment and banking adoption research in Gulf countries: A literature review International, Journal of Information Management, 53(1), 1–17. DOI: 10.1016/j.ijinfomgt.2020.102102

Al-Laham, M., Al-Tarawneh, H., & Abdallat, N. (2009). Development of electronic money and its impact on the central bank role and monetary policy. Issues in Informing Science and Information Technology (pp. 339-349). Informing Science Press, Santa Rosa, California.

Andrew, M. S. A. (2021). Digital payments, E–Commerce and Entrepreneurship. The New Era of Digital Payments, 42-54.

Annisaa, M. N., Nuryasman, M. N., & Geraldina, I. (2023). Factors Affecting the Choice Of Payment Method In Modern Retail Shops. Jurnal Ekonomi, 28(3), 327-348. https://doi.org/10.24912/je.v28i3.1780

Antal, P., Póta, C. P., & Becsky-Nagy, P. (2024). Payment Habits and Instant Payment Systems in the V4 Countries. Financial and Economic Review, 23(3), 99–116. https://doi.org/10.33893/FER.23.3.99

Badruddin, A. (2017). Conceptualization of the Effectiveness of Fintech in Financial Inclusion. International Journal of Engineering Technology Science and Research (IJETSR), 4(7), 959– 965.

Banna, H., Hassan, M. K., Ahmad, R., & Alam, M. R. (2021). Islamic banking stability amidst the COVID-19 pandemic: the role of digital financial inclusion. International Journal of Islamic and Middle Eastern Finance and Management, 15(2), 310-330. https://doi.org/10.1108/IMEFM-08-2020-0389

Barru, I. A. G. (2025). Bibliometric Analysis of digital banking research: trends, challenges, and opportunities with a focus on brimo application. Meraja journal https://doi.org/10.33080/mrj.v8i1.403

Braga, F. D. M. A. A., Isabella, G., & Ramos, H. R. (2018). Digital payment means: The brazilian reality. An "environmental segmentation" study. Revista de Administração de Roraima - RARR, 8(1), 65–85. 10.18227/2237-8057rarr.v8i1.4886

Camenisch, J., Maurer, U., & Stadler, M. (1997). Digital payment systems with passive anonymity-revoking trustees. Journal of Computer Security, 5(1), 69–89. https://doi.org/10.1007/3-540-61770-1_26

Chaterji, Dr. Abhijeet and Thomas, Roshna, Unified Payment Interface (Upi) a Catalyst Tool Supporting Digitalization – Utility, Prospects &Amp; Issues (February 28, 2017). International Journal of Innovative Research and Advanced Studies (IJIRAS), Volume 4, Issue 2, February 2017, Available at SSRN: https://ssrn.com/abstract=3774910

Chaudhuri, B., & König, L. (2018). The Aadhaar scheme: a cornerstone of a new citizenship regime in India?. Contemporary South Asia, 26(2), 127-142.

D. waterman & G. L. Rosston (Eds.), Selected Papers from the 1996 Telecommunications Policy Research Conference (pp. 113–134). Taylor and Francis.

Dadhich, M., Pahwa, M. S., & rao, S. S. (2018). Factor Influencing to Users' Acceptance of Digital Payment System. International Journal of Computer Sciences and Engineering (IJCSE), 6(9), 46–50. https://ijcseonline.isroset.org/pdf_spl_paper_view.php?paper_id=497&10-NCICBM-ACM-2018-43.

Darma, G. S., & Noviana, I. P. T. (2020). Exploring Digital Marketing Strategies during the New Normal Era in Enhancing the Use of Digital Payment. Jurnal Mantik, 4(3), 2257-2262.

Dennis, N. (2017). Evolution of digital payments: Early learnings from Singapore's cashless payment drive. Journal of Payments Strategy and Systems, 11(4), 306–312. https://ink.library.smu.edu.sg/lkcsb_research/6198

Dziubliuk, O. (2024). Bank payment cards as the main form of modern monetary relations and basis of money circulation. Ekonomichnyy analiz, 34(1), 152-164.

Fasihizadeh, M., & Fasihizadeh, A. (2024). Legal Analysis of Direct Debit as a Modern Payment Method. ModernTechnologies Law, 5(10), 19-32.

Gabor, D., & Brooks, S. (2017). The digital revolution in financial inclusion: international development in the fintech era. New political economy, 22(4), 423-436. https://doi.org/10.1080/13563467.2017.1259298

Gaur, A., & Verma, S. (2025). E-payment: a bibliometric analysis and systematic literature review. International Journal of Indian Culture and Business Management, 34(1), 45-72.

Gochhwal, R. (2017). Unified Payment Interface - an Advancement in Payment Systems. American Journal of Industrial and Business Management, 07(10), 1174–1191. 10.4236/ajibm.2017.710084.

Goparaju, H. (2017). Digital Payment Sector: The Sunrise Industry in India: A Review. IUP Journal of Business Strategy, 14(2), 7–19.

Government of India (2022), Digital Payment Methods. Retrieved from http://cashlessindia.gov.in/digital_payment_methods.htmlon 26/10/2022.

Guo, Z., & Dan, M. A. (2023). Catching the fast payments trend: Optimal designs and leadership strategies of retail payment and settlement systems. MIS Quarterly, 47(2), 669. https://ink.library.smu.edu.sg/cgi/viewcontent.cgi?article=8894&context=sis_research

Gupta, M. (2017). Indian Banking System: Journey from Traditional to Digital. International Journal of Banking, Risk and Insurance, 5(2), 22–33.

Harshini, A. L. A (2024) Comparative Study of UPI and Traditional Payment Methods: Efficiency, Accessibility, and User Adoption. International Journal of Computer Science and Engineering Research and Development (IJCSERD), Vol.1 no.1 https://ijcserd.com/index.php/home/article/view/IJCSERD_01_01_02

Hazar, A., & Babuşcu, Ş. (2023). Financial Technologies: Digital Payment Systems and Digital Banking. Today's Dynamics. Journal of Research. Innovation and Technologies, 2(4), 162-178.

https://ijcserd.com/index.php/home/article/view/IJCSERD_01_01_02

Huang, P., & Boucouvalas, A. C. (2006). Future personal" e-payment": IRFM. IEEE Wireless Communications, 13(1), 60-66.

Jain, P., Upadhyay, D., & Purswani, G. (2021). Digital Financial Inclusion: Strategic Issues and Imperatives. Financial Inclusion in Emerging Markets, 297–309. Retrieved from Digital Financial Inclusion: Strategic Issues and Imperatives, https://doi.org/10.1007/978-981-16-2652-4_15

James, J. A. (2024). Payment systems. In Handbook of cliometrics (pp. 1509-1529). Cham: Springer International Publishing.

Joshi, Mrunal, Digital Payment System: A Feat Forward of India (October 7, 2017). Research Dimension (ISSN: 2249-3867), 2017, Available at SSRN: https://ssrn.com/abstract=3043609

Karlan, D., Ratan, A. L., & Zinman, J. (2014). Savings by and for the Poor: A Research Review and Agenda. Review of Income and Wealth, 60(1), 36-78.

Kazan, E., & Damsgaard, J. (2013). Towards A Framework of Digital Payment Platform Design A Comparative Study of Four European Solutions. ITM Communications, 2(1), 1–15.

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. Decision Support Systems, 44(2), 544–564 https://doi.org/10.1016/j.dss.2007.07.001

King, M. (2014). A conceptual framework for financial inclusion and recent evidence for SubSaharan Africa. Enacting globalization (pp. 20-32). Palgrave Macmillan, London.

Kishnani, N. (2017). Digitalization - Dawn of New Era in Banking. Jagran International Journal on Contemporary Research, 5(1), 1–13.

Klapper, L., & Singer, D. (2017). The opportunities and challenges of digitizing government-toperson payments. The World Bank Research Observer, 32(2), 211-226.

Koh, F., Phoon, K. F., & Ha, C. D. (2018). Digital financial inclusion in South east Asia. Handbook of Blockchain, Digital Finance, and Inclusion (pp. 387-403). Academic Press

Krivoruchko, S. V., Rizvanova, I. A., & Berdyshev, A. V. (2024). Development of the bank of Russia's fast payment system in modern conditions. Вестник университета, 164.

Kumar, P., & Chaubey, D. S. (2017). Demonetization and its impact on Adoption of Digital Payment: Opportunities, Issues and Challenges. Abhinav National Monthly Referred Journal of Research in Commerce & Management, 6(6), 1–14.

Kumar, R., & Choudhary, D. (2204) modern payment system with respect to rural customer's perspective-an empirical study. Journal of Management & Entrepreneurship, Vol. 16, No.4 (II), October - Dec 2022

Laxman, V., Ramesh, N., Prakash, S. K. J., & Aluvala, R. (2025). Emerging Threats in Digital Payment and Financial Crime: A Bibliometric Review. Journal of Digital Economy.
https://doi.org/10.1016/j.jdec.2025.04.002

Ligon Id, E., Malick, B., Sheth, K., & Id, C. T. (2019). What explains low adoption of digital payment technologies? Evidence from small-scale merchants in Jaipur, India. PLoS ONE, 14(7), 1–22.

MacKie-Mason, J., & White, K. (2013). Evaluating and selecting digital payment mechanisms. https://deepblue.lib.umich.edu/handle/2027.42/50457

Manao, A., Hurriyati, R., Hendrayati, H., Sudarman, S., Akbar, M. Y., Amelia, R., & Rafliansyah, F. M. (2025). Trends of Mobile Marketing Studies in the Two Last Decades: A Scoping Review using Bibliometric Analysis. Journal of Posthumanism, 5(2), 267-297.

Mas, I., & Sullivan, N. (2011). Mobile Money as an Information Utility That Touches Everyone: Refining the Vision for Financial Inclusion. Innovations: Technology, Governance, Globalization, 6(4), 17–25

Mathur, G. S. (2022). Financial Inclusion an Enabler for Growth In Digital India: An empirical Approach. Journal of Contemporary Issues in Business and Government, 28(4), 463-481
https://cibgp.com/au/index.php/1323-6903/article/view/2467

Mukherjee, M., & Roy, S. (2017). E-Commece and Online Payment in the Modern Era. International Journal of Advanced Research in Computer Science and Software Engineering, 7(5), 1-5.

Najib, M., & Fahma, F. (2020). Investigating the adoption of digital payment system through an extended technology acceptance model: An insight from the Indonesian small and medium enterprises. International Journal on Advanced Science, Engineering and Information Technology, 10(4), 1702-1708. https://doi.org/10.18517/ijaseit.10.4.11616

Olsen, M., Hedman, J., & Vatrapu, R. (2012). Designing digital payment artifacts. Proceedings of the 14th Annual International Conference on Electronic Commerce, 161–168

Otoakhia, E. I. Contemporary Analysis of Velocity of Money and Payment Systems: A Descriptive and Empirical Approach.

Owens, J. (2013). Offering Digital Financial Services to Promote Financial Inclusion: Lessons We've Learned. Innovations: Technology, Governance, Globalization, 8(1–2), 271–282.
https://ideas.repec.org/a/tpr/inntgg/v8y2013i1p271-282.html

Oyewole, O. S., Gambo, J., Abba, M., & Onuh, M. E. (2013). Electronic payment system and economic growth: a review of transition to cashless economy in Nigeria. International Journal of Scientific Engineering and Technology, 2(9), 913-918.

Pal, A., Herath, T., De', R., & Raghav Rao, H. (2021). Why do people use mobile payment technologies and why would they continue? An examination and implications from India. Research Policy, 50(6), 1–24.

Pandey, L. K., Singh, R., & Singh, A. (2025). Adopting social media payment platforms: A systematic literature review and future research agenda. Acad. Mark. Stud. J, 29, 1-20.

Panetta, F. (2018). 21st century cash: Central banking, technological innovation and digital currencies. Do we need central bank digital currency, 28-31

Patil, P. P., Dwivedi, Y. K., & Rana, N. P. (2017). Digital payments adoption: an analysis of literature, Conference on e-Business, e-Services and e-Society (pp. 61-70). Springer, Cham

Peric, K. (2015). Digital financial inclusion. Journal of Payments Strategy & Systems, 9(3), 212214 https://doi.org/10.69554/PFLH9461

Rakesh, N., Kumar, K. S., & Kumar, S. S. (2018). UPI: The Growth of Cashless Economy in India. Arabian Journal of Business and Management Review (Oman Chapter), 7(1), 36-40.

Ravi, S. (2019). Financial Inclusion, India Brooking India Report. Retrieved from https://www.brookings.edu/wp-content/uploads/2019/03/Accelerating-Fin-Inclusion-2019updated-8x10-v2.0.pdfon 02/03/2022

RBI. (2007). Reserve Bank of India - Payment and Settlement Systems. Retrieved from https://www.rbi.org.in/scripts/PaymentSystems_UM.aspxon 20/08/2022

Riegler, J. (2023). Comparative Ethics of Modern Payment Models: Does the Way We Pay for Care Align with Patient Care Ethics?. Voices in Bioethics, 9.

Riegler, J. (2023). Comparative Ethics of Modern Payment Models: Does the Way We Pay for Care Align with Patient Care Ethics?. Voices in Bioethics, 9. https://doi.org/10.52214/vib.v9i.10310

Rodima-Taylor, D., & Grimes, W. W. (2017). Cryptocurrencies and digital payment rails in networked global governance: perspectives on inclusion and innovation., Bitcoin and Beyond (pp. 109-132). Routledge.

Sahu, G. P., & Singh, N. K. (2018). Identifying critical success factor (CSFs) for the adoption of digital payment systems: a study of Indian national banks, Emerging Markets from a Multidisciplinary Perspective (pp. 61-73). Springer, Cham.

*Salehi, M., & Alipour, M. (2010). E-banking in emerging economy: empirical evidence of Iran. International Journal of economics and finance, 2(1), 201-209. **DOI:**10.5539/ijef.v2n1p201*

Savic, M., Pavlovic, N., & Milanovic, M. (2024). Analysis of Modern Payment Systems in Serbia and Countries in the Region. Oditor, 16.

Shpachuk, V., & Trinh, V. Q. (2024). Modern Payment Systems in the Banking Sector. In Modern Banking and Digitalization: The Impact of FinTech on the Banking Market (pp. 121-136). Cham: Springer Nature Switzerland. https://link.springer.com/book/10.1007/978-3-031-71422-1

SiddharthRoy (2022). UPI: India's story of a financial revolution. Retrieved fromhttps://timesofindia.indiatimes.com/blogs/unheard-echoes-of-young-mind-2/upi-indias-storyof-a-financial-revolution/on 26/10/2022

Siddik, M., Alam, N., & Kabiraj, S. (2020). Digital finance for financial inclusion and inclusive growth. In Digital transformation in business and society (pp. 155-168). Palgrave Macmillan, Cham.

Singh, S., & Rana, R. (2017). Study of consumer perception of digital payment mode. Journal of Internet Banking and Commerce, 22(3), 1-14.

Slozko, O., & Pelo, A. (2015). Problems and Risks of Digital Technologies Introduction into e- Payment. Transformations in Business & Economics, 14(1), 225–235 http://www.transformations.knf.vu.lt/34/article/prob

Soejachmoen, M. P. (2016). Financial inclusion in Indonesia: Moving towards a digital payment system in Financial Inclusion in Asia (pp. 131-186). Palgrave Macmillan, London.

Sumathy, M., & Vipin, K. P. (2017). Digital payment systems: Perception and concerns among urban consumers. International Journal of Applied Research (IJAR), 3(6), 1118-1122.

Tan, M. (2004). Electronic Payment Systems – A New Frontier. In E-payment: The digital exchange (pp. 1-16). NUS Publishing, Singapore.

Tang, Z., & Chen, L. (2022). Understanding seller resistance to digital device recycling platform: An innovation resistance perspective. Electronic Commerce Research and Applications, 51(1), 1–13. https://doi.org/10.1016/j.elerap.2021.101114

Vinitha, K., & Vasantha, S. (2017). Factors Influencing Consumer's Intention to Adopt Digital Payment - Conceptual Model. Indian Journal of Public Health Research & Development, 8(3), 170–175.DOI: 10.5958/0976-5506.2017.00181.4

Xiong, L. S., & Badarch, T. (2023). Research on Designs of Modern Payment Systems in China. American Journal of Computer Science and Technology, 6(1), 10-19. Doi 10.11648/j.ajcst.20230601.12

Xu, J. (2014). Digital Payment Systems. In Managing Digital Enterprise: Ten Essential Topics (pp. 159–175). Atlantis Press, Paris

Yu, H. C., Hsi, K. H., & Kuo, P. J. (2002). Electronic payment systems: an analysis and comparison of types. Technology in Society, 24(3), 331-347 https://doi.org/10.1016/S0160-791X(02)00012-X