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Chapter

PRESENT SCENARIO OF ELECTRONIC PAYMENT SYSTEM: PROS AND CONS

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ABSTRACT

The financial stability of each country rests heavily on its payment system, which also facilitates international trade. The use of currency is being phased out in India. To combat money laundering and lessen the role currency plays in the Indian economy, the government in New Delhi started the Digital India Campaign. In an effort to move toward a cashless India, there has been a flurry of innovation in the realm of digital payment systems. The current state of electronic payment systems demonstrates a dramatic improvement in the efficiency and security of monetary transactions. The purpose of this study was to catalog the problems plaguing e-payment systems and to propose ways to fix them. This research is the first step in what will hopefully be a thorough assessment of the many studies conducted on the topic of electronic payment systems and their many components. Recent studies were reviewed to have a deeper understanding of the many different electronic payment options now available.

Keywords: *Payment, Cashless, Electronic, Financial, Method, Electronic Payment System, Transactions*

17.1 INTRODUCTION

Electronic Payment Systems have become an essential part of the modern financial landscape. They offer convenience, security, financial inclusion, efficiency, and transparency. As technology continues to advance, we can expect electronic payment systems to evolve further, providing even more innovative and seamless ways to conduct digital transactions. An electronic payment system or a digital payment system, has revolutionized the way financial transactions are conducted in today's digital age. It refers to the process of making payments electronically, without the need for physical cash or traditional payment methods like checks. Electronic payment systems offer numerous benefits to individuals, businesses, and the economy as an entire (Ahmed et al. 2019).

An electronic payment system refers to a method of transferring money electronically, allowing individuals and businesses to make online transactions without the need for physical cash or checks. These systems enable the secure transfer of funds between parties, making it convenient and efficient for various financial activities such as online shopping, bill payments, and peer-to-peer transfers (Asokan et al., 2000).

There are several types of electronic payment systems:

- i. Credit and Debit Cards:** This is one of the most common forms of electronic payment. Users can make payments by swiping or inserting their cards into a point-of-sale (POS) terminal or by entering card details online.

- ii. **Mobile Payments:** These systems use mobile devices such as smartphones or tablets to make payments. Examples include digital wallets like Apple Pay, Samsung Pay, and Google Pay, which store payment information securely and allow users to make contactless payments at compatible terminals.
- iii. **Online Banking:** Many banks offer online banking services that enable customers to transfer funds electronically, pay bills, and make purchases online.
- iv. **Electronic Funds Transfer (EFT):** EFT allows individuals or businesses to transfer funds from one bank account to another electronically. This can be done through various channels such as Automated Clearing House (ACH) transfers, wire transfers, or online money transfer services.
- v. **Digital Currencies:** Cryptocurrencies like Bitcoin, Ethereum, and others have emerged as alternative electronic payment systems. These decentralized digital currencies utilize blockchain technology to securely record and verify transactions.
- vi. **Peer-to-Peer (P2P) Payments:** P2P payment systems enable individuals to transfer funds directly to each other, bypassing traditional intermediaries. Examples include Venmo, PayPal, and Zelle, which facilitate quick and convenient person-to-person transactions.

Electronic payment systems offer several advantages over traditional cash and check payments. They provide increased convenience, speed, and security, reducing the need for physical cash handling. Moreover, these systems often offer detailed transaction records, simplifying financial management for individuals and businesses. It's worth noting that the electronic payment landscape continues to evolve, with new technologies and innovations constantly emerging to enhance the efficiency and security of digital transactions (Shobha, 2020; Chelawat and Trivedi, 2014; Fatonah et al., 2018).

17.2 RESEARCH METHODOLOGY

The research relied on previously collected data and information. In order to make this research as thorough as possible, a number of journals, newspapers, books, and pertinent websites have been studied. The purpose of this research is to take a look at India's electronic payment infrastructure.

17.3 PROCEDURE OF ELECTRONIC PAYMENT SYSTEM

Selection of Payment Method: The user selects the preferred electronic payment method based on the available options. This could be a credit or debit card, mobile wallet, UPI, or any other supported payment instrument.

- i. **Initiation of Payment:** The user initiates the payment by providing the necessary details. This may include entering the card information, scanning a QR code, or entering the recipient's payment details.
- ii. **Authorization:** The payment system verifies the user's identity and checks if the funds are available or if the transaction meets the necessary criteria for approval. This step ensures that the payment is valid and authorized.
- iii. **Processing:** Once the payment is authorized, the payment system processes the transaction. This involves transferring the funds from the user's account to the recipient's account, either directly or through intermediaries such as banks or payment processors.
- iv. **Confirmation:** The user receives a confirmation of the successful payment. This may be in the form of a transaction receipt, a confirmation message on a mobile app, or an email notification.
- v. **Settlement:** In this step, the payment system settles the funds between the relevant parties. This could involve transferring the funds to the merchant's account, crediting the recipient's wallet or bank account, or other settlement processes depending on the specific payment method.
- vi. **Record Keeping:** The payment system generates a record of the transaction, which is stored for future reference. This record may include transaction details such as the amount, date, time, and parties involved.

It is important to note that the exact procedure can vary depending on factors such as the payment method, the platform or service provider used, and any additional security measures or authentication requirements. Different payment systems may have their own specific steps and processes, but the underlying principles of authorization, processing, and settlement remain consistent (Franciska et al., 2020; Hassooni et al., 2020; Kumar, 2019).

17.4 USABILITY OF ELECTRONIC PAYMENT SYSTEM

The demand for electronic payment systems has witnessed a significant surge in recent years, driven by various factors and changing consumer behaviours. As technology advances and society becomes increasingly digitalized, the convenience, speed, and security offered by electronic payment systems have become essential for individuals, businesses, and the overall economy. One major driver of the demand for electronic payment systems is the shift towards a cashless society. Consumers are embracing the convenience of digital transactions, as they eliminate the need to carry physical cash or visit physical locations to complete financial transactions. Electronic payment systems enable individuals to make purchases, pay bills, transfer funds, and conduct business transactions with just a few clicks or taps on their smartphones or computers (Malusare 2021).

The growth of e-commerce has also fueled the demand for electronic payment systems. As online shopping continues to gain popularity, consumers require secure and efficient methods to make payments online. Electronic payment systems seamlessly integrate with e-commerce platforms, providing a seamless checkout experience and enabling consumers to shop from anywhere in the world. Moreover, the COVID-19 pandemic is one of the reasons to accelerate the embracing of electronic payment systems. The emphasis on hygiene and social distancing has driven the demand for contactless payment methods. Electronic Payment Systems like mobile wallets and contactless cards, have emerged as preferred options for consumers to make touchless transactions, reducing the risk of spreading the virus (Nagaraj, 2023).

Financial inclusion is another critical factor contributing to the demand for electronic payment systems. In many developing countries such as India, electronic payment systems have played a crucial role in extending financial services to previously unbanked or underbanked populations. These systems provide individuals with access to digital payment solutions, enabling them to participate in the formal economy, receive payments, and engage in financial activities. The demand for electronic payment systems is also driven by the desire for enhanced security and fraud prevention. Cash transactions carry inherent risks, such as theft and counterfeiting, whereas electronic payment systems employ robust security measures, including encryption, tokenization, and multi-factor authentication, to protect sensitive financial information. Consumers and businesses seek the security and peace of mind offered by electronic payment systems (Roy, 2015).

Furthermore, electronic payment systems have the potential to drive economic growth and efficiency. By reducing reliance on cash, these systems improve

transparency and accountability in financial transactions, making it easier to track and analyze economic activity. They also enable businesses to streamline their operations, reduce costs associated with cash handling, and enhance overall financial management.

In summary, the demand for electronic payment systems is fueled by the growing preference for convenience, speed, security, financial inclusion, and the need to adapt to a digitalized world. As technology continues to advance, and more individuals and businesses recognize the benefits of electronic payments, the demand for these systems is expected to increase further, shaping the future of commerce and financial transactions.

17.5 ADOPTION OF ELECTRONIC PAYMENT SYSTEM IN INDIA

In India, electronic payment systems have seen significant growth and adoption in recent years. The government's push for a digital economy, increased smartphone penetration, and the availability of internet connectivity have contributed to the widespread use of electronic payment systems. Here are some prominent electronic payment systems in India:

- **Unified Payments Interface (UPI):** It is a real-time payment system which is developed by the National Payments Corporation of India (NPCI). It enables users to link multiple bank accounts to a single mobile application and make instant money transfers between bank accounts. UPI has gained tremendous popularity and is widely used for person-to-person transfers, bill payments, and merchant transactions.
- **Bharat Interface for Money (BHIM):** BHIM is a UPI-based mobile app launched by the Government of India. It provides a simple and secure way to make digital payments by utilizing UPI infrastructure. BHIM allows users to send or receive money using virtual payment addresses (VPAs) or scanning QR codes.
- **Mobile Wallets:** Mobile wallet applications such as Paytm, PhonePe, Google Pay (previously Tez), and Amazon Pay have gained substantial user bases in India. These wallets allow users to store funds digitally and make payments at various online and offline merchants, pay utility bills, recharge mobiles, and send money to other wallet users.
- **Aadhaar Enabled Payment System (AEPS):** AEPS is a biometric-based payment system that enables individuals to perform banking transactions using their Aadhaar number and fingerprint authentication. It is particularly useful for

individuals who do not have a smartphone or access to traditional banking services.

- **National Electronic Funds Transfer (NEFT) and Real-Time Gross Settlement (RTGS):** NEFT and RTGS are electronic fund transfer systems offered by banks in India. NEFT allows individuals and businesses to transfer funds between bank accounts electronically, usually with deferred settlement. RTGS, on the other hand, facilitates real-time, large-value fund transfers.
- **Prepaid Payment Instruments (PPIs):** PPIs are payment instruments issued by authorized entities that facilitate the purchase of goods and services. Examples include prepaid cards, digital wallets, and other instruments with stored monetary value. PPIs are widely used for online transactions, bill payments, and mobile recharges.

It's essential to note that the electronic payment landscape in India is constantly evolving, and new systems and innovations continue to emerge. The Reserve Bank of India (RBI) and NPCI play significant roles in regulating and promoting secure and efficient electronic payment systems in the country (Shanmugam, 2014).

17.6 BENEFITS OF INDIA'S DEVELOPING ELECTRONIC PAYMENT SYSTEM

Following are few benefits of electronic payment systems in India:

- **Financial Inclusion:** Electronic Payment Systems have played a vital role in promoting financial inclusion in India. They have made it easier for individuals, especially those in rural areas, to access and use banking services. Mobile payment systems and digital wallets have provided a platform for the unbanked population to send and receive money, make payments, and save digitally.
- **Convenience and Accessibility:** Electronic payment systems offer convenience and accessibility to users. With a smartphone and internet connectivity, individuals can make payments, transfer funds, and conduct financial transactions anytime and anywhere. This has reduced the dependence on physical cash and the need to visit brick-and-mortar banks or ATMs.
- **Speed and Efficiency:** Electronic payment systems facilitate instant and near-real-time transactions. Whether it's UPI transfers or mobile wallet payments, transactions are processed quickly, enabling immediate access to goods and services. This speed and efficiency have transformed the way individuals and businesses conduct their financial activities.

- **Cost Savings:** Electronic payment systems have the potential to reduce costs associated with cash handling and traditional banking services. With digital transactions, there is no need for printing and transporting physical currency, and businesses can avoid the costs of cash management, security, and manual reconciliation.
- **Enhanced Security:** Electronic payment systems in India are built with robust security measures to protect user information and transactions. Strong encryption, two-factor authentication, and biometric verification (such as fingerprint or iris scanning) provide layers of security, reducing the risk of fraud and unauthorized access.
- **Transparency and Accountability:** Digital transactions leave a clear audit trail, providing transparency and accountability. Users can easily track their transaction history, view receipts, and reconcile their finances. This transparency is especially beneficial for businesses, allowing for better financial management and easier tax compliance.
- **Promoting Cashless Economy:** The adoption of electronic payment systems has helped in promoting a cashless economy in India. With initiatives like demonetization and government campaigns encouraging digital transactions, people have been encouraged to shift from cash-based transactions to electronic modes. This has resulted in reduced reliance on physical currency and increased formalization of the economy.
- **Boosting Digital Entrepreneurship:** Electronic payment systems have facilitated the growth of digital entrepreneurship in India. Small businesses and individuals can easily set up online stores, accept digital payments, and participate in the e-commerce ecosystem. This has opened up opportunities for micro-entrepreneurs, artisans, and small-scale businesses to reach a wider customer base and grow their businesses.

Overall, electronic payment systems in India offer numerous advantages, including financial inclusion, convenience, speed, cost savings, security, transparency, and the promotion of a cashless economy. These systems have transformed the way people transact and have contributed to the digital transformation of the Indian economy.

17.7 POTENTIAL DRAWBACKS OF EPS IN INDIAN SETTING

While electronic payment systems in India have numerous advantages, there are also some challenges and potential drawbacks. Following are some cons related to electronic payment systems in India:

- **Digital Divide:** Despite the increasing adoption of electronic payment systems, there is still a significant digital divide in India. Many individuals, particularly in rural areas, lack access to smartphones, stable internet connectivity, or the necessary digital literacy to use these systems effectively. This hampers their ability to participate fully in the digital economy.
- **Technological Infrastructure:** While urban areas in India generally have reliable technological infrastructure, including internet connectivity and payment infrastructure, rural areas often face infrastructure limitations. Inadequate internet connectivity, power outages, and limited point-of-sale (POS) terminals can hinder the smooth functioning of electronic payment systems, particularly in remote areas.
- **Dependency on Technology:** Electronic payment systems heavily rely on technology, such as smartphones, payment apps, and digital networks. System outages, technical glitches, or cyber-attacks can disrupt services and cause inconvenience or financial losses for users. Technical failures can temporarily hinder the accessibility and reliability of electronic payment systems.
- **Security Risks:** While electronic payment systems incorporate security measures, there is always a risk of security breaches, fraud, and unauthorized access. Cybercriminals may attempt to steal sensitive user data, hack into payment platforms, or engage in phishing attacks. Users need to be vigilant and adopt best practices to mitigate these risks.
- **Cash Dependency:** While electronic payment systems have gained popularity, cash still plays a significant role in daily transactions in India. Not all merchants or service providers, especially in rural areas or small towns, accept electronic payments. This can limit the utility and convenience of electronic payment systems in certain contexts.
- **Transaction Costs:** While digital payments can be cost-effective, there are instances where transaction costs may come into play. Some electronic payment systems charge fees for certain transactions, particularly when transferring funds

across different payment platforms or withdrawing cash from wallets. These costs can be a burden, especially for individuals with limited financial resources.

- **Regulatory Challenges:** The regulatory environment for electronic payment systems in India is complex and subject to frequent updates. Regulations surrounding issues such as data privacy, customer protection, and interoperability among different payment platforms can impact the ease of use and innovation in the electronic payment ecosystem.
- **Dependency on Third Parties:** Many electronic payment systems rely on third-party intermediaries, such as banks, payment processors, or wallet providers. The performance and reliability of these intermediaries can affect the overall user experience. Any disruption in their services can impact the availability and functionality of electronic payment systems.

It's important to note that these challenges are not unique to India and are inherent to the adoption of electronic payment systems in any country. Efforts are being made by the government, regulatory authorities, and industry players to address these challenges and enhance the accessibility, security, and efficiency of electronic payment systems in India.

17.8 MILESTONES ACHIEVED IN INDIAN SCENARIO

Unified Payments Interface (UPI) Usage:

- UPI transactions in India crossed the 3 billion marks in December 2020.
- UPI recorded over 2.3 billion transactions in August 2021, with a transaction value of over INR 4.16 trillion.

Mobile Wallet Usage:

- As of December 2020, the number of mobile wallet users in India was estimated to be around 375 million.
- Paytm, one of the leading mobile wallet providers in India, claimed to have over 450 million registered users as of December 2020.

Digital Payment Transactions:

- Digital payment transactions in India are growing rapidly. As of September 2021, non-cash transactions accounted for about 63% of the total consumer payments in terms of volume.

- According to the Reserve Bank of India (RBI), the volume of digital payment transactions in India increased by 36% from 2018 to 2019.

Aadhaar Enabled Payment System (AEPS):

- As of December 2020, AEPS transactions in India reached over 105 million, with a transaction value of over INR 14,000 crore.

Online Banking:

- Online banking transactions have seen significant growth. As of September 2021, the number of online banking transactions in India increased by 26% compared to the previous year.
- In 2019, the value of online banking transactions in India amounted to over INR 8,000 trillion.

17.9 SOME RECENT FIGURES

During the fiscal year (FY) 2021-2022, the total volume of digital payments in India grew by 33% over the previous year. The Ministry of Electronics and IT (MeitY) reports that during this time period there were a total of 7,422 crore digital payment transactions, an increase over the 5,554 crore transactions witnessed in FY 2020-21.

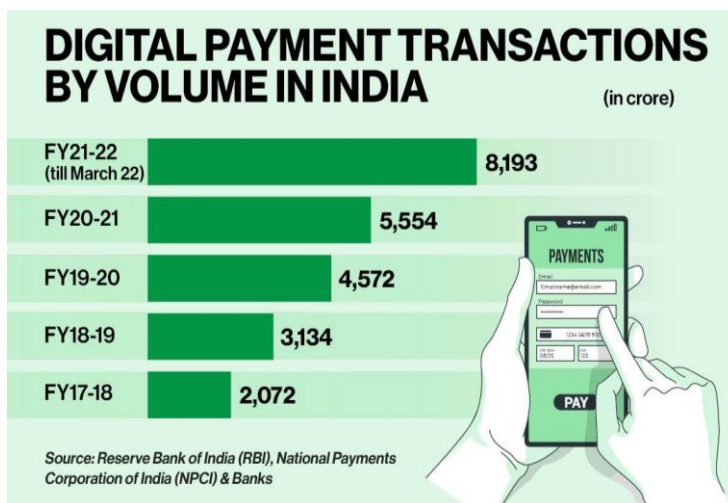


Figure-17.1: Value of Digital Transaction

Source: Reserve Bank of India (RBI), National Payments Corporation of India (NPCI) & Banks

Until the end of February, 452.75 billion transactions totalling 8.27 lakh crore were conducted using the universal payment interface (UPI) provided by the National Payments Corporation of India (NPCI). The number of UPI transactions in February was almost double the level recorded in the same month a year earlier, as reported by NPCI. There were 229.2 billion UPI transactions in February 2021, totalling 4.25 lakh crore. This demonstrates a near-doubling of monthly UPI use over the last year (Yadav et al., 2022). According to NPCI statistics, in February, the most popular UPI app was PhonePe, with 212 crore transactions. In second place was Google Pay, with 152.4 crore transactions. Since 2019, India has become the most advanced market for online financial transactions. ACI Worldwide found that in March 2021, India had the highest volume of real-time payments at 2,550 crores, followed by China at 1,570 crore and South Korea at 600 crores. The United States, with 120 billion transactions, placed ninth (Sujith and Julie, 2017).

17.10 CONCLUSION

In the present scenario, electronic payment systems have gained significant traction in India, revolutionizing the way financial transactions are conducted. Assessing the pros and cons of these systems provides a comprehensive understanding of their impact on the Indian economy and society.

Furthermore, electronic payment systems have improved the efficiency and transparency of financial transactions in India. Digital payments leave an electronic trail, making it easier to track and analyze financial data for businesses, regulatory bodies, and tax authorities. This has led to increased transparency, reduced tax evasion, and enhanced accountability in the economy. However, certain challenges exist in the Indian context. The digital divide remains a significant hurdle, as a substantial portion of the population still lacks access to smartphones, reliable internet connectivity, and digital literacy. This limits the widespread adoption of electronic payment systems, particularly in rural areas, where cash transactions continue to dominate. Moreover, while electronic payment systems have made significant strides, cash transactions are deeply ingrained in Indian society. Many merchants, especially in small towns and rural areas, still prefer cash payments. This poses a challenge for the seamless integration and acceptance of electronic payment systems across all sectors.

In conclusion, the present scenario of electronic payment systems in India reflects a transformative shift towards digital transactions. The pros, including convenience, financial inclusion, efficiency, and improved transparency, outweigh the cons. While challenges such as the digital divide and cash dependency persist, efforts by the government, regulatory authorities, and industry stakeholders are continuously

addressing these issues to ensure wider adoption and seamless integration of electronic payment systems in India. With continued technological advancements, improved infrastructure, and increased awareness, electronic payment systems are poised to play a vital role in India's journey towards a digitally empowered and financially inclusive society.

REFERENCES

1. Ahmed, Awais & Aziz, Abdul & Muneeb, Muhammad. (2019). *Electronic payment system: A complete guide*. *Journal of Multidisciplinary Sciences*. 1. 1-17. 10.33888/jms.2019.121.
2. Asokan, N. & Janson, Phil & Steiner, Michael & Waidner, Michael. (2000). *Electronic Payment Systems*.
3. B.G, Shobha. (2020). *Digital Payments-Analysis of Its Present Status in India*. 2320-2882.
4. Chelawat, Hemlata & Trivedi, I.V. (2014). *Implications of Emerging Electronic Payment Systems in India: A Strategic Overview*. *Journal of Multidisciplinary Research*. 6.
5. Fatonah, S & Yulandari, A & Wibowo, Ferry. (2018). *A Review of E-Payment System in E-Commerce*. *Journal of Physics: Conference Series*. 1140. 012033. 10.1088/1742-6596/1140/1/012033.
6. Franciska, Martina & Sahayaselvi, S. (2020). *Current Scenario of E-Payment in India*. 10.13140/RG.2.2.14193.61281.
7. Hassooni, Marwah & Hameed, Methaq & Taha, Mustafa. (2020). *A study of electronic payment system*. *IOP Conference Series: Materials Science and Engineering*. 767. 012008. 10.1088/1757-899X/767/1/012008.
8. Kumar, Atul. (2019). *A study of significant characteristics of e-payment regime in India*. 7. 109-113. 10.5281/zenodo.6671536.
9. Malusare, Lalita. (2021). *Digital Payments Methods in India: A study of Problems and Prospects*. *International Journal of Scientific Research & Management Studies*.
10. Nagaraj, Rameshkumar. (2023). *Digital Payment System and Its Impact on Indian Economy. Impact of Changing Banking Practices on the Indian Economy (pp.186-190)*Publisher: Multi Spectrum Publications
11. Roy, Sanghita. (2015). *Overview of electronic payment system: A special reference to India*. 10.4018/978-1-4666-8598-7.ch017.
12. Shanmugan, Subramanian. (2014). *PAPER-FREE PAYMENT SYSTEMS IN INDIA-AN ANALYTICAL STUDY*. 976-6502.
13. T S, Sujith & D, Julie. (2017). *Opportunities and Challenges of E- Payment System in India*. *International Journal of Scientific Research and Management*. 10.18535/ijstrm/v5i9.02. T S, Sujith & D, Julie. (2017). *Opportunities and Challenges of E- Payment System in India*. *International Journal of Scientific Research and Management*. 10.18535/ijstrm/v5i9.02.
14. Yadav, Parmeshwar & Sinha, Ms. (2022). *Paradigm Shift Of Digital Payments In India (The Covid-19 Case)*.