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Research Paper

Opportunities and Challenges of Digital Payments in India

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Abstract:

The Ministry of India's main initiative, the Digital India Programme, aims to make India a knowledge-based society and economy. "Faceless, Paperless, Cashless" is one of the professed roles of Digital India. The methodology for the work uses secondary data from research papers and information from the government, newspapers, the internet, article bulletin, and RBI publications. The study examined digital payment methods, opportunities, and challenges in India. This is a digital system, which helps to transfer money 24/7 Payments are made using a variety of electronic payments. Digital payments in India have the potential to transform the economy by promoting financial inclusion, increasing transparency, and promoting economic growth.

Keywords: Digital payment, Internet Banking, Mobile banking, E-payment.

Introduction:

Online or digital transactions that don't include a real money exchange are known as "digital payments." The payer and the payee, respectively, employ electronic means to exchange money in this case. To promote and encourage digital payments in the nation, the Indian government has been implementing several actions. The goal of the "Digital India" Programme is for the government to establish a "digitally empowered" "Faceless, Paperless, Cashless" economy. Digital payments come in a variety of forms and execution strategies. Digital payment is an efficient and cost-effective method of payment. It is convenient and secure. Digital transactions do not require any physical credit card, cash or bank account, providing a simple and safe way for consumers to make payments without any hassle. It is faster, more secure and cheaper than traditional payment methods such as cash or bank with more people using mobile for payments, digital payments are changing how we pay for everyday goods and services. Digital payments are a convenient way to pay for goods and services. People use digital payment systems like credit cards, mobile wallets, or bank accounts to buy items online, in physical stores, or by phone. Digital payments work just like any other form of payment: when you shop online, your credit card information is called upon, and the payment is processed automatically through your bank account. Digital payment has become very popular in the world, so many stores are using it to accept payment. It just may take some time to get used to this new thing. Digital payments make the payment process faster and easier for everyone, from businesses to consumers. Try out digital payments for free today. Digital payments are the future of money, and all of us will use them in some way over the next few years. It's not just about credit and debit card payments anymore. With digital, it's less expensive and more secure if you choose the best method. There's also a wide range of payment options that can fit your lifestyle and make shopping online so much easier digital payments are a direct, fast and convenient way to pay for everything you spend. You can make digital payments when you shop online, in-store or even at the ATM. Digital payments are the future of money, and we're helping to pave the way with our digital payment cards. Digital money is growing in popularity and becoming a bigger part of your life. Digital payment providers are rapidly gaining momentum and are expected to provide a variety of user-friendly solutions. Electronic transactions are expected to account for 20% of all transactions in 2030, according to a World Bank estimate. This is more than double the percentage of all transactions that were done in cash in 2014, as it was expected that 20% would go through digital payments by then. A digital currency is a form of money that is stored and transferred electronically in the cloud. Like paper money, digital currency can be used to buy items from a merchant but with one major difference: you can do so in real time, without sending them physical cash, which makes it easier for merchants to accept. This means that you need only have an internet connection to use the digital payment. Digital payments have several advantages over traditional payment methods, including fewer fees and more ease of use. In the age of digital payment, security and privacy have become major digital payments. Digital payment is the most secure method of payment and can be instantly sent and received at a very less fee. It reduces the cost of transactions and provides better security with your identity being secure due to numerous security features present within digital payments. digital payment is a system that allows the receiving bank to make payments through the internet. This is a digital system, which helps to transfer money 24/7 Payments are made using a variety of electronic payments.

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Literature Review:

Pahwa & Raj[2021] in their research, they have stated the digital payment method and the problems of its uses. Data is gathered from the users of e-payment methods in Delhi-NCR for this exploratory project. The most common issues clients have when using electronic payment methods are transaction difficulty, security, and inadequate internet connectivity. Findings of the study the three biggest issues that consumers encountered when using e-payment methods for purchases of goods and services are transaction failure, identity theft, and internet connectivity.

Shobha B.G. [2020] studied that India now has the chance to empower its people, encourage their use, and get rid of the antiquated banking system thanks to digital payments. It has now become crucial to comprehend and evaluate the current state of digital payment. This study used secondary data to examine the current state of various digital payments and discovered that use of digital modes has significantly increased over the past five years. The study's goal is to draw policymakers' attention to the issue so that everyone may benefit from digitization. Although digitalized payments are becoming more prevalent, cash is still king in many urban areas and the majority of rural areas. The main findings of the study regarding both the number and value of transactions, there has been a tremendous surge in the use of RTGS, ECS, NEFT, UPI, NACH, Credit cards, Debit cards, POS, and PPIs.

Dhanya B K [2019] in their research, they have stated the consumer perception of digital mode. The objective of the study is to know the awareness of digital payment and the most popular digital payment mode preferred by the customer. The study employs both secondary and primary data and is conducted in a descriptive manner. secondary information gathered from numerous published sources. Through the use of interviews, primary data are gathered from customers. Young, adult and senior age groups are separated into three categories for these customers. The results of this study can be used by decision-makers to adopt and improve the digital payment system and to understand how it affects user perception and intention. Users place a lot of emphasis on digital payments, and they are aware of how innovative technology and banking services have become a part of the new way of life.

Sujith and Julie[2017] in their research, have stated the opportunities and challenges of electronic payment systems in India. they used descriptive research methods and authentic secondary data-based research papers such as journals, research papers, magazines, articles, and websites. The objectives of the study are to explain the modes of e-payment, opportunities, challenges and prospects of the digital payment system in India. The main findings of the study e the payment system in India does not include physical cash or check it includes credit card and debit card smart card e- wallet etc. The usage of payment mechanisms, some of which we've examined in this article, has been the primary factor in the development of e-commerce online work. Theft of payment information, personal information, and fraudulent client rejection are the risks associated with online payments.

Franciska & Sahayaselv [2017] in this study, examined an overview of digital payments. this study focused on knowing the various types of digital payment .and exploring the many digital payment methods provided by the financial institution. The research is supported by secondary data. To conduct an effective study, books, journals, newspapers, and pertinent websites were consulted and used to gather the study's contents. The outcome suggests that the digital revolution has made transactions using less cash simple. As a result, 4018 billion transactions were made using mobile banking in 2015–2016, up from 60 billion in 2012–2013. Digital payments are being made in more remote locations thanks to the expansion of mobile networks, the Internet, and energy. It follows that a cashless transaction system is the way of the future.

Mamta et al., [2016] in their study have stated that the inquiry attempted to detect the problems and difficulties with electronic payment systems and provide some solutions to raise the standard of e-payment systems. Electronic payment system deployments are successful when security and protection concerns are managed in a way that appeals to both buyers and sellers and increases market trust in the system.

Objectives

1. To understand the digital payments of India.
2. To explain the digital payment methods of India.
3. To explain the opportunities and challenges of digital payment.

Research Methodology

The methodology for the work uses secondary data from research papers and information from the government, newspapers, the internet, article bulletin, and RBI publications. The descriptive methodology was utilized in this investigation. The secondary sources used for the data collection were articles, journals, books, websites, survey reports, committee reports, and publicly available government data. A descriptive research approach was employed.

Digital Payment: The Ministry of India's main initiative, the Digital India Programme, aims to make India into a knowledge-based society and economy. "Faceless, Paperless, Cashless" is one of the professed roles of Digital India. A variety of digital payment methods are offered in an effort to encourage cashless transactions and make India a society that uses less cash.

Digital payment methods in India

Digital payments are becoming increasingly popular and convenient in today's world. Here are some of the most common modes of digital payment:

Internet Banking: also known as online banking, is a service provided by banks and financial institutions that allows customers to access and manage their accounts over the internet. With internet banking, customers can perform a wide range of transactions and banking services, including checking account balances, transferring funds between accounts, paying bills, and applying for loans or credit cards. Internet banking services are typically secure, using encryption technology and other security measures to protect customers' personal and financial information. However, it is important for customers to take steps to protect their online banking credentials, such as creating strong passwords and keeping their login information confidential.

Banking Cards: More security, convenience, and control are provided by banking cards to consumers than by any other form of payment. A lot of freedom is also provided by the large range of cards that are accessible, including credit, debit, and prepaid cards. These cards offer two-factor verification, such as a secure PIN and an OTP, for safe transactions. Some examples of card payment methods are RuPay, Visa, and MasterCard. People can make purchases with payment cards in-person, over the phone, online, through mail-order catalogues, and at retail establishments. They facilitate easy transactions by saving both customers and retailers' time and money.

Debit Card: A debit card is a payment card that is linked to a checking or savings account at a bank or credit union. When a debit card is used to make a purchase, the funds are directly deducted from the cardholder's account. Debit cards can be used to withdraw cash from ATMs, make purchases online and in-person, and transfer money to other bank accounts. Debit cards can be used at merchants that accept payment through card networks such as Visa, Mastercard, or American Express. Some debit cards also offer rewards programs, cashback incentives, and fraud protection.

There are two types of debit cards: PIN-based and signature-based. A PIN-based transaction requires the cardholder to enter a personal identification number (PIN), while a signature-based transaction requires the cardholder to sign a receipt. Debit cards are widely used and accepted globally as a convenient and secure method of payment. However, it is important for cardholders to monitor their account activity and protect their card information to prevent fraudulent transactions.

Credit card: A credit card is a payment card that allows cardholders to borrow funds from a financial institution to make purchases or obtain cash advances. When a credit card is used to make a purchase, the cardholder is essentially borrowing money from the card issuer, with the promise to pay it back later. Credit cards typically come with a credit limit, which is the maximum amount of money a cardholder can borrow at any given time. Cardholders are required to make minimum monthly payments on their credit card balance, which includes the principal amount borrowed plus interest and any applicable fees.

Credit cards can be used to make purchases online and in-person, as well as withdraw cash from ATMs. Some credit cards also offer rewards programs, cashback incentives, and other perks such as travel insurance or extended warranties on purchases. Credit cards are widely accepted globally and are a convenient method of payment for many consumers. However, it is important for cardholders to use credit responsibly,

Prepaid Cards: Prepaid cards are similar to credit/debit cards but require the user to load funds onto the card before making a purchase. They can be used online or offline, just like credit/debit cards.

Mobile Banking: The most well-known digital banking option is mobile banking. It connects your smartphone to the bank. More than 200 banking transactions can be completed at any time, from the convenience of your home, workplace, or anywhere else in the world. In every person's daily life, a mobile phone is the technological equipment that is used the most frequently. A different method of offering banking services is mobile banking. Due to India's position as the second-largest telecom market in the world, there is a significant opportunity to develop mobile banking services throughout the nation.

Mobile Wallets: Mobile wallets are digital wallets that allow users to store payment information, such as credit card or bank account details, on their mobile devices. With a mobile wallet, users can make payments using their smartphones or other mobile devices, without the need for cash or physical payment cards.

Mobile wallets can be used to make payments in-person at merchants that accept payment through contactless payment systems, as well as online and in-app purchases. Some mobile wallets also offer features such as loyalty programs, coupons, and ticketing. Popular mobile wallet services include Apple Pay, Google Pay, Samsung Pay, PayPal, and Venmo. These services typically use near-field communication (NFC) technology or barcode scanning to facilitate payments

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QR codes: QR codes, or Quick Response codes, are two-dimensional barcodes that can be scanned using a smartphone or other mobile device equipped with a camera. QR codes can store a variety of information, such as website URLs, contact information, and payment information. In the context of digital payments, QR codes are becoming increasingly popular as a method of facilitating transactions. Merchants can display a QR code at their point of sale, and customers can scan the code using their smartphones to initiate a payment.

QR code payments can be used for both in-person and remote transactions, and they are typically processed through a mobile wallet or a banking app. QR codes can be more secure than traditional payment methods, as they can include dynamic authentication methods such as one-time passwords or biometric authentication. There are some popular QR codes ie. Paytm, Phone pay, Google Pay, Amazon pay etc.

Unstructured Supplementary Service Data (USSD)

The introduction of Unstructured Supplementary Service Data (USSD) has made it possible for digital payments to be more widely accepted and accessible. Users of this service can conduct business via mobile without a data connection by dialling *99# on any feature phone. Interbank account to account fund transfers, balance inquiries, mini statements, and other options are available through the interactive menu on the phone. In order to use this approach, the user must connect their phone to their bank account. To make digital transactions accessible to everyone, this direct-to-consumer solution combines two disparate industries: banks and telecom service providers.

Unified Payments Interface (UPI): Unified Payments Interface (UPI), which unifies various bank accounts and associated features on a smartphone application, is one of the most popular digital payment methods in India. Users can use the app to link their bank accounts and conduct transactions using their preferred account. Compared to other well-liked methods like NEFT, RTGS, or IMPS, UPI has made bank transfers much simpler. To send and receive money, The Unified Payments Interface employed a virtual ID as a unique identification, doing away with the need to repeatedly remember and enter bank details.

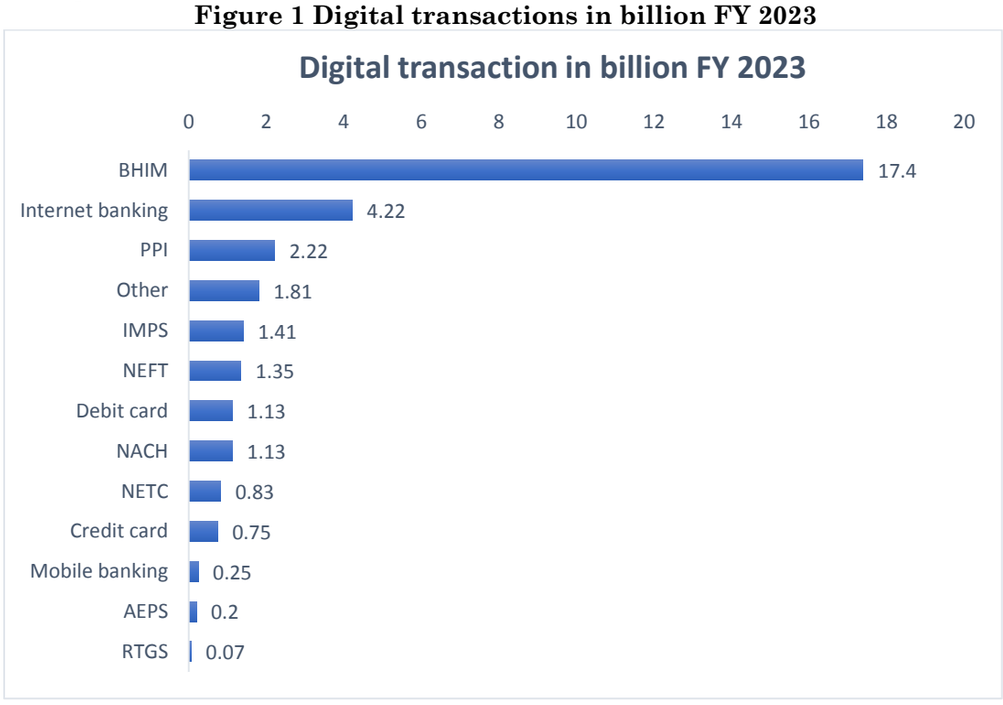
With 5.58 billion transactions totaling Rs 9.83 trillion in April 2022, the Unified Payments Interface (UPI) experienced its biggest monthly volume ever.

Aadhaar Enabled Payment System (AEPS): is a payment system in India that allows customers to make financial transactions using their Aadhaar number and biometric authentication. Aadhaar is a unique identification number issued to Indian citizens that is linked to their biometric data and demographic information.

With AEPS, customers can use their Aadhaar number and biometric authentication to access a range of banking services, including cash withdrawals, balance inquiries, and fund transfers, through their bank account. AEPS transactions can be initiated through a micro-ATM, which is a handheld device provided by banks to banking correspondents or merchants in remote or rural areas. AEPS is supported by the National Payments Corporation of India (NPCI), and it is a part of the government's broader Digital India initiative, which aims to promote the use of digital technology to improve access to government services and financial inclusion.

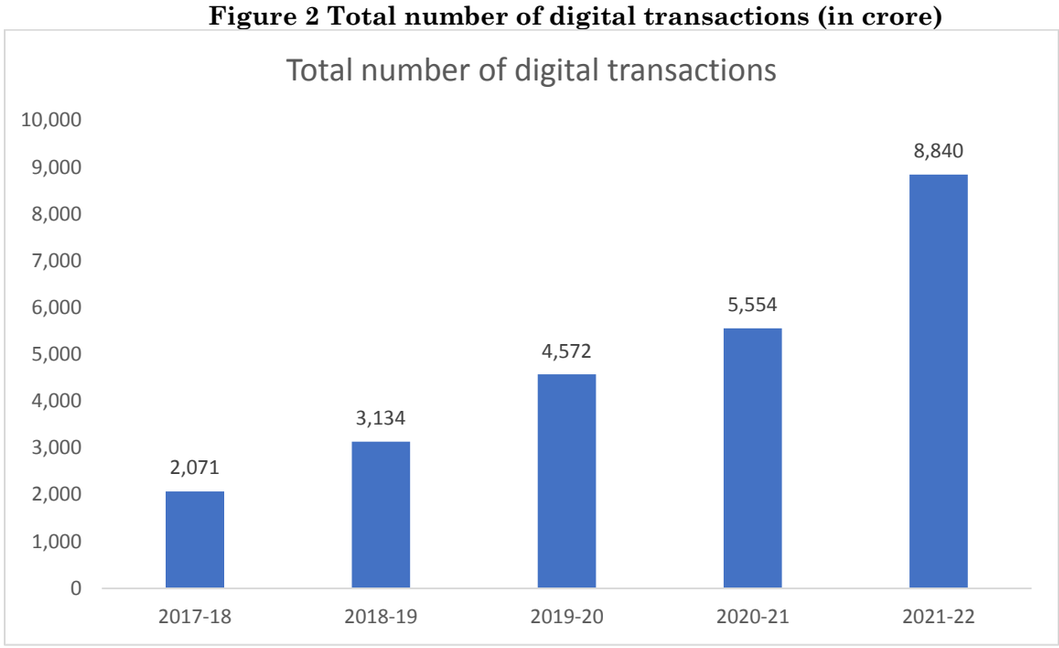
Data Interpretation

Figure 1 Digital transactions in billion FY 2023



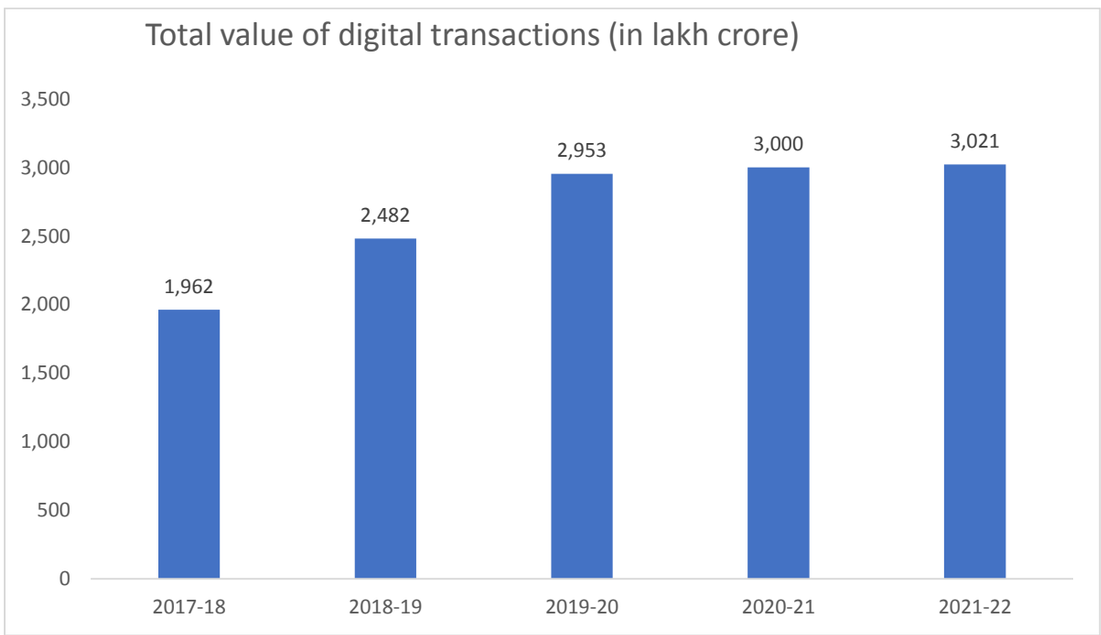
Source: Statista
By mode, the number of digital payments made in India in FY 2023. With an estimated 17 billion transactions since like December 2022, BHIM, or the Bharat Interface for Money, became the most popular method of digital transaction in India. Following were almost 4 billion transactions in internet banking.

Figure 2 Total number of digital transactions (in crore)

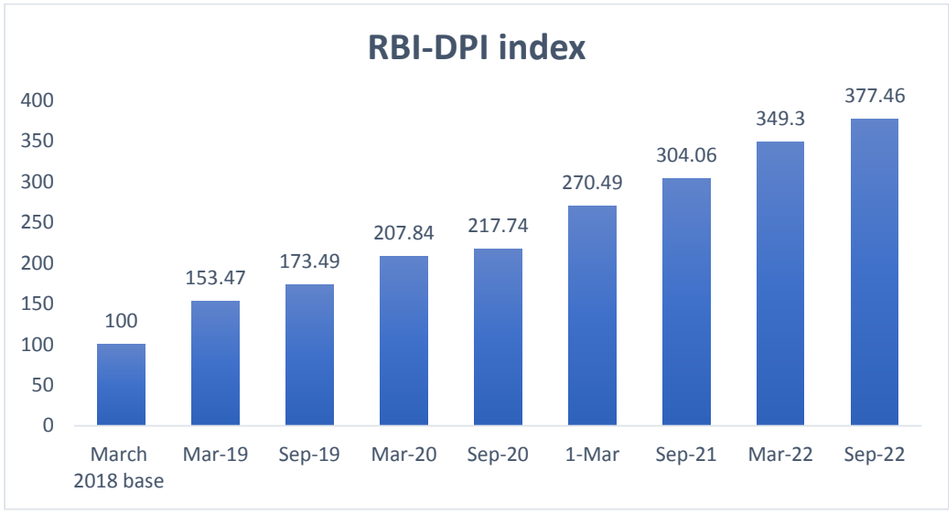


Source: RBI, NPCI and banks
Note: The major electronic payment methods are taken into account: BHIM-UPI, IMPS, NACH, AePS, NETC, debit cards, credit cards, NEFT, RTGS, PPI, and others.
Through the Government's collective efforts and those of other interested parties, the number of digital payment transactions has greatly expanded, rising from 2,071 crores in FY 2017–18 to 8,840 crore in FY 2021–22. (Source: RBI, NPCI and banks).

Figure 3 Total value of digital transactions (in lakh crore)



Source: RBI, NPCI and banks
Note: The major electronic payment methods are taken into account: BHIM-UPI, IMPS, NACH, AePS, NETC, debit cards, credit cards, NEFT, RTGS, PPI, and others.
Figure 4 RBI-DPI index



Source: RBI, NPCI and banks

Period RBI - DPI Index March 2018 (Base) 100 March 2019 153.47 September 2019 173.49 March 2020 207.84 September 2020 217.74 March 2021 270.59 September 2021 304.06 March 2022 349.30 September 2022 377.46

Opportunities of digital payments in India

Digital payments in India offer several opportunities to businesses, individuals, and the economy. Here are some of the key opportunities:

1. Financial Inclusion: Digital payments can help to increase financial inclusion by providing access to banking and payment services to people who may not have had access to traditional banking services before.
2. Convenience: Digital payments offer a convenient way for consumers to make transactions without the need for cash or physical payment cards. This can save time and reduce the risk of theft or loss of cash.
3. Cost-Effective: Digital payments can be cost-effective for businesses as they eliminate the need for cash handling and processing fees associated with traditional payment methods. This can result in lower transaction costs and increased efficiency.
4. Improved Security: Digital payments offer improved security as they eliminate the risks associated with carrying cash and the possibility of counterfeit currency. Digital payment systems also typically use encryption technology and other security measures to protect personal and financial information.
5. Increased Transparency: Digital payments can improve transparency in transactions and reduce the risk of fraud and corruption. Digital payment systems can provide an auditable trail of transactions, making it easier to detect and prevent fraudulent activities.
6. Boost to the Economy: Digital payments can boost the economy by promoting financial inclusion, reducing the informal cash-based economy, and increasing tax revenues for the government.

Challenges of digital payments in India

While digital payments in India offer many opportunities, they also face several challenges that need to be addressed. Here are some of the key challenges:

1. Low levels of digital literacy: Many people in India, especially in rural areas, are not familiar with digital payment methods and lack the digital literacy skills needed to use them effectively.
2. Infrastructure challenges: Digital payments rely on reliable and robust telecommunications and internet infrastructure, which is not always available in rural and remote areas of India.
3. Security concerns: Digital payments are vulnerable to cyberattacks, fraud, and data breaches, which can undermine trust in the system.
4. Limited acceptance: Digital payment systems need to be widely accepted by merchants and businesses to be successful, but many small businesses and vendors in India still prefer cash transactions due to the lack of awareness, infrastructure, or trust in digital payment systems.
5. Interoperability: There are currently multiple digital payment systems in India, and not all of them are interoperable with each other, which can create confusion and hinder adoption.
6. Regulatory challenges: The digital payment industry in India is subject to various regulations and guidelines, which can create complexity and confusion for businesses and consumers.

Conclusion

Overall, digital payments in India have the potential to transform the economy by promoting financial inclusion, increasing transparency, and promoting economic growth. these challenges need to be addressed through measures such as improving digital literacy, enhancing infrastructure, strengthening security, promoting interoperability, and creating a more conducive regulatory environment to ensure the success and growth of digital payments in India.

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