

Role of Digital Payments in Promoting a Sustainable Economy: A Conceptual Study with Reference to India

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ABSTRACT

Digital payments have become a common part of everyday life in India. People can now pay for goods and services, transfer money, pay bills and receive payments through mobile phones and other digital methods. UPI, QR codes, mobile banking, internet banking, debit cards and digital wallets have made payments easier and faster.

The importance of digital payments is not limited to convenience. They can also support economic and social development. Digital payments can help small businesses receive payments, maintain transaction records and participate in the formal financial system. They can also help people access financial services and receive government benefits directly. From an environmental point of view, digital payments may reduce some paper-based activities and the need for certain physical cash-handling activities.

This paper examines how digital payments can contribute to a sustainable economy in India. The study is conceptual and descriptive and is based on secondary information from sources such as the Reserve Bank of India, the Government of India, NPCI and other reliable publications. The study looks at three main areas: economic sustainability, social sustainability and environmental sustainability.

The study finds that digital payments can support small businesses, financial inclusion, transparency and efficient transactions. However, problems such as cyber fraud, lack of digital knowledge, poor internet connectivity, privacy concerns and lack of trust can reduce their benefits. The paper concludes that digital payments can contribute to sustainable development only when they are secure, affordable, accessible and easy for people to use.

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1. Introduction

Technology has changed many parts of our daily life. One important change can be seen in the way people make payments.

Earlier, most people depended on cash for buying products, paying bills and transferring money. Today, a person can make a payment within a few seconds using a mobile phone. A customer can scan a QR code at a shop and make payment directly from a bank account.

Digital payment means making or receiving a payment electronically without physically exchanging cash.

Some common digital payment methods in India are:

- UPI
- QR-code payments
- Mobile banking
- Internet banking

- Debit cards
- Credit cards
- Digital wallets
- NEFT
- RTGS
- IMPS
- Aadhaar Enabled Payment System

The growth of digital payments in India has been very rapid. Government initiatives, banking facilities, smartphones, internet services and payment technology have all contributed to this growth.

UPI has become particularly important. According to the Government of India, retail digital- payment transactions increased from 7,176.90 crore in FY 2021–22 to 22,167.90 crore in FY 2024–25. UPI accounted for 81% of retail digital-payment transactions in FY 2024–25.

The growth of digital payments is important not only because payments become faster. It can also influence businesses, financial inclusion, transparency and resource use.

This makes digital payments relevant to the idea of a **sustainable economy**.

A sustainable economy is an economy that tries to achieve long-term development while also considering people's welfare and responsible use of resources.

Therefore, this paper studies how digital payments can support economic, social and environmental sustainability in India.

2. Objectives of the Study

The study has the following objectives:

1. To understand the meaning of digital payments.
2. To examine the role of digital payments in promoting a sustainable economy.
3. To study the economic benefits of digital payments.
4. To understand how digital payments can support financial inclusion.
5. To examine the possible social and environmental benefits of digital payments.
6. To identify the major challenges of digital payment adoption.
7. To suggest measures for making digital payments safer and more inclusive.

3. Research Methodology

This study is **conceptual and descriptive** in nature.

The study is based on **secondary data**. No questionnaire, interview or primary survey has been conducted.

Information has been referred to from reliable sources such as:

- Reserve Bank of India
- Government of India
- Ministry of Finance
- National Payments Corporation of India
- World Bank

- Research publications and other relevant sources The information has been studied and explained under three main areas: **Economic Sustainability** → **Social Sustainability** → **Environmental Sustainability** The purpose is to understand how digital payments can contribute to sustainable economic development in India.

4. Digital Payments in India

India has experienced a major change in its payment system.

Today, digital payments are used not only in large shopping centres but also by small shops, vegetable sellers, street vendors, restaurants and home-based businesses.

UPI has played a major role in this change.

The NPCI's official statistics show the continued growth of UPI. For example, UPI recorded more than **23.2 billion transactions in May 2026**, with a transaction value of about **₹29.90 lakh crore** for that month.

The Government of India reported that UPI had **55.49 crore users by June 2026**, showing how widely the system has been adopted.

RBI has also continued to focus on financial inclusion and expansion of the digital-payment ecosystem. Its 2024–25 Annual Report notes the expansion of the programme for deepening the digital-payment ecosystem and **continued** efforts to improve financial inclusion.

These developments show that digital payments have become an important part of India's financial system.

5. Meaning of Sustainable Economy

A sustainable economy **can** continue to grow and provide opportunities over a long period without creating serious economic, social or environmental problems.

For this paper, sustainability is understood through three areas.

5.1 Economic Sustainability

It means supporting businesses, employment, income and economic activities for the long term.

5.2 Social Sustainability

It means making economic and financial opportunities available to different sections of society.

5.3 Environmental Sustainability

It means using resources carefully and reducing unnecessary pressure on the environment. Digital payments can potentially contribute to all three areas.

6. Role of Digital Payments in Promoting a Sustainable Economy

6.1 Support for Small Businesses

Digital payments can be very useful for small businesses.

A small shopkeeper does not always need expensive payment equipment. A QR code can allow customers to make payments directly from their mobile phones.

For example, a small grocery shop can accept payment through UPI. A street food seller can also receive payment digitally.

This gives small businesses an additional way to receive money.

Digital transactions also create records. These records may help business owners understand their sales and manage their money better.

Therefore, digital payments can support small businesses and entrepreneurship.

6.2 Lower Cash Handling

Cash needs to be counted, stored, transported and protected.

Businesses and banks spend time and resources handling physical money.

Digital payments reduce the need to physically handle cash for every transaction.

This can make payment collection easier and save time for businesses and customers. However, digital payments also require technology and infrastructure. Therefore, they do not completely remove costs; they change the way payment-related resources are used.

6.3 Financial Inclusion

Financial inclusion means giving people access to useful financial services.

Digital payments can help people become more connected with the formal financial system. A person with a bank account and access to digital payment facilities can transfer money, pay bills and receive payments without visiting a bank branch for every transaction.

Government payments are another important example.

Benefits such as pensions, scholarships and other government payments can be transferred directly into eligible beneficiaries' bank accounts.

RBI continues to focus on financial inclusion and has reported improvement in its Financial Inclusion Index. The index increased to 64.2 in March 2024 from 60.1 in March 2023.

Digital payments can therefore support financial inclusion when people also have access to bank accounts, smartphones, connectivity and digital knowledge.

6.4 Transparency

Digital payments create electronic records.

For example, when a customer pays a shopkeeper through UPI, both parties normally receive a digital record of the transaction.

Such records can help people keep track of their payments.

Businesses can also use transaction records for accounting and financial management. Digital records may support greater transparency, although digital payments alone cannot eliminate corruption or tax evasion.

Good governance, proper accounting and effective enforcement are also required.

6.5 Support for Digital Entrepreneurship

Digital payments have also created opportunities for small online businesses.

A person selling clothes, handmade products, food or other items through social media or online platforms can receive payments digitally.

This means a small business does not always need a physical shop to receive payments. Digital payments can therefore support new forms of entrepreneurship and online business activity.

7.SOCIAL BENEFITS OF DIGITAL PAYMENTS Digital payments can make daily financial activities easier.

People can pay:

- electricity bills;
- telephone bills;
- school and college fees;
- insurance premiums;
- hospital bills;
- shopping expenses; and
- transport-related charges.

This saves time and reduces the need to carry cash.

Digital payments can also support women and small entrepreneurs by giving them greater access to formal financial services.

However, these benefits are possible only when people have access to smartphones, bank accounts, internet services and digital knowledge.

Therefore, digital inclusion is necessary along with financial inclusion.

7. Environmental Benefits

Digital payments may also have some environmental benefits.

Physical currency requires paper, printing, transportation, storage and replacement.

Digital transactions can reduce the need for some physical cash-related activities.

Similarly, digital receipts can reduce the need for printed receipts.

Online payment of bills can also reduce some journeys to banks or payment centres. However, digital payments are **not completely free from environmental impact**.

Mobile phones, computers, servers and data centres require electricity and other resources. Therefore, it would be incorrect to say that every digital payment is completely environmentally friendly.

A better conclusion is that digital payments can reduce some physical and paper-based activities, while the digital infrastructure itself should also become more energy efficient.

8. Transparency and Formal Economy

Another important benefit of digital payments is the creation of transaction records.

Cash transactions may sometimes take place without formal records.

Digital payments normally create an electronic trail.

This can help:

- businesses maintain records;
- customers prove payments;
- institutions monitor transactions; and
- governments improve financial transparency.

For small businesses, regular digital transactions may also help create a better financial history. However, digital payment records should be protected carefully because they contain financial information.

9. Challenges of Digital Payments

Although digital payments provide many benefits, there are also important challenges.

9.1 Cyber Fraud

Cyber fraud is one of the biggest concerns.

Fraudsters may use fake calls, messages, links or websites to cheat people.

Users must therefore be careful while sharing financial information.

9.2 Lack of Digital Knowledge

Some people do not know how to use digital payment applications safely. Older people and first-time users may need additional support and training.

9.3 Internet Problems

Digital payment systems depend on connectivity.

Poor internet service can make digital payments difficult, especially in rural and remote areas.

9.4 Privacy

Digital payments create financial data.

People need to know that their personal and financial information is being protected.

9.5 Lack of Trust

If people experience failed transactions, fraud or delays in receiving refunds, they may lose confidence in digital payments.

Therefore, quick complaint handling is important.

9.6 Digital Divide

Not everyone has the same access to smartphones, internet services or banking facilities. If these differences are not addressed, some people may remain outside the digital economy.

10. Findings of the Study

Based on the conceptual study, the following findings are made:

1. Digital payments have become an important part of India's financial system.
2. UPI has made small-value payments easier and faster.
3. Digital payments can support small businesses.
4. Digital payment records can improve financial record-keeping.
5. Digital payments can support financial inclusion.
6. Government payments can be transferred more directly through digital banking systems.
7. Digital payments can reduce some cash-handling and paper-based activities.
8. Digital payments may support social and economic participation.
9. Cyber fraud and privacy concerns remain important challenges.
10. Digital literacy and internet connectivity are necessary for successful adoption.
11. Digital payments can support sustainability, but they should be combined with secure and responsible digital infrastructure.

11. Suggestions

The following suggestions are made:

11.1 Increase Digital Awareness

Simple training programmes should be conducted for people who are new to digital payments.

11.2 Teach Fraud Prevention

People should be taught never to share OTPs, passwords, PINs or confidential banking information.

11.3 Improve Rural Connectivity

Internet and digital infrastructure should be improved in rural and remote areas.

11.4 Help Small Businesses

Small shopkeepers and street vendors should be given training on digital payments and cybersecurity.

11.5 Improve Complaint Services

Banks and payment providers should provide simple and quick systems for reporting failed or fraudulent transactions.

11.6 Protect Personal Information

Strong security measures should be used to protect customers' financial information.

11.7 Make Applications Simple

Digital payment applications should be easy to understand and use, especially for elderly and first-time users.

11.8 Promote Energy-Efficient Technology

Digital infrastructure should increasingly use energy-efficient systems so that the environmental benefits of digitalisation are improved.

12. Limitations of the Study

The study has some limitations.

First, it is based only on secondary information. No survey or interview was conducted. Second, the study is conceptual and does not use statistical testing.

Third, the study does not calculate the exact environmental impact of digital payments. Future researchers can conduct surveys among consumers, shopkeepers and small businesses to understand their actual experiences with digital payments.

13. Future Research

Future researchers can study:

- digital-payment adoption in rural areas;
- digital payments and women entrepreneurs;
- digital payments and MSME growth;
- digital-payment awareness among senior citizens;
- cyber fraud and consumer behaviour;
- digital payments and financial inclusion; and

- environmental impact of digital versus cash payments.

A future study can also use primary data and statistical techniques.

14. Conclusion

Digital payments have changed the way people in India make and receive money.

They are no longer limited to large businesses or cities. Small shops, street vendors, students, workers and ordinary consumers also use digital payment methods.

The study shows that digital payments can contribute to a sustainable economy in different ways.

From an **economic point of view**, they can support small businesses, make transactions easier and encourage digital entrepreneurship.

From a **social point of view**, they can support financial inclusion and make access to financial services easier.

From an **environmental point of view**, they may reduce some paper-based activities and certain physical cash-handling activities.

However, digital payments also have challenges. Cyber fraud, lack of digital knowledge, poor connectivity, privacy concerns and lack of trust can reduce their benefits.

Therefore, the goal should not simply be to increase the number of digital transactions. The focus should be on making digital payments **safe, simple, affordable, reliable and accessible to everyone**.

With better digital education, stronger cybersecurity, improved infrastructure and effective consumer protection, digital payments can become an important tool for building a more inclusive and sustainable economy in India.

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