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**Editorial**

## **Upside of Digital Payments in India: A Macroeconomic Perspective**

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### **ABSTRACT**

This article examines how transformation in digital payment has revolutionized the macroeconomic landscape of India. The article provides how the fast-growing digital payment infrastructure has contributed towards augmented financial inclusion and strengthening of Micro Small and Medium Enterprises (MSME). It has also been observed that the rise of digital payment has made significant contribution to the Gross Domestic Product (GDP) of the country and visible upward changes in per capita income in the country. Also, the digital payment ecosystems have not only expanded the frontiers of formalization in Indian economy but also boost her GDP. Furthermore, the article offers a holistic critique of digital payments for the academics, researchers and public policy experts.

**KEYWORDS:** Digital Payment, Unified Payment Interface (UPI), Financial Inclusion, India

### **INTRODUCTION**

India has a world class infrastructure for digital payments (Badak et al., 2023). The country has established a robust, secure, and dependable digital payment mechanism which is duly supported by digital identity markers like Aadhar, higher incidence of financial inclusion exemplified by the successful implementation of the Prime Minister Jan Dhan Yojana, and an extra ordinary system of Unified Payment Interface (UPI) backed by technology, trust as well

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as fair and speedy redressal of grievances in case any user faces inadvertent losses due to transactional glitches. Usage of digital payment has surpassed the utility of credit cards in the country.

For long, people in India depended largely on cash transactions which also led to accumulation of black money. The government was the biggest loser during the heydays of cash transaction economy. Both the seller and the buyer made their best efforts at avoiding payment of taxes through cash transactions. Such cash transactions thrived on mutual consent and trust. Hence, there were no records of such cash transactions. The government therefore focused on creating an appropriate infrastructure for digital payment ecosystem as an essential condition for ushering a behavioral change towards cashless transactions (Angamuthu, 2020). It was a step ahead of the plastic money typified by credit cards. Adoption of the 'Point-of-Sale' machines by all sorts of vendors in the MSME spectrum hugely disrupted the cash transaction economy that thrived in the country for several decades after independence.

Further, UPI developed by the National Payment Corporation of India and the Reserve Bank of India (RBI) was a real game changer (Cornelli et al., 2024). It is based on a unique open architecture that enables zero-cost peer-to-peer and peer-to-merchant cash transfers between bank accounts via mobile devices. Starting with one million transactions in 2016, it now accounts for roughly 75-80% of all digital payment volumes in India. Impact of digital payment has been overarching just as its volume. Indeed, digital payment has functioned as inclusive, and open architecture public good marked by credit access and fiscal prudence. Now the government can keep track of all financial transactions and keep a watch on missed tax liabilities as well as concomitant revenue losses. UPI has been widely accepted by almost all the stakeholders in the country. No doubt, UPI has ushered a behavioral transformation in Indian citizens in the context of financial transitions. However, there are few studies which point out that behavioral intentions are marred by innovation resistance while adopting UPI (Sivathanu, 2019).

Digital payment has a symbiotic digital architecture. It does not operate in isolation. Digital payment relies deeply on identity verification and layers of banking to function efficiently at a large scale. Identity verification is generally done through Aadhar which has biometrically verified digital identity of almost all the eligible persons in India. The electronic Know Your Customers (e-KYC) has further revolutionized verification of identity in a seamless manner.

The government has also mandated linking of Aadhar with the bank accounts, thus making the identity verification easier, faster, and credible. Moreover, the Prime Minister Jan Dhan Yojana has created an extended banking layer, which in turn, invariably strengthens the digital payment ecosystem. Prime Minister Jan Dhan Yojana has enabled the people on the fringe to open zero balance accounts through e-KYC. It has been observed that over 75% of the accounts under the Prime Minister Jan Dhan Yojana are active.

### **MACROECONOMIC IMPACT OF DIGITAL PAYMENT ECOSYSTEM**

Fast development of digital payment ecosystem has led to formalization of Indian economy, aggregation of consumption, and above all, financial inclusion.

**Formalization of Indian Economy and GDP Growth:** Large scale adoption of mobile and QR code-based payment has generated verifiable digital data trail for financial transactions. Before the launch of UPI, cash transactions were always outside the ambit of government's scrutiny. In the emerging scenario, minimal use of cash has dented the shadow economy in the hardest way possible. In turn, it has strengthened formalization of economy in a big way. At the same time, it has been observed that a 1-percentage point increase in the usage of digital payment is linked to GDP, a 0.10-percent-point increase in GDP per capita growth over a two-year period (Aguillar et al., 2024)

**Aggregation of Consumption:** Frictionless real time digital payment has furthered aggregation of consumer demands by removing transactional constraints and changing the spending behavior of people in India. Digital payment ecosystem has wrecked the barriers such as physical search cost for cash, constraints related to withdrawal of cash and merchant charges on credit cards generally levied by the shopkeepers and vendors. Indeed, digital payment through UPI has eliminated the pain of paying. Thus, consumption function has moved upward by design. According to Agarwal (2024), extensive adoption of digital payments has led to overall higher consumption. At the macro level, the behavioral shift induced by digital payment ecosystem has pushed the aggregate demands significantly.

**Financial Inclusion:** Cash-dependent economy created a roadblock for financial inclusion in India and kept the poor outside the ambit of formal banking for a long time. However, UPI has demolished that barrier through digital public infrastructure, which in turn has helped in onboarding remote population into the formal framework of financial transactions. For

example, bank account penetration has increased from over 50% in 2014 to over 80% in 2021, especially under Prime Minister Jan Dhan Yojana. Inclusion of the people at the receiving end in the formal banking system has made them aware of financial transactions and confident about using the digital gateways for sending and receiving money in a most convenient manner. A mobile with internet connection is the new source of empowerment for them. Direct benefit transfer has handed over disposable cash in their bank accounts. Hence, the fringe people, armed with disposable cash and access to digital devices, are now on the forefront of expanding the consumption function.

### **STRUCTURAL RISKS**

While the benefits from digital payment are well established, it is also imperative to look at some of the concomitant risks. Indeed, centralization of retail transactions via UPI poses serious operational risks. Systemic infrastructure outages, hardware roadblock, and telecommunication disruptions can derail the retail commerce, which in turn can push down aggregate consumption function in the short run. Moreover, nature of UPI is such that it can cause deposit volatility, which can be detrimental for survival and profitability of the commercial banks. Furthermore, digital payment ecosystems can be exposed to systemic frauds, and cyber security threats. We have several known stories about retail digital frauds, identity thefts, and phishing in which innocent people have lost their hard-earned savings in a jiffy. True, persistent security vulnerabilities can erode public trust in digital payment ecosystem.

### **THE WAY FORWARD**

It is important to consolidate the gains from digital payment ecosystem while mitigating concomitant risks (Bhavsar & Samanta, 2021). In this context, the policy makers must look at strengthening the core processing architectures for managing high volume transaction sans any security threats to the public through a robust regulatory oversight (Das & Das, 2017). Financial institutions need to move beyond routine and simple transaction monitoring through legacy technology. Instead, they should invest heavily in designing more secure online platforms which withstand the threats from cyber thugs across the globe (Sharma, 2021). It is important to retain public trust in digital payment ecosystem by keeping the fraudster away. At the same time, the financial institutions can come forward to collaborating with schools, colleges, and universities to raise awareness about understanding the risks involved in sending and receiving money through digital payment gateways, as also the ways to beat the cyber

thugs out there. Past experiences with online fraud can discourage usage of digital payment by individuals and their sizable network of friends, colleagues, and relatives (Shree et al., 2021).

## **CONCLUSION**

India has evolved as a mature nation over the last two decades in terms of advanced digital payment infrastructure. Country's dependence on cash transaction has reduced to lowest levels. The transformation from cash-dependent to technology-enabled scenario has been triggered by highly successful experiment vis-à-vis UPI, which has touched the lives of the poor and the rich alike. One really does not need a diploma or degree to send or receive money through UPI. Moreover, digital payment has resolved the age-old problem of counterfeit currency in financial transactions. Significantly high incidence of digital payments in India has helped in reducing cash handling costs, lowering financing issues in MSME sector, expanding the formalization of economy and enlarging the tax bases. Efficient digital payment mechanism has led to financial inclusion, holistic resource allocation, and total factor productivity in a major boost to Indian economy. Success story of the digital payments ecosystems in India can be a use case for other emerging economies.

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