

Analysis of Digital Transformation in Payments Method and Its Impact After COVID - 19

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Abstract: Money transactions have changed dramatically since the barter system. The digitization period, as well as the effect of unanticipated pandemic events, compelled customers, and ordinary people to make online transactions using a variety of digital payment methods. With its compatibility and ease of use with interbank accounts, the Unified Payment Interface revolutionized the market. In India, the paradigm shift began with the announcement of the demonetization of specific Indian currency bank notes. Even though India is a cash-based economy, internet payments have seen a fast expansion in the digital infrastructure for payment gateways. This enabled India to endure the 2019 pandemic events and maintain a constant rate of money flow inside the market.

Index Terms: Unified Payment Interface, Cashless Payments, Transactional Security, Customer Satisfaction, Digital Financial Services.

I. INTRODUCTION

a) History of Unified Payment Interface in India :

The Unified Payments Interface (UPI) is a system that integrates several bank accounts into a single mobile application (of any bank branch), combining different banking services, smooth fund transfers, and merchant payments under one canopy. It also facilitates "Peer to Peer" collection requests, which may be scheduled and paid according to the need and convenience. Following the declaration of then-Indian Prime Minister, *Shri Narendra Modi* on *July 1st, 2015*, the transition from cash to digital payments ushered in the age of Digital Transformation in India. In light of the foregoing, *National Payment Corporation of India* conducted a trial launch with 21 member banks. *Dr Raghuram G Rajan*, Governor of the Reserve Bank of India, launched the pilot programme in Mumbai on April 11, 2016. Banks started releasing their UPI-

enabled apps to the Google Play store on *August 25, 2016*. With the advent of digital transactions without cards, major corporations such as Google and Amazon launched payment service apps such as *Google Pay, PayTM, Amazon Pay*, etc. This caused the Indian economy to migrate from physical transactions to digital transactions, which are far more convenient, efficient, and secure.

Indians are more likely to utilize physical currency than digital systems because it is more reliable and familiar to them. They are also not very digitally literate in those days. Nonetheless, individuals began to adapt to UPI and digital transactions for the three reasons listed below. The first point to mention is the *difficulty* of using other transaction mechanisms. In India, not everyone has a credit card. Debit cards need the use of equipment, which is not always available. They must recall more information for other sorts of transactions, such as the IFSC code, bank name and branch, account number, and so on. The second reason is that card firms such as Visa and Mastercard take *service fees* of roughly 2% of the transaction, making users hesitant to use cards for smaller purchases. The third reason for avoiding utilizing cards for transactions is fraud, which includes duplicating card data and card tampering during payment.

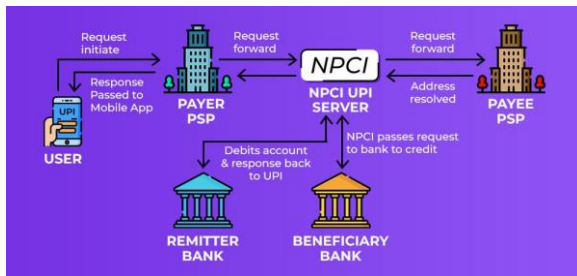
b) How UPI Works?

PSP is an abbreviation for Payment Service Provider. Payer PSPs are applications that enable clients to begin and finish transactions. Gpay, Phonepe, Bhim, PayTM, and so on.

These applications have taken the place of traditional bank apps, allowing users to generate UPI handles to make or accept a transaction. Any consumer may

download these applications and generate their own UPI handle. NPCI oversees app certification, and there is now 20+ third-party applications certified by NPCI for providing UPI handles. However, to begin onboarding consumers, all these UPI apps require a partner bank.

The NPCI is a non-profit organization established by the RBI and supported by various large banks. It connects banks and payment service companies by acting as a trusted switch (PSPs). NPCI, like VISA in the case of card payments, ensures that data flows between banks and payment applications are sent to the right and confirmed destinations.



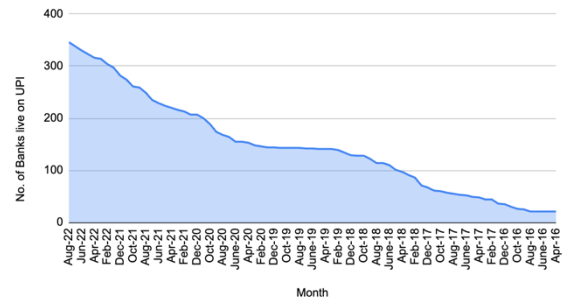
In the instance of UPI payments, the NPCI has made financial services compatible. Users may link any of their bank accounts to any UPI app and transmit or accept payments. NPCI also exposes a slew of semi-interoperable APIs to the ecosystem at large. Validate VPA/UPI ID, bank list, and so on. When using UPI, money is moved from the issuing/sending bank account to the buying (seller/ receiver's) bank account.

The issuing bank must debit money at the request of NPCI and provide a debit response to NPCI after the debit is completed successfully. The acquiring (receiver) bank's responsibility is to effectively complete the credit upon NPCI's request and to deliver a credit response to NPCI. In P2M (Person to Merchant) payments, this refers to the acquirer or payment channel that the merchant uses.

II. UPI USAGE BEFORE AND AFTER COVID - 19

When UPI was first introduced in 2016, there were less than 3.1 crore total transactions, but by September 2019, that number had risen to 161,456.56 crores. This was made feasible by the cooperation of banks and other NPCI factors that increased UPI's dependability.

No. of Banks live on UPI vs. Month



*Data from April 2016 - August 2022

Even if the number of digital payments increased after the demonetization, the rate of adoption has been far slower than expected. The country's leading payment technology, Unified Payments Interface (UPI), is a bright exception to the trend of incremental progress in digital transactions over the years. In November 2018 compared to November 2017, there was a 22% increase in volume and an 18% increase in the value of card transactions. Wallet volume and value increased by 86% and 72%, respectively, whereas UPI increased by 400% and 753% within the same time. According to *B Madhivanan*, ICICI Bank's chief technology and digital officer, UPI is not eroding into earlier platforms because it is built on the proven IMPS foundation. Due to the elimination of the need to provide account numbers and IFSC codes, UPI was able to expand more quickly. "All the onus of making a transfer was on the sender before but UPI's Pull transaction feature put the onus on both sides." he added.

In 2017, regulatory hurdles such as data localization were encountered by international payment processors. Since the Aadhar ruling by the Supreme Court, wallet businesses have been unable to electronically check papers for existing clients or onboard new ones. However, the government's strong backing of UPI shields it from such dangers.

III. CURRENT ISSUES IN THE DIGITAL TRANSFORMATION

The National Payments Corporation of India (NPCI), which is responsible for enabling digital payment and settlement systems throughout the country, has established a regulation requiring all third-party UPI apps to adhere to just a 30% market share threshold. However, this would result in a significant backlash,

which will discourage consumers from using UPI applications and will make it more difficult to conduct digital transactions. Because of this, it's possible that the application may see a decrease in the number of new users. The National Payments Clearing Corporation (NPCI) is reportedly concerned about the possibility of customer disruption at a time when third-party applications like PhonePe and Google Pay continue to retain around 47% and 34% of the market share, respectively. In spite of the fact that there has been a significant increase of 700% in UPI's value of transactions, which is currently at 800 million transactions as of March 2019, there has also been a decrease of 2% in the total volume of payments that has been observed during the early stages of 2019 and that was at 3.6% a year ago. Despite receiving a score of 85% for the success of its transactions in 2019, the decreased. Despite the fact that it has its fair share of drawbacks, the UPI payment system is widely regarded as a revolutionary leap forward in technological development. This is due to the fact that after the demonetization, several big Indian banks were unable to keep up with the rapid adoption of digital technology, which is presently causing a slowdown in UPI payments. The administration of the bank's servers and their connection continues to provide significant difficulties. There have been instances in which money has been taken from user accounts, but the change does not appear immediately, creating delays. Also, there have been instances in which the UPI site may malfunction when it attempts to link itself with bank servers, which is also a big cause for consumers to move away from such UPI Apps. This is another reason why users are moving away from such UPI Apps.

IV. UPI LITE – SOLUTIONS TO TECHNICAL FAILURE OF TRANSACTIONS

NPCI has found a solution for your issue, which now enables you to make online payments even when you are not connected to the internet. As a result of the fact that many of us rely on UP and other forms of online payment for the majority of our purchases, it may be quite frustrating when a transaction fails. An insufficient network connection is one of the primary factors contributing to the failure of transactions or the sluggish processing of transactions. However, this problem was overcome by NPCI through the

introduction of a new software called UPI Lite, which is designed to carry out offline way of money transfer

UPI Lite is a wallet that is stored 'on-device,' in contrast to UPI, which makes direct access to your bank account in order to transfer or receive money. This indicates that you will need to add funds to your wallet before you can use them to transfer the smoney instantaneously to a person who does not have access to the internet. Be aware, however, that while the money may be delivered, the recipient will not be credited with it if they are not online or if they are in an area that prohibits internet use. When there is an active internet connection, he or she will be paid the appropriate amount. On the other hand, NPC intends to make UPI Lite an entirely offline payment option in the near future. In addition, the maximum amount that may be sent in a single transaction is 200, and the total amount that can be added to the wallet is a maximum of 2000. You are permitted an infinite number of transactions each day.

V. CONCLUSION

The negative impacts of COVID-19 on the payment environment have been significant and pervasive, yet they are not irrevocable. Elements of the payment ecosystem that are the most resilient to disruption and the least reliant on physical infrastructure have been able to endure, alleviate, and even profit from the crisis, converting an impending danger into an opportunity. This has enabled these components to convert an immediate danger into a benefit for themselves. People and organizations have been compelled to reassess their payment framework and infrastructure in order to include disruption mitigation and continuity planning. Moreover, the pandemic has brought to light basic challenges created by the rigidity or inflexibility that results from an overwhelming dependence on cash as the sole means of payment, both for many established enterprises in the industry and for individual consumers. The COVID-19 crisis cast doubt on the notion that cash is the most liquid asset. As a consequence, payers were compelled to decide if cash should be seen as a sacrosanct payment option that provides the best accessibility and convenience. After adopting digital payment methods, payers have shown considerable reluctance to revert to cash transactions. However, it is unlikely that money will become outdated in the near future. The fact that

cash withdrawals in the NFS network have showed signs of recovering to pre-COVID-19 levels demonstrates that the Indian populace has a preference for and willingness to use cash. [Cash withdrawals in the NFS network have shown indications of returning to pre-COVID-19 levels.] Therefore, it is probable that COVID-19 offered a significant boost to the attempt to lower the prevalence of cash transactions, but it did not eradicate them entirely. In spite of this, COVID-19 has shown to be a step in the right approach toward expanding digital payment acceptance in India. The traditional payment infrastructure's impenetrability was a fundamental factor that acted as a substantial impediment to the development of digital. Nevertheless, as a consequence of the disruption caused by the outbreak, businesses were able to take a step back and assess their payment systems with an eye toward adopting digital solutions to simplify and speed the process. The non-adoption of digital payments was mostly attributable to apprehension, which stemmed from a lack of understanding, infrastructure availability, difficulty, and prices, according to the surveys performed. In addition, people were likely to see digital payments as an alternative to restricting physical access to cash.

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