



UPI – A Road Block or a New Route of Growth for E-wallets in India

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Abstract

UPI platform has beaten e-wallets hands down in terms of the value of transactions. The volume of UPI transactions has also been growing at a higher rate than that of e-wallets. While the advent of UPI in the digital landscape of India is opening avenues for new players, the evolving regulatory framework of the country is making the going, tough for many existing players in the e-wallet market. As a result, the fintech landscape in India is considered at present to be in the transformative stage and for now is a market to wait and watch. While tech giants like Facebook, Google, Amazon, and Samsung have released their payment apps, established players in the market like MobiKwik and Paytm are relentless to cede their market dominance. But with UPI evolving as a leading platform for mobile payments, late entrants like Google are using this new platform to compete with the established mobile wallet players like Paytm. While Google pay is using the advantages of UPI to penetrate the digital payment market and carve out a share from the markets of established players in the e-wallet industry, it has also taken a few leaves from Paytm's strategy book of discounts, to subdue the early leaders of UPI payments like BHIM. The rise of UPI has shown its effect on the competitive landscape for the existing players too. Players like PhonePe which relied more on UPI than wallet base are growing faster than Paytm, MobiKwik and Oxigen which are more wallets based than UPI based. While UPI is certainly the market disruptor in the digital payment scenario, the question remains whether it can barricade and break the growth of the e-wallet market in India. Some leading magazines are even predicting the death of E-wallets in India. But a careful examination reveals that e-wallets and UPI are two platforms used by various players in the digital payments markets. Hence, the right question to ask would be, can the advent of UPI annihilate players in the E-wallet market. This paper critically analyses the reasons and scenarios that contributed to the rapid rise of UPI and its effect on e-wallets in India.

Keywords: E-wallets, UPI, Mobile payments, Digital payments landscape.



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Introduction:

Though the evolution of e-wallets proceeds more than a decade to the demonetization of higher currency notes in India, it is the demonetization that served as a launching pad and fuelled the tide for the digitalization of the payment landscape in India. This was a great opportunity for e-wallets and UPI to establish themselves as payment platforms in the Digital India drive. Demonetization not only created a platform for many new players in the market but also multiplied the scope for the growth of many existing e-wallets in India. E-wallets with a very meagre presence in a few specific markets and those that are almost dormant other than some limited urban presence also suddenly started sensing the opportunity and scope to expand their presence to pan India. In a way, one can say that the digitalization drive and the demonetization move have opened the floodgates for e-wallets in the country.

Thus, the initial growth of digital payments was fuelled by the surging e-wallets, but the later 12 to 15 months witnessed a changing landscape in the digital payments' scenario. Though the digital payment market is on a steady rise, people are gradually altering their preferences for digital payment platforms. This shift of choice in the use of the payment platform started slowly with the launch of UPI in the country but gathered pace as private players started using it as the platform for their payment apps. More customers started using UPI as a preferred way to transact digitally compared to the star of yesteryears viz. e-wallets. Payments made on through the UPI platform recorded a remarkable growth of over 400% in the financial year 2018-19. From a humble transaction value of more than ₹ 27,000 crores in April 2018 it grew to ₹ 1.35 lakh crore in March 2019.

UPI as a platform is not only outperforming e-wallets in the value of transactions done but is also gradually eating away into the market of e-wallets in areas such as P2M (Person to Merchant) transactions. Several factors from changing regulatory framework to the ease of using payment



platforms contributed to this changing landscape.

Bhutan and Nepal have already adopted the UPI platform for making payments. NPCI International Payments (NIPL) had already worked with Mashreq Bank¹ for launching UPI payments platform in the Middle East. NIPL is working with Liquid Group, to make UPI acceptable in more Asian countries. As Liquid Group provides digital payments across the borders, of north and southeast Asia, QR-based UPI payments are expected to be accepted very soon in 10 countries of Asia. Hence those apps that use UPI platform in India are going to capture international markets in the due course.

REVIEW OF LITERATURE

Even though several papers have been published in the past pertaining to digital payment services their chief areas of concern are the issues of security and acceptability among various categories of customers. Very few have studied digital wallets and UPI as competing platforms for payments and money transfers. Hence the availability of literature regarding the e-wallets and especially their performance and prospects after the advent of UPI is minimal. Hence most of the information has to be sourced from the RBI bulletins and news articles in financial magazines.

Rajesh Krishna Balan, Narayan Ramasubhu, Giri Kumar Tayi (2006) in their research paper “Digital wallet: Requirement and challenges” have discussed the concept and process of developing a digital wallet and also analyzed the key challenges in building and deploying a digital wallet in Singapore.

Pinal Chauhan, in his paper “E-Wallet: The Trusted Partner in our Pocket” (2013) elaborated on how e-wallets are going to make money transactions less cumbersome for the users. The paper has presented to the readers, the ease of use of e-wallets by customers at the POS terminals and the growing scope for their use in the future.

¹<https://timesofindia.indiatimes.com/business/india-business/pay-via-upi-in-10-more-countries/articleshow/86184175.cms>



Ambarish Salodkar, Karan Morey and Prof. Mrs Monali Shirbhate, in their paper “Electronic Wallet”, (2015) discussed how numerous applications like Paytm, Freecharge, MobiKwik, etc. have multi-fold utility like making bill payments, doing online shopping and recharging phones, etc. They discussed the platform expansion of e-wallets from their own web portals to more popular mobile apps that can perform tasks like a full web portal, also by providing better availability and mobility.

Roopali Batra and Neha Kalra in their paper “Are Digital Wallets the New Currency?” (2016) through their analysis concluded that the number of users incorporating the habit of using digital wallets has increased tremendously as more and more people are finding digital wallets to be more convenient and less time-consuming for making the payments. The paper also raises many concerns about the security aspects of digital wallets.

Trilok Nath Shukla, in his paper “Mobile Wallet: Present And The Future”, (2016) claims that with the advent of technology, smart phones have grabbed the attention of a wide variety of customers and hence paved the way for the launch of digital wallets in the country.

In her study titled “Adoption of Digital Wallet by Consumers”, Dr Hem Shwetha Rathore(2017) has given an analysis of the various factors that could impact a consumer’s decision in the adoption of the digital wallet as a mode of payment. She concludes that marketing promotional programs and discounts are driving digital wallets towards greater acceptance and adoption.

Rajendra Kumar Tolety, (2018) in their paper “E-Wallets – Their cause, Rise and Relevance”, analyzed the reasons for the upsurge of e-wallets in India and narrates how few players have leveraged demonetization for propelling their growth. After justifying how e-wallets have become more relevant today with the digital revolution, he also discussed the major challenges and scope for the growth of e-wallets in the country.

The genesis of E-wallets

In the mid-1990s, with the electronification of commerce gathering momentum, digital wallets started to appear on the payments landscape. Due to a lack of awareness, acceptance, and adoption among the people, they weren’t very successful at that time.



A variety of software houses, at the peak of the dot-com boom, started developing digital wallets.

Attempting to implement electronic cash alternatives such as e-money, digital cash or tokens, Millicent, ECash, and CyberCoin entered the e-payment market. Lack of publicity, lead to the poor acceptance and adaptation of this novel concept called, digital wallet, in the market. As these programs were developed and offered by small and not so popular software publishers their not so high credibility also affected the level of acceptance of digital wallets.

An E-wallet, for the west, is a virtual wallet that stores payment card information on a computer or mobile device, to facilitate not only online purchases but also the payments at POS terminals of the brick and mortar stores, following the due authentication by the user. In India, it is a bit different in scope and use. Here it is an online-prepaid payment system where one can load one's money, and use that money when required through this e-wallet. In India, as it was a part of the pre-loaded facility, customers can buy a wide range of products, from bus tickets to airline tickets, and use it for shopping at various stores without using hard cash and without swiping their credit or debit cards. At POS terminals, as customers mostly use mobile phones to operate their e-wallets, they are becoming synonymous with mobile wallets.

An E-wallet is an electronic wallet where an account holder can store his money virtually. It is a pre-paid account in which a user can store his/her money for any future online and now some offline transactions. An E-wallet is protected with a password and generally operated through mobile phones and computers. E-wallets are generally used to make payments for groceries, online purchases, and flight tickets, among many others.

In India 'Times of India' launched, 'Wallet365.com' which can be considered the first e-wallet in India. It has associated with Yes Bank to offer payment services in the country. In this decade with companies from a variety of sectors, launching their e-wallets, we have too many e-wallets in the country. In the foot steps of Paytm, some commercial banks, e-commerce sites, mobile service providers, and even some messaging apps, launched their own e-wallets. By 2017 there are around 80 to 90 players in the Indian e-wallet market. While players like Paytm are doing extremely well, some companies are struggling to find even a foothold in the extremely competitive market. The



initial thrust given by demonetization could be cashed by only a few. With subsequent remonetization, the growth trajectory of many players proved to be transient and few wallets even drifted into oblivion. The initial support from the government enjoyed by e-wallets at the time of demonetization has also faded with the advent of UPI. The RBI sponsored platform is the new blue-eyed boy in the country and then e-wallets had to pass through some regulatory constraints too. Many e-wallets are neither prepared nor had the necessary infrastructure to get through the regulatory requirements mandated by the government and the judiciary. As the going is getting tough only the tough will remain going.

The Launch of UPI

UPI as a real-time payment system is an idea that was conceived and developed by the National Payments Corporation of India. It is controlled by the RBI and IBA (Indian Banks' Association). According to NPCI, Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience. NPCI conducted a pilot launch of UPI with 21 member banks on 11th April 2016. As of March 2019, 142 banks were live on UPI with a monthly volume of 799.54 million transactions worth 18 billion dollars.

The Unified Payment Interface is developed to offer architecture and a set of standard API specifications to facilitate online payments. It simplifies and provides a single interface across all NPCI systems. It also creates interoperability and a superior customer experience. Unified Payment Interface is available in two modes viz. the independent mode and the embedded mode.

In the Independent Mode, the bank develops a separate UPI app and converts its existing mobile banking application to be extended to facilitate UPI services as well.

In Embedded Mode, the bank gives the binary/SDK to the merchant to integrate it into their apps



which are UPI compliant. In this mode, the merchants have the opportunity to include more than one UPI compliant app from different banks.

The UPI applications are preferably developed with customization by a bank. This is to avoid the risks involved around the third-party vendors who involve in the application development. Unless utmost care is taken to properly secure and monitor the development practices of the third party developers, the chances of exploitation of vulnerabilities in the future shall be high

The UPI Success Story:

Though UPI had a humble start in August 2016 it has raced on through 2017. In November 2017 the volume of transactions done through UPI crossed the 100-million mark, overtaking Immediate Payment Service (IMPS), which used to be the most popular mode of peer-to-peer (P2P) transactions. While UPI reached 105 million transactions in November 2017, IMPS was still under the 90 million mark. This is a significant drift considering that in November 2016, transaction volumes for UPI and IMPS stood at 0.28 million and 40 million, respectively.

If we analyze in terms of value, it is IMPS that maintained a huge dominance over UPI. During that month IMPS facilitated transactions worth Rs 78,258 crore while UPI could only reach up to Rs 9,679 crore worth of transactions.

The lower ticket size of transactions and UPI being a free service, unlike IMPS where consumers have to pay a charge to use it, led to the rapid rise in popularity of UPI among Indian users.

The entry of Google in India with the Tez app also contributed to the UPI numbers. The app, being sponsored by Google which powers 93.89% of the smart phones in India, and having the trust of 98.87% of Indians as their favourite search engine, brought greater acceptability and hence easy penetration in the Indian market. The Google app which uses the UPI platform has managed to clock 12 million users and generate 140 million transactions within 3 months of its launch.

National Payments Corporation of India (NPCI) promoted an app called Bharat Interface for Money (BHIM) to serve as a pioneering example for using the UPI platform. BHIM did work as the first



model vehicle to launch on the UPI platform. BHIM initially accounted for 45% of all UPI transactions but was eventually edged out by Google from its leadership position.

BHIM also ventured into an Aadhaar based digitized payment platform for facile, effortless and real-time payment process with the aid of Aadhaar enabled biometric fingerprint device. The BHIM Aadhaar Pay is a mobile-based Application, set forth for the merchants/vendors wherein they digitally acquire the payment from the consumers upon successful biometric verification/authentication. However, its use remained minimal as very few showed interest in investing and using complex biometric authentication systems instead of a simple mobile smartphone that the vendor already has and knows how to use.

Another contributor to the racing up of UPI is PhonePe, a wallet of Flipkart that partnered with Yes Bank to launch its UPI payments. Being an already existing and popular wallet opting for UPI through the app was more convenient for many users. During the same period, PhonePe contributed up to 30% of the UPI payments.

The large scale promotions and Cash backs offered by Google, PhonePe and Paytm in the UPI market are not eating just the market of E-wallets but other UPI players as well. BHIM has been consistently losing market share over the last few months in the UPI market. For May 2019, BHIM came off with only a 2% share out of the total UPI pie, down from more than 7% in May 2018 and 42% in the year before the period.

According to the National Payments Corporation of India (NPCI), the number of transactions of Unified Payments Interface (UPI) has crossed the landmark figure of 1 billion in October 2019. The total transactions of UPI jumped to 1.15 billion in October 2019 from 0.96 billion in September 2019. The total transaction value of UPI stood at Rs 1.91 lakh crore during the month, up from Rs 1.61 lakh crore in the previous month.

UPI platform has beaten e-wallets hands down in terms of the value of transactions and the volume too. For the Financial Year 2020-21, 4 billion E-wallet transactions worth ₹1.52 trillion Compared to



22.3 billion UPI transactions, valued at ₹41 trillion, proves that UPI has won the race².

Is UPI a Threat to the Survival of E-Wallets?

If we follow the current trend of UPI eating into the market of e-wallets as a linear projection, we may visualize the death of e-wallets soon. But the question to ponder is, won't e-wallets offer resistance instead of conceding their defeat? What are the chances that the trend becomes oscillatory, swinging the pendulum back in e-wallets' favour? We need to examine and analyze the factors that caused and contributed to the growth of UPI and its carving into the market of e-wallets to assess the quantum of the threat of UPI to e-wallets. The following are the chief reasons that caused the current drift of customers from e-wallets to UPI.

Direct connect: A wallet transaction involves multiple legs, including the transfer of money from the bank account to the wallet and then to the beneficiary, which the UPI doesn't require. UPI connects one bank with another bank, directly for money transfers. Thus transfers through e-wallets look cumbersome compared to the ease that UPI offers.

The Wallet Image: As UPI transfers money from bank to bank directly, without holding cash with it, it is perceived to be safer than wallets which hold money with them before transferring from one account to another account. Those who are already using banking apps prefer banking based payments to wallets, and hence UPI became a better payment option for them.

A better source of funds: Mobile wallets are generally intended and used for storing smaller amounts of cash. But as UPI is directly linked to a bank account which is a bigger source of funds, users can do a larger volume of money transfers through UPI. In other words, just like you take some money from your locker and put it in the wallet, you transfer some money from the bank account into the wallet. But this is not the case with UPI. What you have in the bank is what you have in the app. So a UPI is like a virtual/nonphysical debit card, which can also do other things like transfer funds or accept them. It has access to a much greater source of funds than an e-wallet.

²<https://www.livemint.com/industry/banking/new-norms-may-revive-fortunes-of-digital-wallets-11622226236625.html>



KYC not mandatory for UPI app: This mandatory KYC norm caused a ruckus in the e-wallet industry with many of its players not equipped well to complete the KYC norms for their customers in the semi-urban or rural markets. This caused a great shrink in the wallet space. As banks have already done their KYC with their customers, UPI apps that have been associated with banks are not necessitated to do them again. The mandatory KYC norms for e-wallets have literally decimated some e-wallet players from tier 2 and tier 3 centers where they don't have the necessary infrastructure and manpower to do the KYC even in the near future. Only a few players like Paytm, that woke up early, invested in the process while Amazon with a great rural reach and deep pockets endured the KYC shock. The value of e-wallet transactions has seen a fall of close to 30% between February 2019 and March 2019. The volume of transactions has also dived indicating the mandatory KYC effect. This opened a great space for the UPI apps to launch themselves.

Lack of Interoperability with E-wallets: This was perhaps the biggest constraint in using an e-wallet till 2020. Even after completing the KYC, it was not possible to transfer money from one wallet to another. While UPI was facilitating the movement of funds across the member banks, e-wallets still remained closed territories. This had greatly impeded the growth of e-wallets in India.

Diminished Government Support: Many e-wallet executives complain that the Government extends its support to banks and not to e-wallets. The attention and reliance enjoyed by e-wallets during the crisis of demonetization were lost with subsequent remonetization. With the introduction of UPI by RBI, the government also finds no reason to lend a helping hand to the e-wallets but to regulate them. UPI services being offered free to the customer within a limit, is also a reason for its stellar growth within a short span.

Limited Merchant Acceptance in the semi-urban and the rural: Many e-wallets don't have much acceptance from the semi-urban and rural merchants. Though merchants need not invest anything but just download an app, aggressive marketing strategies with promotional discounts have to be employed to penetrate the rural markets and gain the confidence of merchants. While big players like Google are offering huge discounts and cash-backs as promotional offers, many e-wallets don't have anything to lure the rural population. Other than 2 or 3 players in the e-wallet market, the rest didn't even invest to fulfill the KYC mandated by the government. Thus many e-wallets had to just let the customers go, who were



enticed by UPI players like Google Pay and PhonePe.

Survival and Growth of e-wallets, the way ahead

One reason why it is unfair to compare the value of transactions between UPI and e-wallets is that the former is not designed for the transfer of funds. Fund transfer is only an accessory service that e-wallets have taken up in addition to facilitating cashless payments. E-wallets stretched themselves from serving the e-tailers to serving the retailers by holding cash electronically and facilitating making payments at the merchant POS terminals. This service served especially the smaller merchants, as they may not afford a costly swiping machine. At the time of demonetization, there is hardly any cash available anywhere and swiping machines were costly. It would take time to order and install them. That is when many e-wallets stepped in and scaled up their operations. The e-wallets in India have delivered the cause well. Thus e-wallets are intended to meet smaller payment transactions rather than huge/ costly purchases.

Thus e-wallets are meant for smaller transactions, and they can never compete based on value with UPI or IMPS. When a consumer in rural India wants to pay at a nearby grocery store, the e-wallet serves him well. Some of the bigger wallet companies have invested in merchant acquisitions and have a stronger game in person-to-merchant transactions, especially in rural India. They have even invested in offline payment mechanisms at stores where neither the customer nor the user needs to have a smartphone or internet connectivity.

The interoperability of e-wallets is expected to address the issue of limitation in the territory, once it becomes operational. The guidelines have enabled this, but the practical system, on how to do it has not been approved by the Reserve Bank of India yet.

In May 2021, RBI mandated allowing interoperability of prepaid payment instruments (E-wallets) by 31 March 2022. But the catch here is that interoperability would be permitted through the UPI channel, India's payments network. To encourage the migration of E-wallets to full-KYC, in April 2021, RBI has proposed to increase the limit of the outstanding balance of E-wallets from the current level of ₹1 lakh to ₹2 lakh.



The research done by ICICI suggests that users are interested in linking UPI IDs with digital wallets because they want to use the wallet balance for small transactions and use their savings accounts through UPI only for bigger transactions. Hence, on 26 May, ICICI Bank announced that it collaborated with NPCI to allow linking its digital wallet ‘Pockets’ to UPI. Thus, UPI would instead of competing with E-wallets, facilitate its use in smaller transactions.

Traditionally, for those transactions carried out through various means such as NEFT, RTGS, etc., banks used to levy charges. Since its advent, till FY 19-20, UPI was facilitating P2P and P2M transactions free of cost. But from April 2020 all the large private banks have introduced charges on UPI transactions, ranging from Rs 2.5 to Rs 5 on person-to-person payments for using the UPI beyond 20 times a month.

The mandatory KYC norms may appear to deter the growth of e-wallets. But in reality, the norms have freed the clogged e-wallet space with a lot number of not so serious and guerilla market players. This should help the serious players in the market consolidate their positions in the market. However, with the new rules from April 2021, like cash withdrawals, and interoperability being exclusive to full KYC wallets, normal and marginal wallet holders are encouraged to migrate to go for full KYC.

If we study the recent scams in India, the modus operandi of the frauds reveals that they have little to do with the security of the apps but more with the psychological conning abilities of the scammers. As UPI directs money directly into the bank account, it may make UPI more prone to security issues through such scams. When it comes to wallets, the money doesn’t directly expose the whole amount in the bank account. The loss in such cases shall be limited to the wallet balance. This makes e-wallets less attractive to scammers too. This is one reason why conservative minds still prefer e-wallets to UPI.

One reason why e-wallets may cutback but will never peterout is because of their sponsorship. E-wallets are sponsored by e-tailers. Paying on such e-commerce platforms through the e-wallets sponsored by them is simpler and more profitable for the customer. Until those e-tailers prosper, their e-wallets also do. To increase their utility and widen their market, they can associate with a bank to offer UPI services too. Even though, some of these e-wallets support UPI platforms, many customers



still store money in their e-wallets and pay through them. Some parents, to support their kids, instead of linking their cards to UPI platform-based apps used by their kids, put money in children's e-wallets. This will limit the kids' access to funds and teaches them thrift.

According to the 2021 Global Payments Report³ by Worldpay from FIS, fueled by the pandemic, in 2020, digital wallets have seen a sudden rise in the offline retail segment too becoming the second-most popular in-store payment method. They grabbed a share of 22% standing second only to cash payments, which led with a 34% market share, ahead of debit cards and credit cards which had a share of 20% and 12%, respectively. The report also estimated that digital wallets would overtake cash payments to evolve as the most popular payment method even in physical stores by 2024, with a 33 % market share in the total payments.

With the new rules for interoperability of e-wallets, a customer can now transfer money from one wallet to another, or a bank account, effectively, transferring and receiving funds like bank accounts. As E-wallets along with other non-bank payment system operators like the PPI issuers, card networks, white-label ATM operators and TReDS are now permitted to take direct membership in a centralized payment system, they can now send or receive funds through direct electronic transfers to a bank or another wallet. Enhanced outstanding balance limit in wallets with full KYC from Rs 1 lakh to Rs 2 lakh would also increase the throughput of transactions of wallets.

Sunil Sanghai the Founder & CEO, Nova Dhruva Capital⁴ opines that NBFCs should consider setting up their own wallets to facilitate disbursement of the loan amounts to the customers' accounts through their own wallets, effectively making a wallet of the NBFC a bank account. This idea if implemented would convert NBFCs into virtual banks in certain aspects. Thus, one can find many reasons that ensure the survival if not the resurgence of e-wallets. But eventually, confining to the business of e-wallets alone may not provide enough opportunities for growth or possibilities to scale-up operations for the Fin-techs. Hence many leading e-wallet

³<https://www.financialexpress.com/industry/banking-finance/digital-wallets-emerge-second-most-popular-in-store-payment-method/2218021/>

⁴<https://economictimes.indiatimes.com/markets/stocks/news/a-bank-in-the-wallet-rbi-has-just-taken-indian-banking-to-next-stage/articleshow/82062459.cms>



companies have already partnered with banks or launched their own payments banks, to access the UPI route too. Based on their core competencies and competitive advantages firms are using a mix of e-wallet and UPI platforms to capture the market.

Conclusion:

If we have to compare e-wallets to UPIs and pick a winner, then we have to accept that UPI is growing faster than e-wallets and seems like grabbing the market that could have been at least partly captured by e-wallets in the absence of UPI. But is UPI's growth carved entirely out of the potential market of E-wallets? One needs to understand that an e-wallet is more a kind of another entity than just a platform for payments. It is like a third entity other than the banks and cash, trying to facilitate a payment mechanism. But UPI is more like a facility, a tool that banks can and are effectively leveraging to bounce back in the digital payment scenario where they were lagging behind the e-wallet players for the past few years. The tool is of course now effectively positioned by Google to carve into the markets of e-wallets and banks. But again, it has to channel bank accounts to facilitate the flow of funds. With such a scenario where new entrants are coming to eat away the market of another player not in the same domain but across the boundaries of the field they belong to, the lines of demarcation between the domains are fast diminishing. We can no more be sure of who belongs to which domain. There are only players now. They compete to sustain and thrive in the ruthlessly competitive world. But which game these players play is no more limited to their domain. They no more just play the game that they belong to but all those games that are necessary on the day of the play to survive and thrive.



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