



ORIGINAL RESEARCH PAPER

Economics

GROWTH OF DIGITAL PAYMENTS AND THE EMERGENCE OF FINTECH IN INDIA

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ABSTRACT

In view of the growing ecosystem and infrastructure favoring digital transactions in India and the world, this paper intends to provide an overview of the current advancements in the domain of Fintech, with a focus on digital payments and the factors that led to the rise of the overall industry from the context of market players, consumers and the facilitating agencies and organizations including the reforms and initiatives led by the government in enabling the huge growth in the country. The paper also seeks to understand and suggest the prospects of the future growth and direction of the industry so that an implementation plan can be made as per the predictions of the associated market.

INTRODUCTION

Over the last two decades, the technological advancements coupled with the advent of internet and the rapid adoption of smartphones has opened a variety of new markets including one that encompasses the online payment technologies, accentuated with the rise of UPI and certain governmental interventions have enabled a conducive environment for the growth of digital payments in India. The financial services domain has observed a massive inclination towards the digital ecosystem and have opened a surfeit of opportunities around FinTech. On the global scale of ecosystem, the surge in the volume and amount of digital transactions has led to a shift in the dynamics of the payment industry towards the digital medium.

While feature phones were mostly limited to the capabilities of USSD (Unstructured Supplementary Service Data) functionality, the rise of smartphone users along with the availability of internet at one of the cheapest rates in the world has been decisive in the exponential growth of digital transactions in India.

Global Scenario and comparison with the Indian digital payment ecosystem

According to the data by Bank for International Settlements, with a total volume of cashless payments standing at 24,430 million, India saw an increase in digital transactions by 54.5% in 2018, as compared to 48% in the case of China and 23% in case of Indonesia¹. Being a developed economy with a mature market for card transactions, the UK saw a growth of 10% for cashless transactions². With a CAGR of 20.2%, India is being forecasted to experience the highest growth in terms of the value of digital payment transactions between 2019 and 2023, ahead of even China and The United States of America³. Lack of digital infrastructure and high population without access to banking services is one of the reasons for comparatively lower adoption of mobile payments in the emerging economies.

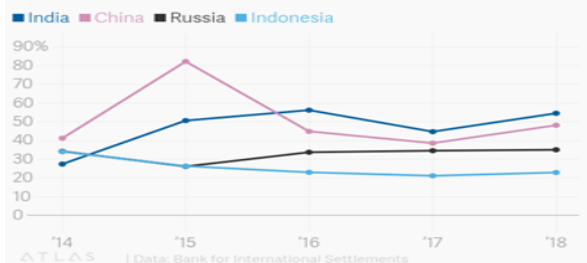
On the global scale, Apple Pay, Google Pay and Samsung Pay stands out to be the top mobile payment providers as well as in the US, while Alipay and WeChat dominates the Chinese economy. Vipps, Mobile Pay and Swish glares in the Nordic region for their high adoption rates while Mercado Pago is popular in the Latin America. The recent technological developments have enabled the use of biometric authentication, which can be readily available on smartphones, to remotely authenticate the users for financial services⁴.

FinTech in India

The increase in focus of the government towards the financial inclusion coupled with the assertion of cashless

transactions had a major impact on the Indian startup ecosystem in the category of fintech. With UPI clocking record figure of 1218.77 Million in volume⁵, real-time money transfer through a mobile device has been made easy and promoted the form of financial transaction. A report by PwC and ASSOCHAM states that the adoption rate for fintech in India is at 57.9%, the second-highest globally⁶.

Annual cashless payment growth rates



Indian startup ecosystem India has always been a unique market for its interesting demographics. While Fintech unicorn startups were found to be the most valued ones; supply chain, logistics & delivery was the category for most of the unicorn startups, followed by Fintech. It is interesting to note that India is in coherence with the global trend as far as the category of Fintech is concerned but lacks far behind in the domain of Artificial Intelligence.

While most of the developed economies implemented a credit-card based infrastructure of cashless payment decades ago¹, the overall legacy has become a form of burden in terms of adoption to the newly available solutions which are being accepted readily in the growing economies like China, India, etc.

The category is likely to find more innovation in the coming time, as FinTech continues to expand its range of services and disrupt the banking and tech industry though the startups are struggling to build a sustainable business model.

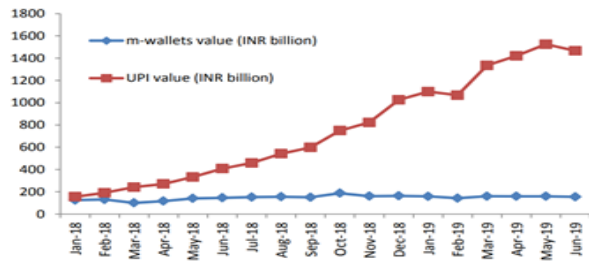
Although the count of unicorn startups in the category of Fintech stands second. It is, however, interesting to note that the valuation of Fintech unicorn startups stands highest among all the above-mentioned categories.

Growth of Unified Payment Interface (UPI)

UPI stands as one of the main elements that accelerated the growth of mobile payments in India at an exponential rate. As of Nov 2019, 143 banks are already live on UPI and facilitated more than 1218 million volumes of transactions⁵.

According to a report by Worldline, the emergence of UPI

had an impact over the growth of mobile wallets, which saw an increase of 18.4% in the number of transactions in Q2 2019⁷. The number of transactions via UPI in the same period, notably, was found to have an enormous growth of 263%.



The statistics, in the report, as per the data by RBI shows that the transactions via on mobile wallets in Q2 2019 were a meager 10% of the UPI's total transaction value, which may indicate that the growth of UPI came at the expense of transactions via mobile wallets.

As per the report by Worldline, in Q2 2019, the highest volume and the value of transactions were clocked at merchant categories including Grocery, Restaurants, Petrol Stations, Apparel Stores and Speciality Retail⁷.

The report by RBI on Deepening Digital Payments, May 2019, envisages a ten fold rise over the next three years in digital payments with a recommendation of the expansion of UPI, from Indians living and traveling abroad, for remittances and payments⁸. Plans for international growth include a plan to launch UPI in countries including Singapore and UAE.

Digital Payments constitute 96% of the non-cash retail payments between the period of October 2018 and September 2019⁹, as per RBI. NEFT and UPI saw an enormous growth of 252 crores and 874 crores worth of transactions, clocking 20% and 263% growth, respectively, during the same period⁹.



Volume (in Million) of UPI transactions
Source: NPCI - Created with Dataswrapper

Note: The data used in the above graph excludes the transactions having debit/credit to the same account for the month of August 2018 onwards

Government Initiatives

The government of India has proved to be a catalyst in the growth of digital payments ecosystem in the form of modernization of payment infrastructure, digital literacy and offering an ease of setting up a business. The government pushed a surge of digital inclusion in the country with subsidies, programs and incentives including:

- BHIM cashback and referral bonus scheme¹⁰.
- Subsidy on digital payments, in the form of 10% discount on payments for rail tickets, highway toll fees and insurance policies¹¹.
- Facilitating UPI transactions to accept payments without any MDR (Merchant Discount Rate)¹².

- Service Tax exemption for different categories¹³.
- Launch of e-wallet services by different states (T-wallet by Telangana¹⁴, Bhamashah wallet¹⁵ by Rajasthan, etc.)
- Launch of NCMC (National Common Mobility Card) for toll and transit payments¹⁶.
- Mandating FASTags for all vehicles for highway toll collection¹⁷.
- Issuance of virtual payment addresses by India Post Payments bank.
- DigiDhan Abhiyaan, the outreach campaign enrolling over one crore rural citizens for digital payment methods¹⁸.
- Interoperability between digital payment wallets¹⁹.
- Digital literacy programs including Pradhan Mantri Gramin Digital Saksharta Abhiyan²⁰, Lucky Grahak Yojana, Digi-Dhan Vyapar Yojana, DigiVaarta²¹, etc.
- Funds transfer facility through NEFT around the clock on all days including weekends and holidays²².

Future Trends:

I. Voice and vernacular language inclusion

In 2021, 536 Million Indian language internet-users are projected as compared to 199M English language users²³. In India, 10 Million new internet users were added every month in the year 2018²⁴. It was also found that 90% of the new internet users preferred regional language²⁵. The rise of platforms like TikTok and Sharechat, which are targeting the audience in tier-2 Indian cities instead of the tier 1 cities targeted by platforms like Snapchat, Instagram, etc., is making sure that the content distribution can be done via regional languages like Hindi and Tamil.

Google is equipping itself to work on its voice search algorithms²⁵, because the internet users all around the world, and not just in India, are adopting the voice search mechanism to find content online. According to a study by PwC, around 41% make atleast one search via voice per day; moreover, the number is increasing²⁶. By the year 2020, around 50% of all the online searches will be directed by voice and this number is exponentially large from that of 20% in 2016²⁷.

The emergence of Artificial Intelligence based systems will trigger the rise of global voice and speech recognition software market, which is expected to be worth \$31.82 Billion by the year 2025²⁸. The deep learning algorithms will leverage the use of voice and speech-based solutions for more efficient search results and will further act as a catalyst in favor of the market²⁹.

ii. Digital Wealth management

Around 69% of the overall HNI (High Networth Individual) population in India falls in the age group of 30-55 years³⁰, who are also the frequent users of social media platforms. With the continuous rise in the number of digital users, a growth of investment can be expected in financial assets in the form of digital investment in categories, including, but not limited to, mutual funds, equities, venture capital including crowdfunding. Wealth management will see a significant shift towards investment through web or mobile applications³¹.

iii. Digital Lending (\$1 Trillion opportunity)³²

By the year 2023, it is estimated that MSME (Micro, Small and Medium Enterprises) digital lending may increase 10-15 times to arrive at INR 6-7 Lakh Crore (\$80-100 billion) worth of annual disbursements³³, creating a window for traditional lenders to go digital.

With the growth of API based data distribution patterns and the technical know-how to analyze large sets of data

values, the credit value chain is seeing a transformation while adapting the digital models, making the possibility of real time, person-to-person digital lending process more efficient. Technological advancements and inclusion like biometrics for authentication, Machine Learning, Artificial Intelligence, e-signatures, and Blockchain may even enable an ecosystem for the process of digital lending which may involve no external or human involvement³².

Ant Financial introduced the 3-1-0 formula which translates to 3 minutes to decide, 1 minute to transfer the amount and 0 human touch, through which more than 5 Million loans have already disbursed³³. With the exponential rise of internet users in India and the electronically available data like tax and legal records coupled with data available through open APIs as a part of India Stack, big data can be leveraged by the lenders to reduce the customer acquisition cost and make efficient underwriting models. With the emergence of Jan Dhan, over 90%³² of households in India have access to banking services and Aadhar becoming the world's largest biometric database³⁴ coupled with the mobile phone access, the reach of digital lending mechanism can see a wide horizon in the future.

iv. Social Commerce: \$70 Billion opportunity for India³⁵

With the strikingly high growth of users making use of digital payments and social messaging applications, the opportunity of social commerce is gaining pace. Middle- and lower-income segment population finds a great source of e-commerce out of social messaging applications, majorly favored by platforms including Facebook and WhatsApp. Word of mouth and the appeal of content to go viral may play a huge role in making a sale via social commerce.

With a steady growth of social media users globally, which is further expected to rise in the coming years coupled with the fact that 71% of consumers rely on social media for their buying decisions, while 78% of people get influenced by the social media posts of companies for their buying decisions³⁶. 93% of online users put visual content to be one of the crucial factors while making a purchase decision³⁷. The quality of the visuals also makes a significant impact in understanding how the product looks. Positive evidence has been observed enforcing the fact that images help to increase the attention, trust and conversion rate of a buyer³⁸. An e-commerce website, Etsy, with over 60 million items in its catalog, discovered that the quality of listed images was an important factor for sale for 90% of its users³⁹.

E-commerce via social media, in India, may encounter a curve like that of China, where it has grown swiftly over the last couple of years and encompass more than 15% of the online retail sales in the country⁴⁰. In India, it may account for 15-20% of the online retail sales over the next 10 years. The market for social commerce is projected to be worth \$70 Billion⁴¹, which is more than two times the current e-commerce market in the country.

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