Causality of government policies and the lucrative uptake of digital payment applications in India.

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Abstract

India made a remarkable achievement in the past few years by enabling its mass amount of people digitally in the payment sector. The timeline of the evolution of digital payment infrastructure in India begins from the introduction of the ECS and EFT followed by the introduction of cards and now at a stage of using innovative mobile payment applications. In between these digital India campaign introduced by the government in 2015 and the demonetization happened in 2016 plays an inevitable role in the diversion of the growth trend. India's payment landscape is growing more faster than the countries around the globe. Some of the factors that work as catalysts for facilitating such tremendous growth include the emergence of mobile payment technologies, inclusive government policies, and strong regulatory assistance. Growth of digital payment applications in India is mainly attributed to the ambitious efforts of the Reserve Bank of India along with the National Payment Corporation of India, an initiative from the coordinated efforts of the RBI and the Indian Banks Association (IBA). RBI on 15th May, 2019 published its "payment and settlement systems in India: vision 2019-21" with a core theme of 'empowering exceptional e-payment experience'. NPCI put its constant efforts on introducing disruptive innovations in digital payments through the introduction of various payment infrastructures such as IMPS, UPI, USSD, and BHIM App. This paper is an attempt to analyze as to what extent various policies of the government support the growth of the UPI interface. The statistics published by RBI and NPCI about UPI are used for analyzing the growth trend and the study reveals that UPI is the real winner of various digital payment promoting Initiatives of the government.

Key Words: Digital payments, NPCI, UPI
Introduction

Payment and settlement systems in India have gone through an era of digitalization. Card base financial transactions were losing its charm due to the introduction of innovative payment instruments. The continuous effort by the government and the central bank of our country for the promotion of digital payment systems get reflected in the growth of such systems. Digital payments have rapidly become the convenient mode for Indians for transacting with government and for other transactions. Payment and settlement systems in India are regulated by the Reserve Bank of India and the Board for Regulation and Supervision of Payment and settlement systems within the framework of payment and settlement systems act 2007. Along with RBI, there is an umbrella organization for operating all the retail payments and settlements systems in India, it is NPCI (National Payment Corporation of India) an initiative of RBI and IBA in 2005. The main goal of NPCI was to accumulate multiple payment systems across the country. NPCI formulated the interface called Unified Payment Interface (UPI) with a vision which was to provide a convenient and affordable payment platform to an ordinary man. UPI was launched on 11th April, 2016 and banks begin to launch their UPI enabled applications on google play store from 25th August 2016 onwards. UPI is important because it works as a unified layer that integrates mobile applications to real-time payment systems for providing instant money transfer across bank accounts kept by a consumer in different banks and digital wallets. As per NPCI records around 38 third party apps were in collaboration with the UPI interface. Among this PhonePe, Paytm, Mobikwik, Google Pay, BHIM SBI, and Kotak 811 were identified as the best UPI apps in India. The government of India in coordination with RBI and NPCI formulate policies for the promotion of digital payment in India. So, this paper is an attempt to analyze the growth trend of UPI supported digital payment applications after the introduction of various policies of the government.

Review of Literature

After the happening of two most important initiatives of the government i.e.; digital India and demonetization more studies were carried out in the area of growth prospects of digital payment in India. After demonetization, millions of consumers and merchants switched to e-wallet companies like Paytm to carry out their payment transactions. Such an outset(Sandhu,2018) studies the growth of e-wallet companies in the post-demonetization era. It is a case study on Paytm.
The study unveils the cases were Paytm helped people to make digital payments and the achievements of Paytm and the trust that the company creates among its users is pure because of its serious efforts and customer-centric market approach. Nowadays Paytm on an average of 1.5 crores being hourly added to its wallets and it is expected that the event of demonetization brings this change. Reserve bank of India in its annual report of 2018-19 relating to payment systems and IT says that "to further widen the scope and to increase digital payments, various new features have been approved in UPI. The major additional feature include increasing the per transaction limit of an UPI transaction to 2 lakh from the existing limit of 1 lakh "this development gives the clear indication that UPI plays an important role in the growth of digital payments (Payment and settlement systems and information technology, 2018), Current government create an implement enhanced policies and initiatives to promote digital payment system in India. For the last three years beginning from 2014 to July 2017 remarkable growth is marked in various digital payment modes in India. Demonetization boosts up this growth especially the growth of new-fangled modes of digital payments. This remarkable growth adds to economic growth (Joshi,2017). A report of the High-level Committee on the deepening of digital payments was released on May 2019 by RBI, the report says that government is the active player in the payment system space. The government plays a significant role in promoting payments digitally as well as ensuring transparency and efficiency in such transactions. "The key drivers of mobile payments in India have been positive policy framework changes and government initiatives like the launch of new payments system such asUPI, Aadhar linked electronic payments and improvement of the digital infrastructure”(fin-tech in India powering mobile payments, 2019).

Significance of the study
The central bank of the country along with the NPCI has made tremendous efforts to develop a digital payment culture across the country. As per RBI criteria, the digital payment platform of a country is simple and efficient and more important it should be convenient for the users while they carry out their payments. in this angle, UPI is an interface with the features that satisfy the ideal digital payment system criteria of RBI. UPI is a unified interface rolled out by the National Payment Corporation of India and UPI is functioned with the help of its advanced features and using the smartphone as its main component. The rate of mobile phone penetration...
ration is high in India and this facilitates the spread of UPI all over the country.
Why UPI is superior to other payment solutions

**Interoperability**
- UPI allows instant transfer of money across bank accounts and wallets
- Allows full interoperability between payment channels, institutions, and multiple payment identifiers such as Aadhar number, mobile number and other advanced virtual payment addresses

**Instant Payments**
- UPI build on IMPS infrastructure and its transactions were processed 24x7 basis.

**Single identifier**
- In a single mobile app integrate bank accounts of different banks, wallets and prepaid instruments
- Helps the user to process all his payments on a single interface.

**Push and pull payments**
Payments can be initiated by the sender and the receiver, if payments are on pay request the sender is pushing funds to the beneficiary on the other hand if it is a collect request the customer is pulling the funds from the intended remitter with help of virtual address.

(Source: NPCI: Driving digital revolution, 2016)

As per NPCI UPI product statistics, while starting its functioning in August 2016, only 21 banks are live on the UPI platform in December 2019 it is 143. In this outset, it is significant to analyze the growth trend of UPI concerning various initiatives by the Government to support the growth of digital payment infrastructure in the country.

**Statement of the problem**
UPI is a unified platform allows users to process their payments from bank accounts of different banks. UPI is one of the fast-growing payment interfaces in India. As per NPCI statistics, For December 2019 the total number of UPI transactions in the country stood at 1308.40 million and the value of fund transferred is stood at 2,02,520.76 crore. But when UPI was started functioning in August 2016 the number of UPI transactions was only 0.93 million
and the amount transferred for the same is 3.1 crore. During the last 3 years, UPI made
tremendous growth. So, there is a necessity to analyze the highs and lows of UPI with different policies of the government.

Objectives

• To analyze the growth trend of UPI enabled mobile applications in India

Research Methodology

A descriptive design is used for the study. Secondary data published by the RBI and NPCI is used for the study. DataneededforthestudyiscollectedfromtheofficialwebsiteofbothRBIandNPCI like www.npci.org.in and www.rbi.org.in. Scope of the study is the period starting from August 2016 to December 2019. For analysis of data tools like cross-tabulation, percentage analysis, bar chart, and line chart are used.

Evolution of digital payment system India

1980s-1990s

a. Introduction of Electronic Clearing service and Electronic Fund Transfer
b. Banks started the issuance of debit and credit cards

2000-2005

a. Introduction of new fund transfer and settlement systems such as RTGS and NEFT

2006-2010

a. Passed payment and settlement act 2007, unique biometric identification program named Aadhar was launched.
b. Launch of IMPS

2011-2014

a. Introduction of RUPAY card payment scheme
b. National Automated Clearing House implemented
c. Introduction of Aadhar Enabled Payment system

2014-2018

a. Launch of Digital India
b. Demonetization
c. Growth of IMPS, PPI transactions touched triple digits
d. Introduction of UPI (Unified Payment Interface) and BHIM
a. NEFT and RTGS services available on a 24x7 basis.

b. Recently our finance minister announced that no Merchant Discount Rate will be applicable on transactions through Rupay and UPI Platforms from 1 January 2020 onwards and revenue department will Soon notify UPI as their prescribed mode of payment for their virtual Transactions without charging any MDR.

Analysis and discussions

Table 1

<table>
<thead>
<tr>
<th>Year of...</th>
<th>Amount (Cr)</th>
<th>Volume (In Mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>891</td>
<td>3</td>
</tr>
<tr>
<td>2017</td>
<td>56,670</td>
<td>427</td>
</tr>
<tr>
<td>2018</td>
<td>585,710</td>
<td>3,746</td>
</tr>
<tr>
<td>2019</td>
<td>1,836,638</td>
<td>10,788</td>
</tr>
</tbody>
</table>

Source: NPCI.org/statistics

UPI was introduced by NPCI in April 2016 but banks started to launch their UPI enabled applications in August 2016 and table 1 shows the number UPI transactions and the amount transferred through UPI for the last 4 years. Table 1 indicates that UPI transactions were increased at a higher rate year after year.
Figure 1: Growth Trend of UPI transactions

Figure 1 showing the growth trend of UPI transactions for each quarter starting from the last quarter of 2016. From the figure, it is clear that the value of UPI transactions shows the steady growth and it is at the peak level when it reaches the last quarter of 2019.

Figure 2: Number of banks live on UPI

Figure 2 showing the number of banks they are live on UPI by launching their mobile applications on UPI. In 2016 it was only 137 and the number increased by 356.9% in 2017.
and the percentage increase was 106.2 in 2018 and it was 31.37% in 2019. The percentage increase was higher during 2016-17.

**Important Mobile Applications on UPI Interface**

As per recent UPI product statistics published by NPCI, there were 38 applications worked on the platform of UPI among these Google pay, Phonepe, Paytm, and BHIM app holds top positions. Razorpay, an intermediary between Indian payment apps and vendors compiled data relating to the share of transactions via the unified interface on Razorpay gateway in October 2019.

**Figure 3: Share of various Mobile applications on UPI interface**

![Share of various applications on UPI Interface](image)

Source: (Ghosh, 2019)

Figure 3 shows the share of each mobile application to the overall growth of the UPI interface. The majority of the UPI transactions were carried out through Google pay (61.2%). Followed by PhonePe (24.9%). The remaining 5.8% is carried out in Paytm.

**Findings and Conclusion**

UPI launched by NPCI in April 2016 and banks started to launch their mobile applications on the interface from 25th August 2016 onwards. UPI growth trend follows an upward direction from its introduction until 2019. When it starts only 137 banks were live on UPI but in 2019 the number increased to 1696 and the percentage increase is higher during 2016-17 when
demonetization effect the cash-based economy of India. The government of the continuous efforts of RBI and NPCI introduced number initiatives to facilitate the growth of the UPI interface. Different central government companies including IRCTC tie-up with UPI
Interface by launching their mobile applications through the interface. Recently, your finance minister announced that there is no MDR (Merchant Discount Rate) that is applicable for transactions through RUPAY and UPI from January 2020 and the central revenue department will soon notify UPI as their prescribed mode of digital transactions without any MDR. UPI is the real winner who gained a lot from demonetization and various Digital India.

References


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