

An Analysis of Digital Payments Platforms in India

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Abstract

The advent of demonetization transited the cash dominated Indian economy to cashless one. It was the chief step towards making Indian economy free from the hustle of carrying cash, as it brought with it the fear of theft. The initiation of making payments through ATM, credit and debit cards especially among the younger and middle-aged generation shows that India has started its journey towards being one of the modern digitalized economies of the world. Moreover, the initiation of financial inclusion program since 2014 has brought about 330 million people under its preview associating them officially with financial sector of India. Furthermore, demonetization has reduced counterfeit currencies and has made people understand the vital importance of using online paying methods. Japan, Norway and Netherlands are the economies which have implemented various measures along with the support of the Governments and Ministries have almost eliminated the usage of cash and have headed towards being digital. The authors also stand in support of the initiation of digital era and the policy of demonetization initiated by the Government of India.

This research paper tries to analyses the trends in digital payments in India from 2018-2022 using annual data. The paper uses secondary data available on the Handbook of Statistics on the Indian Economy published on Reserve Bank of India website.

Keywords: Digital, Financial Inclusion, Reserve Bank of India, Debit Card, Credit card, Demonetization.

Introduction:

The public as well as the private sectors have been revolutionized by the advancement brought by digital financial inclusion in India. However, the Government of India has been the main catalyst which relies on the banking system as an instrument for poverty alleviation and comprehensive growth. For example, the opening of bank accounts under the Pradhan Mantri Jan Dhan Yojna and making payments through Direct Benefit Scheme has put the Indian economy on digital platform. In order to broaden the consumer base banks along with some private banks have initiated the proposal of digital financial services for the financially prohibited and unwarranted count. (M Star Project,2019 a). The result of which is that the use of mobiles as a

digital medium by the people has shown a rising trend. Therefore, a shift is visible for such population from cash-based transactions towards digital technology. Apart from mobile usage an upward inclination is also witnessed in people making online payments for purchasing grocery items to paying rent, booking tickets etc.

The Digital Era for India:

India secured the first position with 89.5 million digital transactions followed by Brazil, China and Thailand bagging the second, third and fourth positions with 29.2 million, 17.6 million and 16.5 million transactions respectively in 2022. The Prime Minister added, this milestone has been achieved which shows that the rural economy is changing and India is one of the economies where mobile data is inexpensive. (Roshan, 2023) Under the Digital India drive, the Government of India with an intention of providing empowerment digitally has created an economy which is Faceless, Paperless and Cashless. As per the information provided in the Economic Times, Indian economy is expected to witness 66.6 billion transactions amounting to \$270 billion bring a turnaround from cash to cards and digital payments by 2023. (Bhatia,2023)

UPI has emerged as a sole player driving digital growth in India. It accounted nearly three fourths ie 73% of the total 1139382 lakhs of financial transactions in 2022. Moreover, its growth over the years has been acknowledged by sharp ups and downs. The rate followed a mixed trend with reaching a mammoth 132% in 2019 followed by decline of 78% in following year and then 105% in next and reaching 82% in 2022. (Source: RBI and Author own Calculations). UPI has gained popularity among the people as is associated with minimal charge with allowance of wide range of payments which can be directly transferred to the beneficiary bank account using Virtual Payment Address (VPA). (M Star Project,2019 b) Thus, it can be said that digital financial inclusion has become a prominent tool for promotion of economic growth, equality, firm business conditions and sound financial and banking systems. (Mohapatra et.al,2020)

Literature Review:

A plethora of studies have been done on digital financial inclusion in India. Some of which are listed under in the form of literature review.

Thirupathi et al (2019) mentions various advantages and disadvantages of cashless payments in India and concluded that post demonetization these have become the face of Indian economy especially the youths and middle-aged people. These payments techniques are almost used in each and every sector with the lure of getting discounts or gift coupons after every payment. This shows the evolution of Indian economy towards a developed one.

Angamuthu (2020) emphasized on government role in taking Indian economy on the path of cashless one. Both the volume and value of transactions via digital handle has shown a tremendous growth of 24.11% and 15.84% respectively. This will lead to inflow of investments

into the country. With the passage of time these modes will become new normal and people will readily adjust to them as per the need of the hour.

Mishra and Tripathi (2022) analyzed that in India is one of the countries with highest digital utilization rate of 75% followed by China (63%), Italy (49%) and worldwide average 45% amid national shutdown and pandemic. Digital payments have become a pre requisite owing to demonetization and covid 19 and have generated a momentum towards heading for cashless economy as per government scheme.

Dash et.al (2023) held the view that Indian economy underwent a revolution with the advent of digitalization. Cash usage has been reduced but it will take a longer span of time to completely eradicate. The usage of debit and credit cards have gone up in 2020 and 2021. Moreover, mobile banking has been resorted to as a safest way for future dealings. But Indian economy where majority of people live in poverty implementation of digital means while changing attitude of people seems to be difficult task but is obvious.

Objectives of the Study:

This research is primarily based on the following objectives:

1. To analyze the trends in digital platforms in India from 2018-2022.
2. To examine the percentage growth and the contribution of various digital payments modes.

Importance of the Study:

This research paper gives insights about the trends prevailing in payments via digital modes in India for period of 2018-2022. It is seen that India is transforming herself to complete digital era as people have shown their inclination for quick, easy and time saving dealings. Besides this this study is also useful for the society and policymakers as it deals in details about the trends and mentions reasons for the same. This study completely supports the policy of demonetization and digital India move adopted by the government as meaningful results are noticed. This will take Indian economy to new heights of progress, growth and prosperity.

Global Highlights:

India has always maintained cordial relationship in the international arena. This section deals with some of the global economies and the trends prevailing there in context of the present research paper.

- **Norway:** It being almost ten times smaller than India had opted for cashless economy more than 5 years. The cash usage was less than 5% and it continued to drop. The prime reason for such performance were the refusal of two large banks DNB and Nordea to involve themselves in giving and taking cash. This move has already brought a positive

change as 40% of Norwegian population has started using Vipps, a mobile app launched by DNB bank. Furthermore, the politicians are also assuring that in cash free nation, money laundering and tax evasion are challenging. They further added that life without cash will be comfortable. (Mowinckel, 2018).

- **Japan:** Being the third biggest worldwide, a turnaround towards being cashless was the motive as 36% of payments were done through online mode as per the Japanese Ministry of Economy, Trade and Industry (METI). These payments were worth 95 trillion yen in 2021 rose to 111trillion yen in 2022, marking a considerable rise of 17%. It was the first time that Japan had crossed 100trillion yen level mark. The government is actively participating in this cashless drive, while Tokyo plans to achieve 40% of digital transactions by 2025 and 80% in long run.

Certain incentives were taken by them in this direction are mentioned as under-

- a. **Rise in Consumption Tax in 2019:** In order to boost cashless era, the consumers who paid digitally on certain outlets were offered cashbacks, reward points up to 5% of total value of transactions. This initiative ended in June 2019 but proved profitable in gearing up digitalization.
 - b. **Digital Salary Application:** Japan uplifted the prohibition on digital salary payments since 1st April 2023. This proved to be a quick and time saving procedure as the salary was directly transferred to the beneficiary smartphone payment application account instead of following the traditional method of transfer to their bank accounts.
 - c. **Digital Yen:** Initial stage of digital yen along with the popularity of cryptocurrencies have further accelerated the pace of shedding of cash and preference towards being cashless. (Mehta,2023)
- **Netherlands:** A strange phenomenon of conversion of prisons to luxury hotels and mansions came into limelight. The reason for such an unusual behavior is the crime rate is almost negligible as per the reports. The deputy governor of Norgerhaven, a high-security prison in the Netherlands further that they have eliminated the cause of crime by providing debt therapy means to control anger management. This method has proved successful and the past 10 years it is still expanding. (Patowary,2018)

Research Methodology:

This paper uses secondary data on annual basis covering the period of 2018- 2022 and is the empirical analysis of the variables used. The variables incorporated to study the digital trend include payments through NEFT, payments through RTGS, payments through UPI, payments through Credit Cards, payments through Debit Cards along with total digital payments. The data

is collected from Handbook of Statistics on Indian Economy available at Reserve Bank of India website. The study has taken total volume of digital payments in lakhs for the given period.

The author has calculated percentage growth as well as percentage contribution of the above stated variables for the given time period.

Graphical and Tabular Presentation:

This section deals with tabular and graphical presentation of data as under.

Table 1: Various Digital Payment Modes in India.

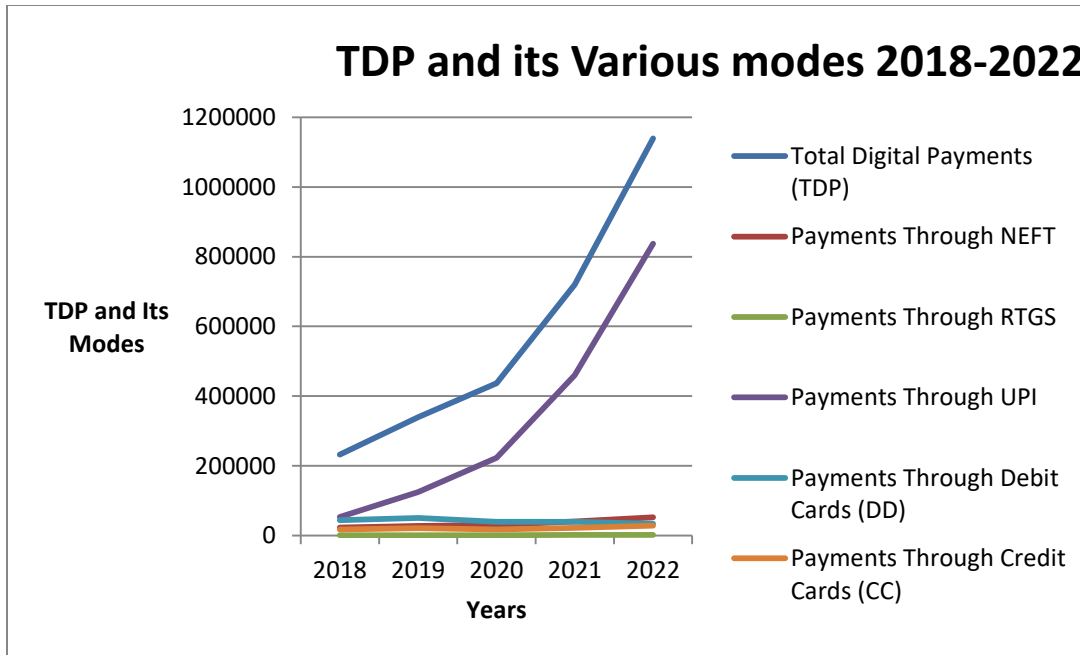
Years	Total Digital Payments (TDP)	Payments Through NEFT	Payments Through RTGS	Payments Through (UPI)	Payments Through Debit Cards (DD)	Payments Through Credit Cards (CC)
2018	232602	23189	1366	53915	44143	17626
2019	340155	27445	1507	125186	50611	21773
2020	437068	30928	1592	223307	40146	17641
2021	719768	40407	2078	459561	39384	22399
2022	1139382	52847	2426	837144	34179	29145

Source: Handbook of Statistics on Indian Economy, Reserve Bank of India. (RBI, 2023)

It can be seen from the above table that except debit and credit cards payments all other payments modes have witnessed a steep rise from 2018-2022. Both the cards followed a mixed trend, while debit cards payments continued to decline after 2020 while for the credit cards it became minimal for 2020 and then showed a growth. One of the reasons for the same was the onset of Covid 19 pandemic and its aftermath impact where people switched to cashless and contactless payments with the fear of getting infections.

This can be illustrated by a graph under:

Graph 1 TDP and its Various Modes 2018-2022.



Source Table 1.

In percentage terms TDP recorded a growth of nearly 400% (389.84) for 2018-2022. Except debit card which recorded a negative inclination (-22.57%) all others showed clear indication of growth. UPI payments occupying the first position with percentage increase of 1452.71% with NEFT payments growth occupying the second position with 127.89% followed by RTGS and credit cards growth 77.59% and 65.32% respectively for same time period. (Author own Calculations)

The yearly growth rates of the variables are presented below:

Table 2: Yearly Percentage Growth in TDP and its Various Modes.

Years	Percent Growth in TDP	Percent Growth in NEFT	Percent Growth in RTGS	Percent Growth in UPI	Percent Growth in DC	Percent Growth in CC
2018						
2019	46.24	18.35	10.32	132.19	14.65	23.53
2020	28.49	12.69	5.64	78.38	-20.68	-18.98
2021	64.68	30.65	30.53	105.80	-1.90	26.97

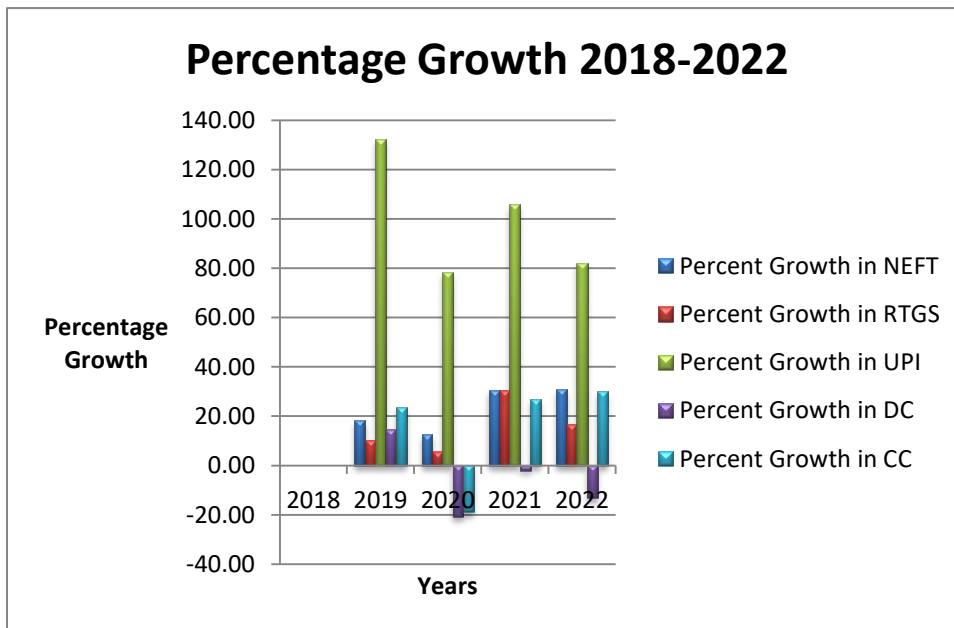
2022	58.30	30.79	16.75	82.16	-13.22	30.12
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Source: Compiled from Table 1. (Author own Calculations).

As it can be seen that the year 2020 recorded minimal growth of total digital payments and its various modes after that they showed the sign of recovery. The prominent reason for such a behavior was the onset of the pandemic and lockdown imposed by the government. After that people became habitual to such a situation and adopted modern approach of dealing the payments. Lockdown brought with loss of jobs, work from home facilities and government provided monetary assistance via digital modes that caused upswing in various digital platforms. (Pandey and Pal, 2020)

This can be presented graphically

Graph 2: Percentage Growth in Various Modes 2018-2022.



Source: Table 2

It is interesting to note that a negative growth rate is noticed while paying via debit cards in three out of four years. This gives an indication for people preference for UPI as it is secure, time saving and easier way for making payments from the debit account to creditor one.

Percentage Contribution of Various Digital Modes in Total Digital Payments:

UPI dominated the other modes of digital payments during the period of study, It had a share of nearly three fourths (as mentioned above) in the total digital payments for 5 years. In a report published by Economic Times, it was discovered that nearly 57% of Indian population used digital payments five to six times a week as compared to 21 % using it three times a week. (Kumar et.al, 2022 a)

The percentage contribution is presented by table and graph below:

Table 3: Percentage Contribution of Various Modes in TDP 2018-2022.

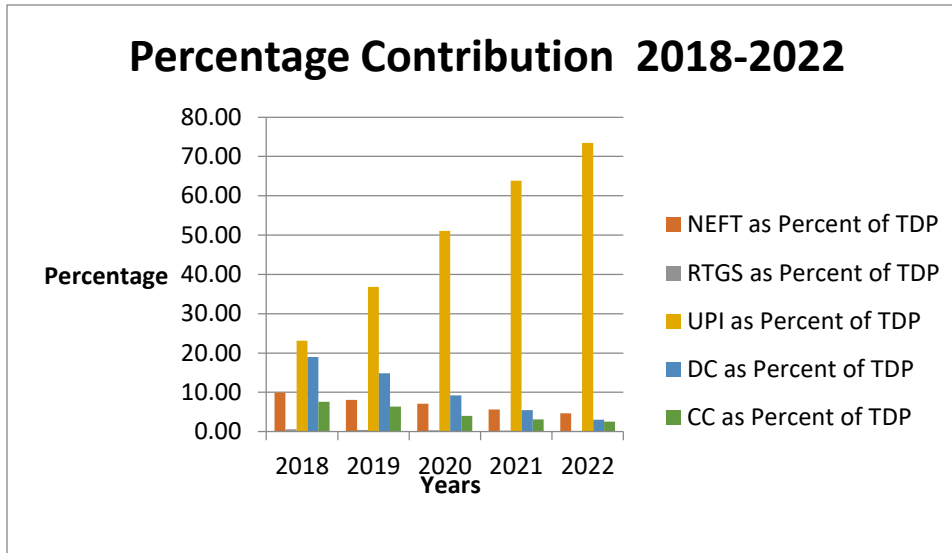
Years	NEFT as Percent of TDP	RTGS as Percent of TDP	UPI as Percent of TDP	DC as Percent of TDP	CC as Percent of TDP
2018	9.97	0.59	23.18	18.98	7.58
2019	8.07	0.44	36.80	14.88	6.40
2020	7.08	0.36	51.09	9.19	4.04
2021	5.61	0.29	63.85	5.47	3.11
2022	4.64	0.21	73.47	3.00	2.56

Source: Compiled from Table 1. (Author own Calculations).

It is visible from above data (Table 3) that only the share of UPI has been continuously rising for the mentioned period while the other methods contribution in total digital payments has registered a downfall over the years.

This can be shown through a graph.

Graph 3: Percentage Contribution of Various Modes in TDP 2018-2022.



Source: Compiled from Table 1. (Author own Calculations).

Apart from the advantages UPI transactions offers, it is also not free from disadvantages. One of them associated with it is the increase in cyber scam. It rose to 190 percent during nationwide closure in March 2020 in Delhi out of which 62% of the grievances were regarding digital scams. Secondly people also faced the issue of transaction breakdown especially for the public sector banks as compared to private ones. For example, the percentage of failure for SBI was more than 5% which reduced to 3.8% in August 2020. The same for Axis bank was 0.6 percent in August 2020 and 1.5 % in September 2020. (Kumar et.al, 2022 b)

Limitations of the Study:

Some of the limitations of this research paper are mentioned as under:

- a. The authors have only some modes of digital payments in India such as debit cards, credit cards UPI, NEFT and RTGS. Payments via BHIM Aadhar Pay, Prepaid and Paper Based instruments IMPS are excluded from scope of this research paper.
- b. The study fails to cover the impact of digital payments on terrorist funding activities.

Conclusion:

India surpassed other countries in making digital payments shows that this incentive has proven fruitful for the entire economy. The credit of this also goes to the demonetization move initiated in 2016 by the Prime Minister with a view to curb black money has taken the economy towards a progressive and developing path. Amongst the digital modes, UPI has occupied lion share along with increase in its usage over the years. It was surprising to note that Kenya was the topper amongst the African countries when it came to the usage of digital payments. The authors cited the examples of Norway, Japan and Netherlands that these being smaller in size and less

populated than India have opted being digital. Thus it can be said that India has come a long way but the path of converting itself to an entire cashless economy is a time taking process.

References:

1. Angamuthu, B. (2020). Growth of Digital Payments in India. *NMIS Journal of Economics and Public Policy*, 5 (4), pp. 31-41.
2. Bhatia, S. (2023, September, 10). Digital Payments in India, Razorpay, <https://razorpay.com/learn/digital-payments-india-definition-methods-importance/>
3. Dash, S., Bhoi, B., & Biswal, S. S. (2023). Electronic Payment Methods in India: A Statistical Trend Analysis. *Science and Culture*, 89 (9-10), pp. 336-341.
4. Kumar, A., Choudhary, R. K., Mishra, S. K., Kar, S. K., & Bansal, R. (2022) a. The Growth Trajectory of UPI – Based Mobile Payments in India: Enablers and Inhibitors. *Indian Journal of Finance and Banking*, 11(1), p.51.
5. Kumar, A., Choudhary, R. K., Mishra, S. K., Kar, S. K., & Bansal, R. (2022) b. The Growth Trajectory of UPI-Based Mobile Payments in India: Enablers and Inhibitors. *Indian Journal of Finance and Banking*, 11(1), p.54.
6. M Star Project (2019, March) a. Executive Summary, *India Digital Financial Inclusion- Journey Map Report*, p.1.
7. M Star Project (2019, March) b. India's Digital Financial Service Journey, *India Digital Financial Inclusion- Journey Map Report*, p.11.
8. Mehta, P. (2023, September, 25). Real-Time Payments Pioneer, Japan Shaking off Cash by Embracing Digital Payments, *Treasury News Network*, Retrieved from [cmfile.com › story › real-time-payments-pioneer-japan-shaking-off-ca...](https://cmfile.com/story/real-time-payments-pioneer-japan-shaking-off-ca...)
9. Mishra, A. K., & Tripathi, D. (2022) Growth of Digital Payment System in India: A Trend Analysis, *Shodh Dristhi*, 13 (9), pp. 97-106.
10. Mohapatra, M. R., Moirangthem, N. S., & Vishwakarma, P. (2020). Mobile Banking Adoption Among Rural Consumers: Evidence from India. *American Business Review*, 23(2), p.300.
11. Mowinckel, A. (2018, April, 4). A Nation Without Cash: Norway's the First Country to Go Cash Free, *Business Today*. Retrieved from [Business Today Online Journal › bt-online › a-nation-without-cash-Norways](https://www.businesstoday.com.sg/bt-online/a-nation-without-cash-Norways).
12. Pandey, N., & Pal, A. (2020). Impact of Digital Surge During Covid-19 Pandemic: A Viewpoint on Research and Practice. *International Journal of Information Management*, 55, p.3

13. Patowary, K. (2018, November,18). Dutch Prisons Are Being Converted Into Hotels And Apartments Because of Lack of Prisoners, Amusing Planet, Retrieved from www.amusingplanet.com › dutch-prisons-are-being-converted-into

14 .Reserve Bank of India (2023, September, 15). Payment System Indicators, *Handbook of Statistics on the Indian Economy*, RBI. pp. 115-116.

15. Roshan, A. (2023, June,10). India Tops World Ranking in Digital Payments in 2022, Leaves Behind These Countries Including China, India TV, Retrieved from www.indiatvnews.com › Business.

16. Thirupathi, M., Vinayagamoorthi, G., & Mathiraj, S. P. (2019). Effect Of Cashless Payment Methods: A Case Study Perspective Analysis, *International Journal of Scientific & Technology Research*, 8(8), pp.394-397.

Annexure 1.

It contains the list of abbreviations used in the above research paper.

List of Abbreviations:

1. ATM- Automated Teller Machine.
- 2.RBI- Reserve Bank of India
3. NEFT- National Electronic Fund Transfer
- 4.RTGS- Real Time Gross Settlement
5. UPI- Unified Payment Interface
- 6.CC- Credit Cards
- 7.DC- Debit Cards
- 8.TDP- Total Digital Payments