

# A Comparative Study on Growth of UPI over Debit Card Transactions in India

Megha Bhoote

Assistant Professor, Dept. of Commerce, Government First Grade College, Sagar, Karnataka, India

Email: megsubs[at]gmail.com

**Abstract:** Information technology have made a lot of impact on our daily lives. It forced the common people to move from traditional payment system towards the digital payment system which ensured safe, secure and convenience. There are different types of digital payments are available such as Payment Cars, USSD, AEPS, UPI, Digital Wallets and so on. The present paper made a highlight on Debit cards and UPI transactions. Debit card payment remained sluggish due to the surge in the digital transactions after the pandemic and UPI emerged as the most popular mode of money transfer particularly small value of transactions according to RBI data. The research paper attempt to analyse the value and volume of UPI and Debit card transactions and also compare the growth of UPI over the debit card transactions in India. The study is based on the secondary data gathered from official website of RBI & NPCI. The graphs are used for analysing the data and Trend analysis technique used to interpret the data. The conclusion of the paper is that there is mass acceptance of UPI mode of payment drastically declined the usage of debit cards in India.

**Keywords:** UPI, Debit Card, Transaction, RBI, NPCI, Growth

## 1. Introduction

UPI has launched by National Payment Corporation of India (NPCI) in the year 2016 and it revolutionised the digital payment system in India. Just in 8 years UPI payments became now the most popular and prominent digital payment platform in India. UPI allows the user to transfer the money instantly without entering any bank details. According to NPCI there are over 300 million UPI users in India transacting in different applications. The UPI users are growing rapidly among the smartphone users. Significant population of our country is still using basic handsets. Taking into consideration of this NPCI launched UPI 123 pay and UPI lite services in the year 2021 to benefit this segment of population. These apps allow the customers to fetch the basic UPI features like registration, payment and balance check through SMS and IVRS. Cross border transactions had created new opportunity for the growth of UPI at international level.

UPI is the hometown payment system which shows the remarkable growth in the value and volume of transactions over the period of 8 years due to its ease of use and instantaneous nature of transactions. However, this growing popularity of UPI has made an impact on debit card transactions, which usage have been dropped down drastically. Both debit card and UPI have one same feature that the money gets debited instantly, But the UPI is more convenient as no card involved and payment is done by just scanning a QR code. The people now a days feels easy rather than carrying a debit card and swipe over the POS machine, are losing its importance day by day

## 2. Literature Review

Anshka Mishra and Prof. Ashish Kumar Srivastava (2023) "A comparative study on Analysing the impact of UPI on Debit card Transactions." The main objective of this paper was to analyse the status and significance of UPI in digital eco system and share different apps in UPI payment. It focused to evaluate impact of UPI on debit card transactions.

The entire study based on secondary data. Descriptive and correlation analysis used for analysing the data. The conclusion of the paper is debit card was in the market much earlier than UPI but it not got mass acceptance as received by UPI. Growth of Volume as well as value is more in UPI as compared to debit card.

P. Satishkumar (2018) "A Study on growth of UPI in Digital empowerment." In this research article researcher highlighted that Unified Payment Interface, a new age payment system introduced in India by NPCI. It is a mobile centric real time interbank payment system to transform digital payment in India. The main objective this paper was to analyse the growth and trend of UPI transactions and also to compare the UPI system with other payment system. The study completely based on secondary data collected from NPCI and RBI websites. For analysing the data descriptive statistics has been used. The conclusion of this research paper was UPI apps are very simple and easy to used compared to other digital payment system. And also, these UPI are having more incremental growth in the future.

Satindu Bal Gupta, Rajkumar Yadav and Shivani (2020) "A study of growing popularity of payment apps in India." In this research paper researcher made an attempt to study the reasons for increasing the popularity of UPI payments apps among the respondents. The researcher focused on three popular apps such as Google pay, PhonePay and Paytm. Among all these three apps Google pay is gaining a lot of popularity among the respondents because of its specified features.

Mahesh A and Ganesh Bhat (2021) studied about the "Digital Payment Services in India- A case study of Unified Payment Interface." The researcher focused on UPI Growth system and assessed the UPI position in digital payment system also studied on progression of UPI in retail digital payments and finally did the SWOT analysis about UPI system. The conclusion of the paper was Users are benefited from the convenience and speed of digital transactions through UPI. Because it is easier to access via

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smartphone than other digital payment options, it is gaining in popularity, especially in the retail payment industry.

### Objectives

- 1) To analyse the value and volume of Debit Card Transactions for four years.
- 2) To analyse the value and volume of UPI transactions for four years
- 3) To compare the growth in value and volume of UPI Over Debit Card transactions for four years

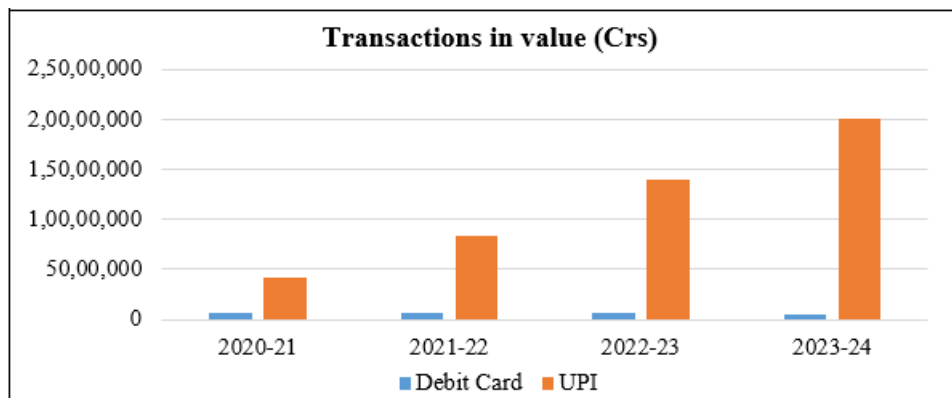
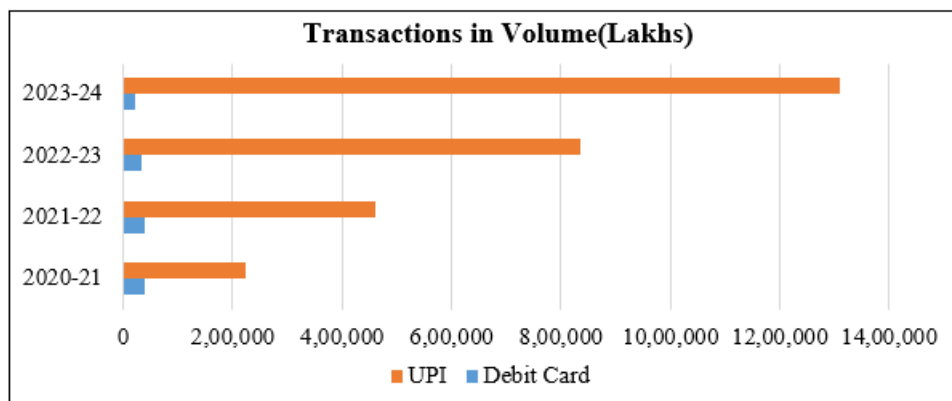
### Research Methodology:

The study is based on the secondary data gathered from official website of RBI & NPCI. Books, magazines and newspapers, Trade Journal and Reports prepared by research scholars The study period is for 4 years 2020-21, 2021-22, 2022-23 & 2023-24. The graphs and tables are used to analyse the data and Trend Analysis technique is used to interpret the analysed data.

### 3. Analysis & Interpretation

Year	Debit Card Transaction		UPI Transaction	
	Value (in Cr)	Volume (in lakh)	Value (in Cr)	Volume (in lakh)
2020-21	6,62,667	40,200	41,93,658	2,23,306
2021-22	7,30,213	39,384	84,15,900	4,59,561
2022-23	7,20,163	34,192	1,39,14,932	8,37,143
2023-24	5,92,429	22,859	1,99,95,086	13,11,294

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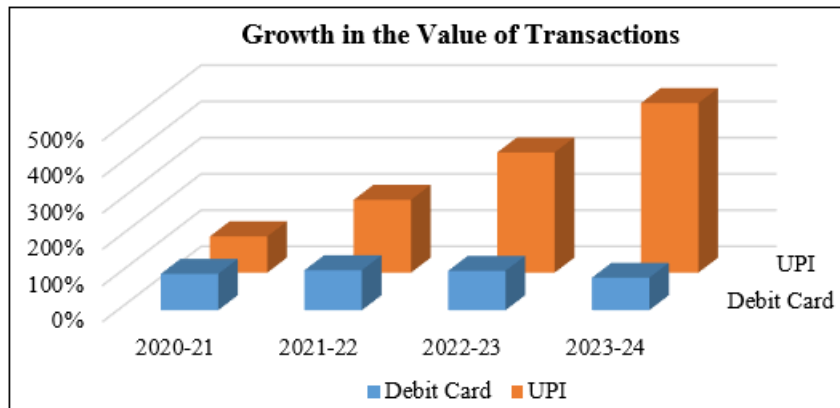
**Interpretation:** The above table and graph shows that there is decrease in the Debit card transactions both in value and volume i.e. 40,200 lakhs in the year 2020-21 and it reduced to 22859 in the year 2023-23 in volume of transaction. The value of transaction was 6,62,667 crores in year 2020-21 and it declined to 5,92,429 in the year 2023-23. At the same time

there is drastic increase in the UPI transactions over the period of four years. In the year 2020-21: 41,93,658 crores in value and it raised to 1,99,95,086 crores. When it comes to volume it was 2,23,306 lakhs in the year 2020-21 and increased to 13,11,294 lakhs. It indicates that UPI have a mass acceptance from Public.

### Growth in Value of Transactions

Year	Debit Card Transaction		UPI Transaction	
	Value (in Cr)	% of Growth	Value (in Cr)	% of Growth
2020-21	6,62,667	100%	41,93,658	100%
2021-22	7,30,213	110.19%	84,15,900	200.68%
2022-23	7,20,163	108.67%	1,39,14,932	331.80%
2023-24	5,92,429	89.40%	1,99,95,086	467.79%

Source: <https://www.rbi.org.in/>



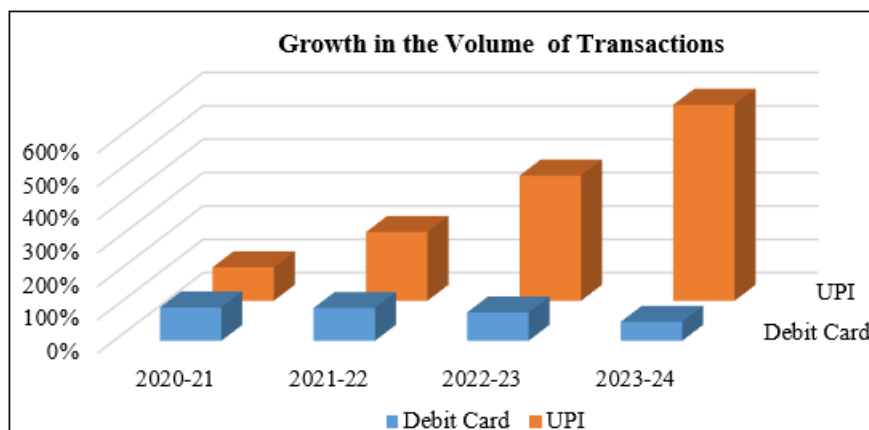
**Interpretation:** The above table and graph shows the growth in the value of transactions. The growth rate of debit card was 110.19% in the year 2021-22, it reduced to 108.67% in the year 2022-23 and again it decreased to 89.40% in the year 2023-24. The UPI growth rate in the year 2021-22 was

200.68%, it increased to 331.80% in the year 2022-23 and again it raised to 467.79% in the year 2023-24. It clearly indicates that there is declined in the growth rate of Debit card over four years and at the same time there is drastically increased in the growth rate of UPI transactions.

**Growth in Volume of Transactions**

Year	Debit Card Transaction		UPI Transaction	
	Volume (in lakh)	% of Growth	Volume (in lakh)	% of Growth
2020-21	40,200	100%	2,23,306	100%
2021-22	39,384	97.97%	4,59,561	205.79%
2022-23	34,192	85.04%	8,37,143	374.89%
2023-24	22,859	56.86%	13,11,294	587.22%

Source: <https://www.rbi.org.in/>



**Interpretation:** The above table and graph shows the growth in the volume of transactions. The growth rate of debit card was 97.97% in the year 2021-22, it reduced to 85.04% in the year 2022-23 and again it decreased to 56.86% in the year 2023-24. The UPI growth rate in the year 2021-22 was 205.79%, it increased to 374.89% in the year 2022-23 and again it raised to 587.22% in the year 2023-24. It clearly indicates that there is declined in the growth rate of Debit card over four years and at the same time there is drastically increased in the growth rate of UPI transactions in the terms of volume.

#### 4. Conclusion

As we are aware about the fact that there is usage of smartphones an internet has increased significantly in recent years. It had created the great opportunity for the people to adopt the UPI mode of payment. UPI had brought transformative shift in the digital transactions. This

tremendous growth of UPI in the value and volume is the main reason for falling in the transaction of Debit card. As UPI has features like convenience, Security and incentives forced the people to use their phones to pay rather than the swipe a debit card. The result of this research paper, there is more than 100% increase in the value and volume of UPI transactions at the same time on an average 11% decrease in the value and 22% decrease in the volume of Debit card transactions in India over a period of Four years. The conclusion is the debit card existing in India as a payment option much more earlier than the UPI. But UPI got a lot of mass acceptance and popularity among the people.

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