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Growth In Digital Banking Post Covid-19

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Abstract
Safe and efficient payment systems are required to ensure a proper financial system in the country. Reserve Bank of India has taken measures to ensure safe and upgraded payment systems. This paper aims to study the growth in use of different types of payment instruments in India. The researcher also aims to find the trend analysis in the growth of use in payment instruments in India.
Data has been taken for a period of 7 years from RBI website and conclusions are drawn via statistical methods. Year-on-year growth in use of payment instruments has been calculated by the Percentage method. From the study it is evident that customers are switching to online buying and selling. There are paper based payments, electronic payments, and pre-paid payment systems. Electronic payments include ECS, NEFT and RTGS whereas PPI includes mobile banking, ATM, POS, and online transactions. Technology has brought about tremendous change in the payment systems. PPI and electronic modes of payment are preferred by people. After Covid 19, there is very high usage of online payments such as UPI, NEFT and RTGS transfers. People have become tech savvy and are able to use technology to make payments. The use of paper- based instruments has declined from 18% to 8% in the year 2023. Total digital payments have increased by 23% in 2021-22 and 20% in 2022-23 as compared to 18% in 2021-2022 and 8% increase in 2022-23 in paper-based instruments. The pecentage use in UPI payments is the highest ampongst the various modes of digital payments; it is 92% in 2020-21, 105% in 2021-22 and 65% y-o-y increase in 2022-23. People are finding mobile phones very convenient to use for making payments.

Keywords: -*Digital Banking, Payment instruments, NEFT, RTGS, ECS, Mobile Banking, POS,ATM*

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I. Introduction

Safe and efficient payment systems are required to ensure a proper financial system in a country. The payment system must be developed according to the geographic spread of the country. The Reserve Bank of India has taken steps to ensure upgraded and safe payment systems in India. The regulations for payment and settlement systems are prepared under the Payment and Settlement Systems Act, 2007 (PSS Act) which came into effect in August 2008. The policies on payment systems in the country are made by the Board for Regulation and Supervision of Payment and Settlement Systems.

There are paper-based payments and electronic payments. Use of paper-based payment is gradually decreasing. In the nineties RBI focused on improving the infrastructure of payment and settlement system. Digital payments are made through internet banking using Real Time Gross Settlement (RTGS), National Electronic Funds transfer (NEFT) and mobile wallets. This paper aims to study the types of payment instruments existing in India and calculate the trend analysis of growth in use of these instruments.

The researcher has collected data from the RBI website. Quantitative research has been used to analyze data and conclusions are drawn via statistical methods. From the study it is evident that customers are using electronic payments more. As India has more young population, digital payments are becoming popular due to convenience and use of these instruments.

II. Research Objectives

The objectives of the present study are:
1. To study the different types of payment instruments. The payment instruments differ in theircharacteristics.
2. The study also aims to measure the growth in use of digital payments in India.

III. Research Methodology

Data has been collected from secondary sources. Data of payment instruments has been collected from RBI website for a period of 4 years, from 2019-20 to 2022-2023. The percentage method has been used to calculate the year-on-year increase in the usage of payment instruments. Data sources have been mentioned wherever necessary. Conclusions are drawn based on the data analyzed via statistical methods.

IV. Literature Review

Nicole Jonkar[1] has compared usage of cash against payment with electronic payment cards in the Netherlands. Factors such as cost of payment instruments, safety, monitoring expenses, convenience and transaction speed influence the decision making of consumers regarding mode of payment. According to Sergei Koulayev et al [2], income and age determine payment choice. Wealthy people use credit cards more. The characteristics of payment instruments are also important when choosing the mode of payment. The ease of use has more weightage.

Thorsten Beck et al [3] have studied the effect of mobile money on entrepreneurship and economic development with the help of quantitative dynamic general equilibrium model. Mobile money comes with transaction costs.

According to the research of Ashish Baghla[4] the future of Digital Payments in India is bright. But it will need support from the people and awareness amongst them. Awareness regarding the features of payment instruments needs to be made. There is also a fear in their minds of loss of money due to digital hacking. To give a boost to economic development the government will have to empower the people with knowledge. In his paper, Mahil Carr[5] says that businesses are looking for swift ways to send and receive payments due to the rising need of quick transfer of money. Consumers and vendors need a convenient way of making payments which is less complicated and less time-consuming. Technical levels of security should be high for customer acceptance and wide use of online payments services. Digital payments should be secure without compromising on privacy. The intermediaries in digital banking are merchants, network operators, mobile device manufacturers, software technology providers, banks, and financial institutions.

R. Gandhi [6] in his paper "Evolution of payment system in India" has explained the evolution that has been sweeping the country. Improvement in infrastructure of IT system of banks and their core banking system has led to an increase in number of digital banking. More facilities are being integrated through the mobile channel such as PayPal, Paytm and Google pay. These technologies and evolution in payment systems however increase the risk of hacking. Aadhaar, use of PIN for ATM transaction and OTP has played an important role for beneficiary identification and authentication in payments.

K. Suma Vally and Dr. K. Hema Divya [7] in their paper studied the impact adopting digital payments on consumers. Many changes took place in the payment systems like digital wallet, UPI, BHIM apps for smooth shift to digital payments. Measures should be taken to create awareness towards the effective usage of technology and security. The researcher [8] has mentioned in the paper that the country needs to overcome challenges by creating awareness among the people. U.P. Shukla [9] advocates that telecom service providers should come up with versatile mobile account linked features. He has developed a model to predict customers' liking towards the use of m-wallets. D. Garcia-Swartz & A. Layne-Farrar [10] have done cost benefit analysis for shifting towards cashless society and found that consumers are likely to gain from this shift while merchants may not benefit from the shift towards cashless society.

V. Payment And Settlement Systems

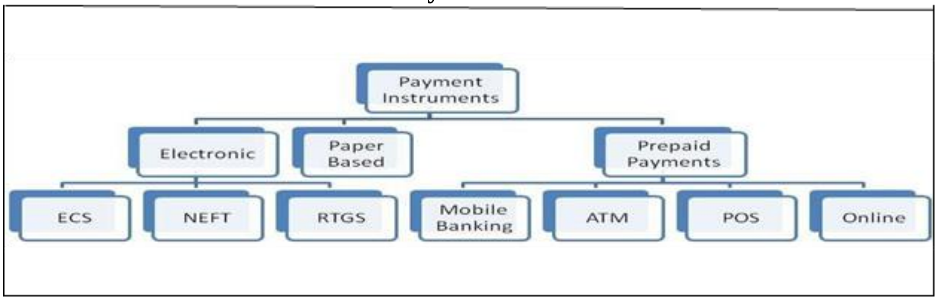
A system which enables payment between a payer and a beneficiary is called a 'payment system'. It involves clearing, payment and settlement services. Clearing refers to the process where the service provider acts as counterparty between the buyer and seller. Settlement is the act where the ownership changes. Entities operatingmoney transfer systems are known as payment system providers.

In India, the Reserve Bank of India ensures secure, efficient, and authorized payment systems in the country. Policies regarding payment systems are made by the subcommittee of the Central Board of Reserve Bank of India, namely, The Board for Regulation and Supervision of Payment and Settlement Systems (BPSS). The BPSS is instrumental in setting policies and standards for regulating the payment and settlement systems in India. The Payment and Settlement Systems Act, 2007 (PSS Act) regulates the payment and settlement systems in India.

Payment Instruments

There are paper based payment instruments, electronic instruments, and prepaid payment instruments. Thefollowing chart shows the types of payment instruments used in India.

Chart 1: Payment Instruments



Source: Compiled from data available on RBI website

Paper based Instruments

Paper based payment instruments such as cheques and demand drafts and notes comprise the paper-based instruments. Magnetic Ink Character Recognition (MICR) technology was introduced by RBI for bringing efficiency in processing of cheques.

Electronic Payments

Electronic payments are gaining popularity due to the measures taken by RBI. These include ECS, NEFT,RTGS, ATM, POS, Mobile Banking, and Banking cards.

Electronic Clearing Service (ECS)

ECS system was introduced during 1990 to handle repetitive and bulk payment requirements such as salary, dividend, and interest of organizations. In this facility accounts are credited on the specified value and on a specified date. In 2008 National Electronic Clearing Service (NECS) was launched, facilitating all Core Banking Solutions (CBS) bank branches to participate, irrespective of their location across the country.

National Electronic Funds Transfer (NEFT)

A secured system was introduced for transfer of funds from accounts of individuals and corporate in 2005.Batch settlements are done it hourly intervals through NEFT.

Real Time Gross Settlement (RTGS)

Under RTGS money is transferred from one bank to another on a “real time” (there is no waiting period) and “gross” (settlement on one to one) basis. These payments are final and irrevocable once processed. RTGS wasintroduced in 2004 for transactions above Rs two lacs.

Mobile Banking

With the advent of technology banking can be done through mobile phones. Thus, banking can be done from anywhere now provided there is a smart phone, and the facility of internet is available on the smart phone. RBI issued guidelines that systems for security and inter-bank transfer arrangements should be through RBI’s authorized systems only.

Point of Sale (POS) Terminals

A point of sale (PoS) is the place where sales are made. Customers can make payments through POS terminals by using debit or credit cards for buying goods and services. A PoS is the point of sale which can be a mall in a market or city. A PoS is the area where a customer completes a transaction, such as a checkout counter. There are more than 500000 POS terminals in India.

ATMs

There are more than 61000 ATMs in India. Customers can withdraw cash from any bank terminal if they have a bank account and make payments through POS terminals by using debit or credit cards for buying goods and services. Payment gateways facilitate online payments. National Payments Corporation of India (NPCI) is the apex organization in India for operating online payment systems.

Banking Cards

Banking cards give more security, convenience, and control to consumers. The wide variety of cards available such as credit cards, debit cards and prepaid cards offer a lot of flexibility. These cards provide 2 factor authentication of PIN and OTP for secure payments. Examples of cards payment systems are RuPay, Visa, and MasterCard. Consumers can purchase items in stores, on the Internet, through mail-order catalogues and over the telephone using cards.

Digital Banking

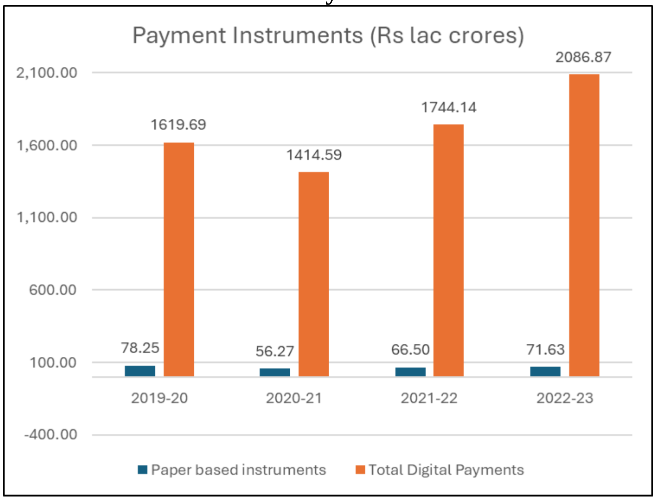
The following table shows the use of paper-based payment instruments and digital payments post Covid-19. There is a considerable increase in use of digital payments in 2021-2022 and 2022-2023. In 2020-21 the use ofpaper-based payments has gone down.

Table 1: Use of Payment Instruments

Payment Instruments - Value (Rs lakh crore)				
	2019-20	2020-21	2021-22	2022-23
Paper based instruments	78.25	56.27	66.50	71.63
Total Digital Payments	1619.69	1414.59	1744.14	2086.87

Source: RBI annual report

Chart 2: Use of Payment Instruments



Source: Prepared by author

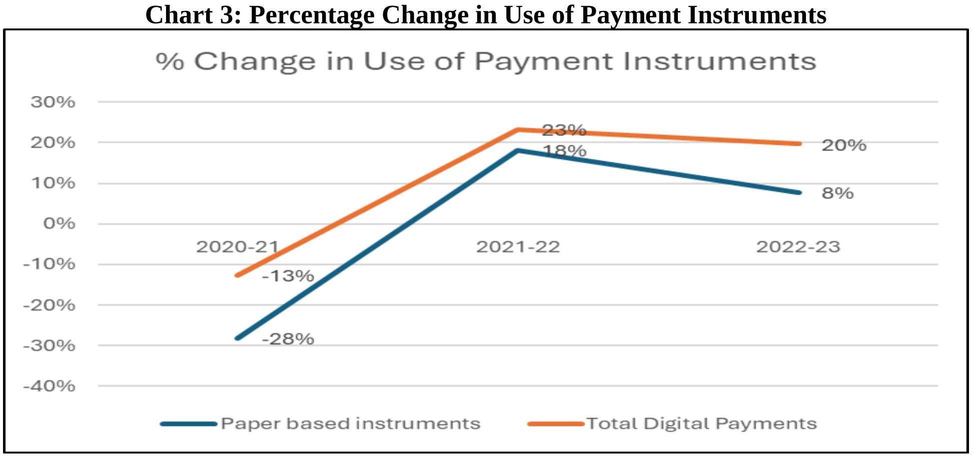
Table 2 shows the percentage change calculated y-o-y basis in use of paper based and digital instruments. Theuse of digital payments has increased in 2021-22 and 2022-23.

Table 2: Percentage Change in Use of Paper based and Digital Payments

% Change in Use of Payment Instruments			
	2020-21	2021-22	2022-23
Paper based instruments	-28%	18%	8%
Total Digital Payments	-13%	23%	20%

Source: RBI annual report

Chart 3: Percentage Change in Use of Payment Instruments



Source: Prepared by author

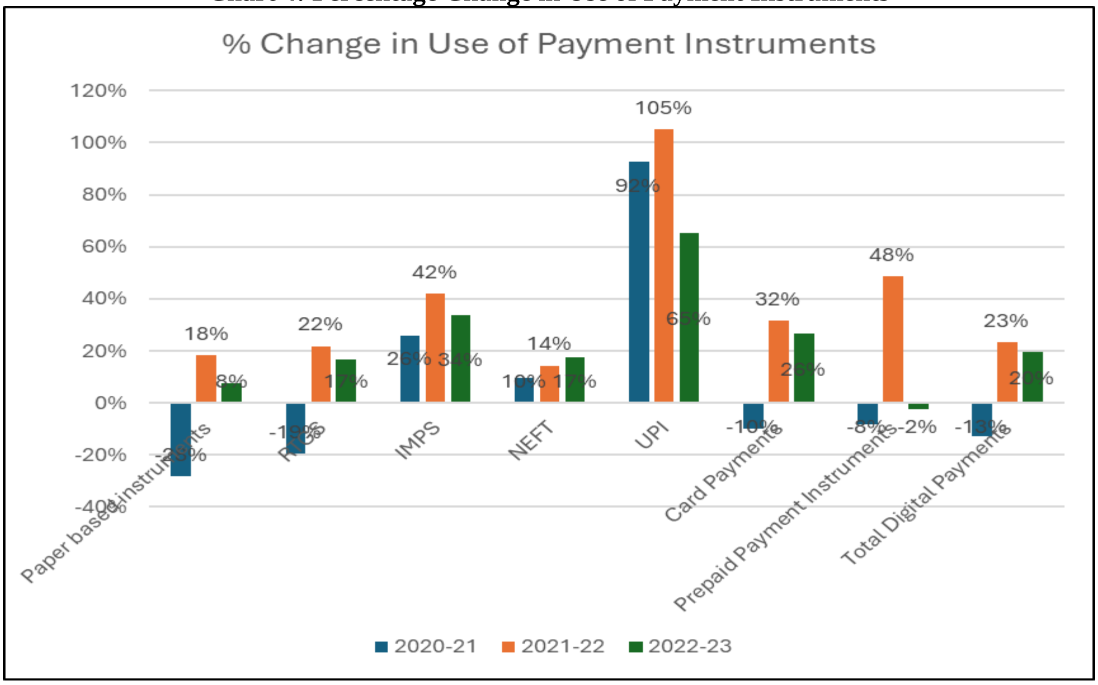
Table 3 depicts the percentage change in use of all types of digital payment instruments. There is a significant increase in UPI payments. The availability and use of mobile phones has made UPI payments easy and faster. Total digital payments have increased by 23% in 2021-22 and 20% in 2022-23 as compared to 18% in 2021- 2022 and 8% increase in 2022-23 in paper-based instruments. Money transfer through RTGS, IMPS and NEFT has increased substantially since 2020-21. Payment through debit and credit cards has also increased by 32% in2021-22 and 26% in 2022-23.

Table 3: Percentage Change in Use of Payment Instruments

% Change in Use of Payment Instruments			
	2020-21	**2021-22**	**2022-23**
Paper based instruments	-28%	18%	8%
RTGS	-19%	22%	17%
IMPS	26%	42%	34%
NEFT	10%	14%	17%
UPI	92%	105%	65%
Card Payments	-10%	32%	26%
Prepaid Payment Instruments	-8%	48%	-2%
Total Digital Payments	-13%	23%	20%

Source: Compiled from data available on RBI website

Chart 4: Percentage Change in Use of Payment Instruments



Source: Prepared by author

VI. Findings And Conclusions

The researcher has tried to evaluate the usage of different payment instruments. The use of online payment instruments has increased since Covid 19. This has also resulted in low costs and an efficient system of funds transfer. After Covid 19, there is very high usage of online payments such as UPI, NEFT and RTGS transfers. People have become tech savvy and are able to use technology to make payments. The use of paper-based instruments has declined from 18% to 8% in the year 2023. Total digital payments have increased by 23% in 2021-22 and 20% in 2022-23 as compared to 18% in 2021-2022 and 8% increase in 2022-23 in paper-based instruments. Money transfer through RTGS, IMPS and NEFT has increased substantially since 2020-21. Payment through debit and credit cards has also increased by 32% in 2021-22 and 26% in 2022-23.

The pecentage use in UPI payments is the highest ampongst the various modes of digital payments; it is 92% in 2020-21, 105% in 2021-22 and 65% y-o-y increase in 2022-23. This is due tot the availablity of mobile phones and use of mobile phones. People are finding mobile phones very convenient to use for making payments.