

Digital payment system - The era of cashless future - A study

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Abstract: We are witnessing enormous change in the payment systems, disrupting the monopoly of physical/paper-based system by electronic ones. In this paper an attempt has been made to study electronic payment system that has changed the traditional payment system in India. The paper talks about different e-payment methods provided by RBI and Indian banks and their level of transaction in terms of volume. This paper is based on secondary data sources.

Keywords: Cards: Debit and Credit cards- ATM/POS, RTGS, NEFT, M-Wallet, Mobile Banking.

Introduction

India continues to be driven by the use of cash; less than 5% of all payments happen electronically however the finance minister, in 2016 budget speech, talked about the idea of making India a cashless society, with the aim of curbing the flow of black money.

Reducing Indian economy's dependence on cash is desirable for a variety of reasons. India has one of the highest cash to gross domestic product ratios in the world, and lubricating economic activity with paper has costs. According to a 2014 study by Tufts University, The Cost Of Cash In India, cash operations cost the Reserve Bank of India (RBI) and commercial banks about Rs21,000 crore annually. Also, a shift away from cash will make it more difficult for tax evaders to hide their income, a substantial benefit in a country that is fiscally constrained.

Benefits of Cashless society

- Reduced instances of tax avoidance because it is financial institutions based economy where transaction trails are left.
- It will curb generation of black money
- Will reduce real estate prices because of curbs on black money as most of black money is invested in Real estate prices which inflates the prices of Real estate markets
- In Financial year 2015, RBI spent Rs 27 billion on just the activity of currency issuance and management. This could be avoided if we become cashless society.
- It will pave way for universal availability of banking services to all as no physical infrastructure is needed other than digital.
- There will be greater efficiency in welfare programmes as money is wired directly into the accounts of recipients. Thus once money is transferred directly into a beneficiary's bank account, the entire process becomes transparent. Payments can be easily traced and collected, and corruption will automatically drop, so people will no longer have to pay to collect what is rightfully theirs.
- There will be efficiency gains as transaction costs across the economy should also come down.
- **Hygiene** – Soiled, tobacco stained notes full of germs are a norm in India. There are many such incidents in our life where we knowingly or unknowingly give and take germs in the form of rupee notes. This could be avoided if we move towards Cashless economy.
- In a cashless economy there will be no problem of soiled notes or counterfeit currency
- Reduced costs of operating ATMs.
- Speed and satisfaction of operations for customers, no delays and queues, no interactions with bank staff required.
- A Moody's report pegged the impact of electronic transactions to 0.8% increase in GDP for emerging markets and 0.3% increase for developed markets because of increased velocity of money

An increased use of credit cards instead of cash would primarily enable a more detailed record of all the transactions which take place in the society, allowing more transparency in business operations and money transfers.

Digital Payment System In India

The RBI plays a pivotal role in the development of India's payment and settlement systems for both large-value and retail payments. The central bank played a pioneering role in automating the paper-based clearing system in the 1980s. It introduced an electronic funds transfer system and electronic clearing services (ECS Credit and Debit) in the 1990s. The special electronic fund transfer (SEFT) system was introduced in April 2003 (subsequently discontinued in March 2006, after the implementation of the National Electronic Fund Transfer (NEFT) system in November 2005) and the real-time gross settlement (RTGS) system in March 2004. The RBI operates the RTGS, which has replaced the paper-based inter-bank clearing system and settles a sizeable volume of large-value and time-critical customer transactions. RBI also manages the clearinghouses (for paper-based and electronic clearing) in 17 large cities while operating the clearinghouses at four major locations. It is the settlement banker in these cities. The RBI introduced the NEFT system in November 2005. Together with ECS, this forms the electronic retail payment infrastructure. The National Electronic Clearing Services (NECS) system, which aims to centralize the Electronic Clearing Service (ECS) operation and bring uniformity and efficiency to the system, was implemented in September 2008. At present, the NECS settles only credit transfers.

➤ Card based clearing (CBC)

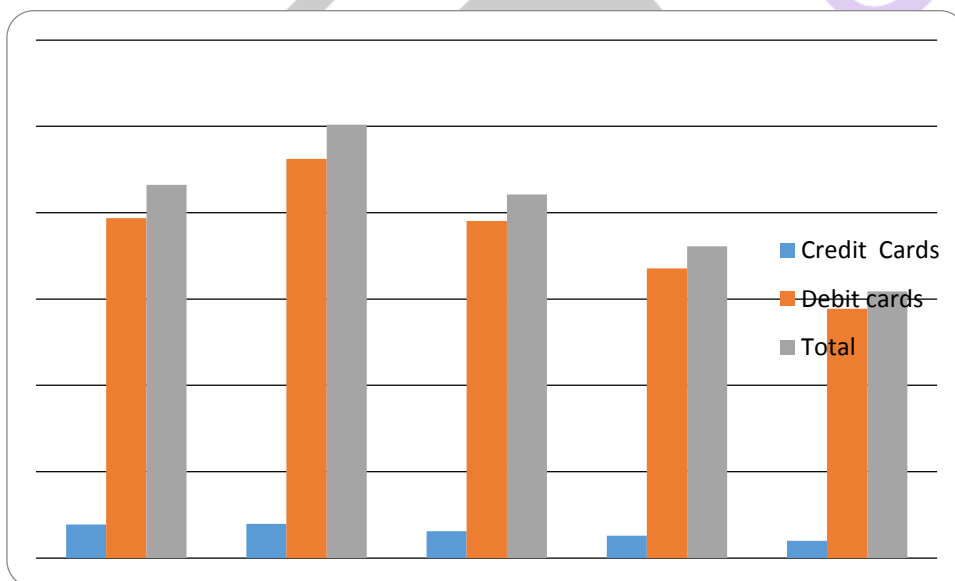
Card payments form an integral part of e-payments in India because customers make many payments on their card-paying their bills, transferring funds and shopping. Ever since Debit cards entered India, in 1998 they have been growing in number and today they consist of nearly 3/4th of the total number of cards in circulation. Majority of credit card purchases come from expenses on jewelry, dining and shopping. Another recent innovation in the field of plastic money is co-branded credit cards, which combine many services into one card-where banks and other retail stores, airlines, telecom companies enter into business partnerships. This increases the utility of these cards and hence they are used not only in ATM's but also at Point of sale (POS) terminals and while making payments on the net.

Transactions with Cards

Volume (million)

Years	Credit Cards	Debit cards	Total
2016-2017	771.87	7874.47	8646.34
2015-2016	791.67	9247.00	10038.67
2014-2015	619.41	7804.57	8423.98
2013-2014	512.03	6707.10	7219.13
2012-2013	399.23	5775.25	6174.48

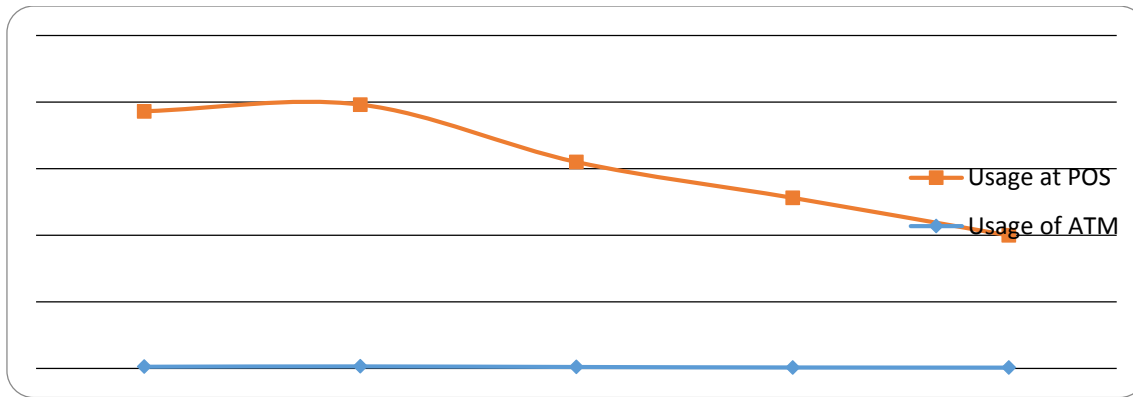
Source: www.rbi.org.in



Transactions with Credit Cards

Volume (million)

Years	Credit Cards	Usage of ATM	Usage at POS
2016-2017	771.87	5.02	766.85
2015-2016	791.67	6.00	785.67
2014-2015	619.41	4.29	615.12
2013-2014	512.03	2.96	509.08
2012-2013	399.23	2.51	396.72



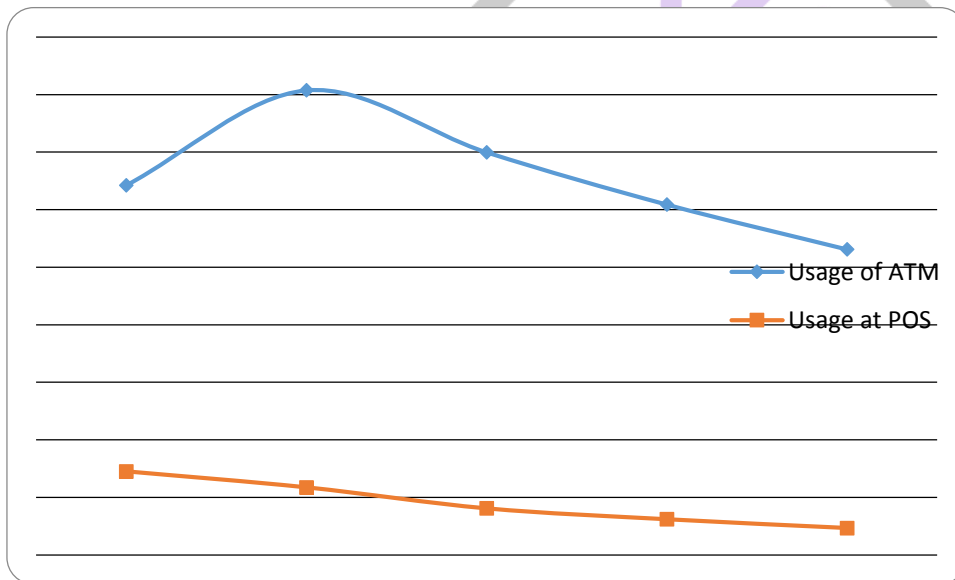
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Transactions with Debit Cards

Volume (million)

Years	Debit Cards	Usage of ATM	Usage at POS
2016-2017	7874.47	6422.31	1452.16
2015-2016	9247.00	8073.39	1173.61
2014-2015	7804.57	6996.48	808.09
2013-2014	6707.10	6088.02	619.08
2012-2013	5775.25	5308.39	466.86

Source: www.rbi.org.in



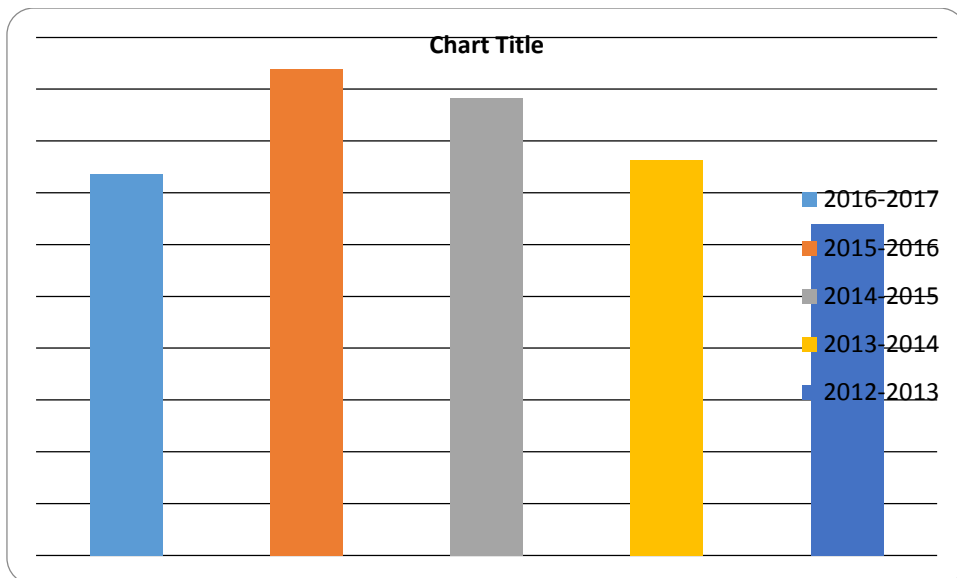
➤ **Real-time gross settlement (RTGS)**

Real-time gross settlement systems (RTGS) are specialist funds transfer systems where transfer of money or securities takes place from one bank to another on a "real time" and on "gross" basis. Settlement in "real time" means payment transaction is not subjected to any waiting period. The transactions are settled as soon as they are processed. "Gross settlement" means the transaction is settled on one to one basis without bundling or netting with any other transaction. Once processed, payments are final and irrevocable. RTGS systems are typically used for high-value transactions that require immediate clearing.

Transactions with RTGS Volume (million)

Years	Customer transaction
2016-2017	73.74
2015-2016	93.95
2014-2015	88.39
2013-2014	76.35
2012-2013	63.99

Source: www.rbi.org.in



Real Time Gross Settlement (RTGS) system includes customer transactions only

➤ **National Electronic Funds Transfer System (NEFT)**

National Electronic Funds Transfer (NEFT) is one of the most prominent electronic funds transfer systems of India . Started in Nov -2005,NEFT is a facility provided to bank customers to enable them to transfer funds easily and securely on a one -to-one basis. It is done via electronic messages. This is not on real-time basis like RTGS(Real Time Gross Settlement). This is a "net" transfer facility, which is executed, in hourly batches resulting in a time lag.

➤ **M-Wallet**

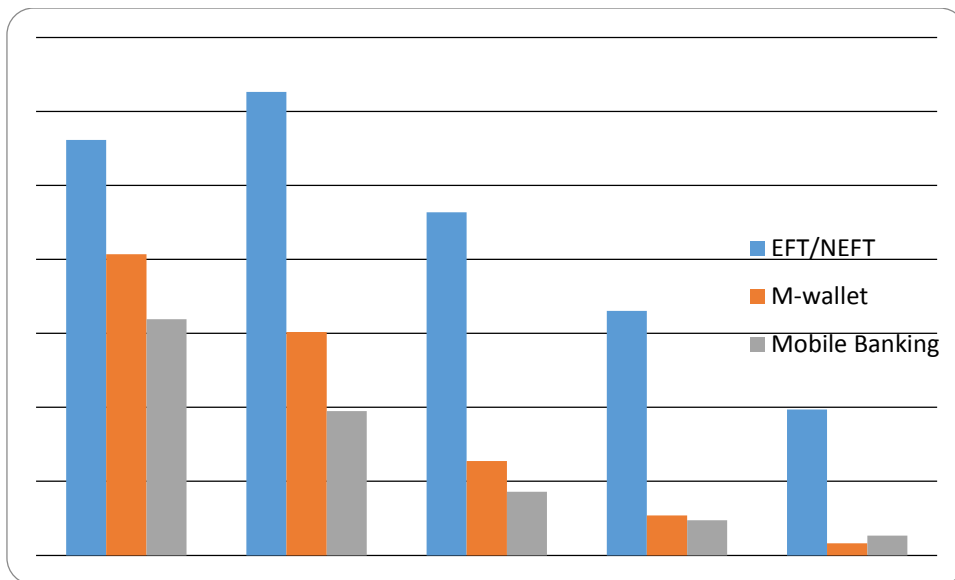
A mobile wallet is a type of payment service through which businesses and individuals can receive and send money via mobile devices. It is a form of e-commerce model that is designed to be used with mobile devices due to their convenience and easy access. A mobile wallet is also known as mobile money or a mobile money transfer. By 2017, the number of smart phone users in India is estimated to hit 340.2 million. Worldwide, the figures are projected at 2 billion. The adoption of low-cost smart phones coupled with the availability of high speed internet has enabled many people to access E-commerce and banking on their mobile phones. There are around 10-12 mobile wallets in India.

➤ **Mobile Banking**

Mobile banking refers to the use of a smartphone or other cellular device to perform online banking tasks while away from your home computer, such as monitoring account balances, transferring funds between accounts, bill payment and locating an ATM.

Years	Volume (million)		
Other Transactions	EFT/NEFT	M-wallet	Mobile Banking
2016-2017	1123.00	813.91	638.51
2015-2016	1252.88	603.98	389.49
2014-2015	927.55	255.00	171.92
2013-2014	661.01	107.51	94.71
2012-2013	394.13	32.70	53.30

Source: www.rbi.org.in



Challenges in making India a cashless economy

There are number of hurdles in making India a cashless economy.

- A large part of the population is still outside the banking net and not in a position to reduce its dependence on cash. According to a 2015 report by PricewaterhouseCoopers, India's unbanked population was at 233 million. Even for people with access to banking, the ability to use their debit or credit card is limited because there are only about 1.46 million points of sale which accept payments through cards.
- About 90% of the workforce, which produces nearly half of the output in the country, works in the unorganized sector. It will not be easy for the informal sector to become cashless.
- There is a general preference for cash transactions in India. Merchants prefer not to keep records in order to avoid paying taxes and buyers find cash payments more convenient. Although cashless transactions have gone up in recent times, a meaningful transition will depend on a number of things such as awareness, technological developments and government intervention. For instance, mobile wallets have seen notable traction, and it is possible that a large number of Indians will move straight from cash to mobile wallets. A study by Boston Consulting Group and Google in July noted that wallet users have already surpassed the number of mobile banking users and are three times the number of credit card users.
- Availability of internet connection and financial literacy.
- India is dominated by small retailers. They don't have enough resources to invest in electronic payment infrastructure.
- The perception of consumers also sometimes acts a barrier. Most card and cash users fear that they will be charged more if they use cards. Further, non-users of credit cards are not aware of the benefits of credit cards.

Steps taken by RBI and Government of India towards cashless economy

- Government is promoting mobile wallets. Mobile wallet allows users to instantly send money, pay bills, recharge mobiles, book movie tickets, send physical and e-gifts both online and offline.
- Promotion of e-commerce by liberalizing the FDI norms for this sector.
- Government has also launched UPI which will make Electronic transaction much simpler and faster.
- Government has also withdrawn surcharge, service charge on cards and digital payments

Steps to be taken by RBI and Government of India towards cashless economy

- Open Bank accounts and ensure they are operationalized.
- Abolishment of government fees on credit card transactions; reduction of interchange fee on card transactions; increase in taxes on ATM withdrawals.
- Tax rebates for consumers and for merchants who adopt electronic payments.
- Making Electronic payment infrastructure completely safe and secure so that incidents of Cyber crimes could be minimized and people develop faith in electronic payment system.
- Create a culture of saving and faith in financial system among the rural poor.

Though it will take time for moving towards a complete cashless economy, efforts should be made to convert urban areas as cashless areas. As 70% of India's GDP comes from urban areas if government can convert that into cashless it will be a huge gain. Therefore different trajectories need to be planned for migration to cashless for those having bank account and for those not having

Conclusion:

The stage of payment system development in a country, to a large extent, depends upon the adoption of technology, introduction of new payment instruments and the confidence of the public in using these payment instruments. In India, cash still continues to be the predominant payment mode.

Technology is a great enabler and provides us huge opportunities for making banking more efficient and more inclusive. At the same time, it is also faceless, and this absence of a 'human touch' can be quite intimidating. Hence technology must be harnessed in the most appropriate way to utilise the full potential.

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