International Journal of Recent Trends in Engineering & Research

ISSN (ONLINE) : 2455 – 1457 IMPACT FACTOR : 4.101

Paradigm Shift in the Payment System

Dr.G.John
Associate Professor in Commerce,
St. Joseph's College, Trichy-2

I. THE EVOLUTION OF PAYMENT SYSTEM

Payment system is an arrangement for settling the value of commercial transactions arising out of buying and selling of goods and services. First, the settlement was through a barter system. When the concept of *money* was propounded, it became the means of settlement using pebbles first, and latter precious metals like gold and silver as coins. Latter, it evolved into paper money, called currency, which was used for settling buying and selling transactions and for transferring money from one person to another.

Then, the evolution gave birth to a banking system which changed the course of settlement and transfer of money's worth from person to person in a safer, quicker and convenient way. Banks became fulcrum on which monetary system of a country started balancing and revolving. This led to transfer of money from account to account without the physical transfer of currency. Human brain, in an effort to speed up the process of settlement, invented cheque. Cheque became a sophisticated way of settling transactions and accounts wherein cheques were cleared manually and physically but it took days. Human patience was running out and a solution was born as Core Banking System (CBS). The CBS enabled electronic clearing of cheques in T+1 day using MICR (Magnetic Ink Character Recognition) clearing systems and CTS (Cheque Truncation System). Then came the Big Bang! With the advent of Information and Communication Technology (ICT), instant transfer of money's worth and instant clearing of cheques became a reality.

ICT resulted in a 'paradigm shift' in the way we do shopping, from where we buy goods and services, and how we make payments. Today the norm is: E-Commerce and M-Commerce and the mode of payment is E-Payments and M-Payments. This new avenue has given birth to ICT dependent new payment instruments, and innovations are flooding the financial systems across the world.

Today, we have various types of payment instruments coexisting, meant to meet the requirements of different users in different circumstances – bank accounts, cheques, debit and credit cards, mobile wallets, online payments, prepaid payment instruments, etc. There are also various systems to meet the remittance requirements of users depending upon their time criticality and cost sensitivity – National Electronic Funds Transfer (NEFT), Immediate Payment Service (IMPS), Aadhaar Enabled Payment System (AEPS) and Unified Payments Interface (UPI). The need for making bulk and repetitive payments is met by systems such as Electronic Clearing Service (ECS), National Automated Clearing House (NACH) and Aadhaar Payment Bridge System (APBS). These systems of payment instruments and remittances, hitherto confined to an elite class, is going to become popular and common mode of payment and settlement of commercial transactions in India. Thanks to 'Demonetisation'. The transition is from physical transfer to virtual transfer of money's worth - an epidemic that would wipe out currency to a larger extent, though it may not become completely extinct.

DOI: 10.23883/IJRTER.2017.3483. OWOJH

II. EARLY HISTORY OF CURRENCY IN INDIA

First Rupee note in India was issued in 1862 by the British Government, printed by UK based company De La Rue which is incidentally today the world's largest currency note printer and supplier of paper used for the same. In 1920s, the British government decided to print currency in India and consequently they established currency printing press at Nasik, Maharashtra. In 1928, Five Rupee currency notes were printed from the Nasik press. As the demand increased, Indian government established a second printing press at Dewas, Madhya Pradesh. Till 1997, these two presses were printing all the currency notes. Due to heavy demand for notes, government of India outsourced printing of currency notes to American, Canadian and European companies. This involved a heavy cost and it was met with a lot of criticism at home. Hence, two more printing presses were established, one at Mysuru in 1999 and another at Salboni, West Bengal in 2000.

Though all the currencies were printed inland, paper for the same was procured from abroad. Currency paper producing mill, called Security Paper Mill was established at Hoshangabad, MP in the year 1968, but it could meet only small portion of currency note requirement and we were sourcing currency papers from different countries like Britain, Japan and Germany. In 2015, to meet our growing demand for currency papers, capacity of Hoshangabad Paper Mill was increased and a new Paper Mill was established at Mysuru near the printing press. These two are now almost able to supply currency paper to the currency note printing presses. It took almost 75 years for India to become self sufficient both in printing currency notes, and producing papers for the same. By producing currency papers in India, we are able to save around Rs.1,500 crores annually in the import bill.

III. THE CASH CYCLE

Issue of currency notes and management of currency is one of the core functions of the Reserve Bank of India. It is enshrined in the preamble to the RBI Act, 1934 as "…to regulate the issue of Bank Notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage." The RBI prints and circulates currencies according to the demand and replacement of soiled currencies in its procession. The demand for currency in India is determined on the basis of an econometric model factoring GDP growth prospects, rate of inflation and denomination-wise disposal rate of soiled notes.

1) The cash cycle begins with printing of currencies in one of the four presses: Mysuru (Karnataka), Salboni (WB), Dewas (MP), and Nashik (Maharashtra).
2) After printing, they are transported to RBI's 19 Issue Offices located across the length and breadth of India.
3) From the Issue offices, currencies are transported to currency chests. These are actually store houses where bank notes and rupee coins are stocked on behalf of the Reserve Bank of India. At present, there are 4422 currency chests.
4) From Currency Chests, currencies are distributed to bank branches coming under its jurisdiction.
5) Banks in turn circulate currencies to general public through their banking transaction.
6) The public presents the soiled notes to the tellers, who in return send them to back office for onward transmission to RBI.
7) After examining, soiled notes are destroyed and replacement indent is given to printing presses.

Data with the RBI shows that on an average, 75% of all notes in circulation is withdrawn and destroyed and an equivalent and additionally required currencies are printed every year. The cost of printing currency every year is around 25 Billion rupees.

IV. COST OF CASH

The RBI and commercial banks incur a total cost of Rs.21,000 crores annually for currency operation and management. The cost of printing, managing and moving money around the country is huge. Cash can be lost or stolen, wet, torn, or become soiled over time. A significant amount of time and effort is expended in shepherding them through the system and finally into the consumer's hands. In the process of planning, printing, circulating and managing currencies, the RBI incurs the following costs: production cost, cash management, cash transport, interest cost of carrying cash at currency chest, cash in hand at branches, and ATMs. The various costs associated with currency management could be categorised as below.

No	Costs for:	Type of cost
1	Reserve Bank of India – prints currency	Currency Production and Operation cost
2	Cash-in-transit companies and other service providers	Fees, Operating costs, Insurance costs
3	Banks – disburse currencies to customers over their counters and collect soiled noted	Cash handling and processing costs, - Insurance costs, Costs for cash-in -transit companies, Loss of interests
4	Retail sector – who provide services of maintaining ATM, Transporting cash etc.	Loss of interests, Front office (payment process at cash desk), Back office- Cash handling costs, Insurance costs- Cost for cash-in transit companies - Safety equipment
5	Consumers	Fees, transit, waiting time, risk, and opportunity cost,

In other parts of the world, the central bank's role is over with printing of currencies and its cost is confined to this only. Rest of the activities is undertaken by commercial banks and the costs are borne by them. But in India, larger junk of cost is borne by the RBI.

One of the major expenditure is ATM management which includes: cost of location of ATMs, providing air conditioning and ensuring Uninterrupted Power Supply (UPS). They also require everyday care like dispensing cash, paper replenishment, and journal management. This is called first line activity. An ATM usually contains four compartments of cash, called cassettes. Each cassette is filled with different denomination of cash which is done by Managed Service Providers (MSP). They also do real time remote monitoring, which provides information on the status of an ATM such as whether it is in-service or out of service. Remote monitoring can also indicate the reasons for being out of service. Adding and running ATMs alone costs banks Rs.1,520 crores a year. Every ATM transaction by a customer costs Rs.75 for the banker.

Another cost is the expenditure incurred for replacing soiled currency. The RBI disposed Rs.16.4 Billion worth of soiled notes and issued fresh ones against these in 2015-2016. Once the life of currency is over, they have to be replaced with new currencies. On an average, nearly 75% of currency in circulation gets replaced every year with new ones. The average age of the notes is usually less than a year, depending on the usage. Lower the value, higher the usage. It is estimated that, post demonetisation, to replace the entire stock of Rs.1,000 and Rs.500 notes with new notes, the RBI will be spending around Rs.12,000 crores.

V. COST OF CASH FOR THE CONSUMERS

Cash is not free for consumers too. The following costs are incurred by consumers of cash.

1. Fees. The cost paid by consumers to access cash, depending on the point of access and instrument used to receive cash. For example, ATMs charge fees beyond a particular number of transactions.

2. Transit. The amount of money spent by consumers for reaching cash access points like banks or ATMs and time spent traveling.
3. Queue. This is the cost of waiting time in queue to get cash. This is more in a busy bank branched and ATMs.
4. Risks. Risk associated with carrying and holding cash – accidental loss or theft of cash etc.
5. Opportunity cost. The opportunity cost of holding cash includes: interest forgone, erosion of value due to inflation, etc.

The absolute cost of cash to consumers, based on average transit time and cash access costs are high in India. One research estimates that residents of Delhi alone spend 6 million hours and Rs.9.1 crores to obtain cash from ATMs and banks. From this we can extrapolate the cost and time spent all over India just for using cash. It is said that the direct cost of running a cash based economy is close to 0.25 % of India's GDP.

VI. CASH DRIVES SHADOW ECONOMY

Black money is one of India's biggest scourges and the cash is the engine that drives shadow economy. As cash transactions are difficult to trace people can easily launder money and evade paying tax. If the data provided by the government is to be believed, the size of black money in India is Rs.15-16 lakh crores. This is the money which is unaccounted, being used to finance shadow economy. They are almost running a parallel government financing all illegal transactions. Most of them are used for financing terrorists, mafia gangs, buying and selling of real estate, elections, purchasing political decisions, betting, trafficking, and for hijacking democracy. This money has increased in alarming proportion recently.

The currency with people rose rapidly during the last three years–2013 to 2016, against deposits kept by people in banks. In 2007, currency in circulation was almost equal to bank deposits. But in the last three years, currency with Indians was more by 50 % than bank deposits. One can safely assume that this is due increase in corruption, unaccounted, and black money. Another worrying factor is counterfeit notes that are in circulation. It comes from the border across, mainly financing terrorism and illegal activities. The unaccounted money and illegal notes play havoc rendering policy initiatives ineffective and redundant. Demonetisation will put a short-term break on this.

VII. WHY IS CASH POPULAR IN INDIA?

India is the second largest producer and user of currency notes, next only to China. India's cash intensity stands out in contrast to other developing countries. The value of notes and coins in circulation as a percentage of GDP in India is 12.04%, compared to 3.93% in Brazil, 5.32% in Mexico, and 3.72% in South Africa. According to data supplied by the Bank for International Settlements, the cash-GDP ratio is 3% in Sweden – a leader in cashless economy.

There are many reasons why cash remains the dominant form of payment. It is empowering for millions of unbanked families. It is an intuitive method of exchange and acts as a store of value. It doesn't come with the transaction fees as that of electronic payment methods. Cash provides a degree of privacy that more modern forms of payments are unable to guarantee.

Another reason is the lack of access to banking for a large part of the population as well as cash being the only means available for many. Universal banking is still a distant dream in India. The data from the Indian Finance Ministry shows that only about 32% of India's population has access to financial institution and other financial services. Even the distribution of bank branches are not uniform: it is highly skewed with a third of all bank branches being located in 60 Tier 1 and Tier 2 cities and towns.

Another fact is that half the India's output comes from small and informal sector where cash is the norm. Statistics show that the informal economy, nearly 90% of India's labor market and firms, account collectively for some 40% of GDP and all the transactions are on cash basis. For 60% percent of wage earners and workers in India, salary is distributed in cash. All these compelling reasons augment the use of cash albeit its negative consequences.

VIII. REASONS TO SHUN CASH

Summarizing the arguments above, the following reasons could be enlisted to shun cash.

1. Cost of currency printing and management is huge in India. The RBI and commercial banks spend a considerable amount.
2. The cost of using cash by the consumer is large. Consumers in India spend a great deal of amount and time for fetching cash.
3. The cost of providing large network of ATMs, and bank branches to disperse cash in the system is huge.
4. Cash drives the shadow economy and is responsible for informality in the markets.
5. Tax collection in India is abysmally low because of use of cash which is not accounted and shown in the books of accounts. Government loses a hefty sum on this front.
6. A huge amount of cash never enters banking system thus dampening 'credit creation' process of banks.
7. Unaccounted cash is responsible for financing all illegal transactions.
8. Excess cash in the economy is responsible for inflation, and erosion of value and purchasing power of money.
9. Corruption thrives on cash. Democratic process is vitiated by corruption and cash is the 'sole proprietor' in this regard.
10. There are a lot of risks associated with holding cash: loss of value, safety, security, theft, and accidental loss.
11. There is one more reason, if not last, to avoid handling cash as they are the carriers of germs and diseases. From hygiene point of view, we need to shun cash.

IX. GOING CASHLESS – THE NEXT BEST ALTERNATIVE

We are making a steady progress towards becoming a 'cashless economy'. It is not an option but a compulsion driven by economic prudence. Finance Minister Arun Jaitley in his press meet said after demonetisation "it will take India towards a cashless economy, it doesn't merely push the country in that direction, but significantly pushes it". If India has to contain and control unaccounted money, it has to necessarily shift from cash dependent economy to cashless economy. Cashless economy is a situation in which the flow of cash within an economy is non-existent and all transactions are done through electronic media channels such as direct debit, credit and debit cards, electronic clearing, payment systems such as Immediate Payment Service (IMPS), National Electronic Funds Transfer (NEFT) and Real Time Gross Settlement (RTGS). By reducing cash transactions, and by boosting E-payment system, we can achieve the twin objective of economic growth and financial inclusion.

The moment demonetisation was announced, our obsession with cash started melting. Once the notes lost its 'currency', we started switching over to other modes of payment. PaU India (E-Commerce portal) registered 80% increase in transaction just within 24 hours of demonetisation. Paytm, a major mobile payment operator, witnessed five million daily usage post demonetisation as against their average transaction of three million. It also registered 700% increase in overall traffic, and 1000 % growth in the amount of money added to its account in the first two days itself. Likewise, 'Ola Money' registered 1500% increase it its e-wallet. All these data suggests that consumers who are otherwise using cash mode of payments, have started switching over to E-payments. There was

70% surge in debit card usage, and that of credit card usage increased by 40% which implies first time card usage by inactive debit/credit card holders. All these data indicate that when compelled Indians are ready to switch over to cashless mode. By adopting E-payments, M-payments, and by reducing cash transaction, it will be easy for the tax authorities to crack down on tax evasion. This becomes a self checking mechanism for bringing more and more people within the tax net and to curb black and unaccounted money. But are we ready for this paradigm shift?

X. THE CHALLENGE !

We are yet to fully harness the potential of IT sector. The Institute for Business in Global Context and Tufts University in their research titled 'cost of cash India' observed that "despite its prowess in the telecommunications field, India has been left behind by its peers in mobile payments. Though India has a fiercely competitive telecommunications market, possesses a well-developed financial system, and is a widely acknowledged technology exporter, fewer than 2% of Indians have used a mobile phone to receive a payment, compared to over 60% of Kenyans and 11% of Nigerians".

Recently, we became the second largest users of internet pushing the US to third place. As of June 2016, there were 342 million internet users with a penetration rate of 27%. This means the remaining 73% or 912 millions do not have internet access. Out of 833 million who live in rural areas, only 13% (108 million) have internet connections, whereas 58 % of people in urban areas have internet facility. How are we going bridge this rural and urban divide?

Another hurdle is the penetration of smart phones. For M-payments and E-Wallets a smart phone is a prerequisite. Though ours is fastest-growing smart phone market in Asia-Pacific region, only 17 percent of adults own a smart phone according to one research. Added to this is the slow speed of internet service which would discourage the user from using E-Wallets and M-Payments. The average time to load a page on a mobile phone is 5.5 seconds in India which is way behind when compared to 2.6 seconds in China, 4.5 in Sri Lanka and 4.9 seconds in Bangaledesh.

The current infrastructure to handle mammoth volume of E-payments transactions is highly insufficient. The growth in infrastructure has not kept pace with the growth in debit and credit cards. While debit cards registered a growth of 64% between October 2013 and October 2015, the number of ATMs grew about 43%, while point-of-sale machines increased nearly 28% and people need to realize the importance of E-payments and adopt it.

If these challenges are addressed on a war footing, there is a greater scope for Indians to switch over to alternate payment systems, and we may usher in a new world of cashless economy.