CASHLESS INDIA : CHALLENGES & OPPORTUNITIES

Original Research Article

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ABSTRACT

As Indians queue up for cash in banks and ATMs, the question of whether India will successfully transition to a cashless economy stays strong in our minds. A cashless economy is one where cash flow is minimal or non-existent. In a cashless economy, electronic channels like a debit card, credit card, electronic merchants, payments such as IMPS are the mode of transaction. India has been a cash-dependent economy, with 97-98% of all transactions still in cash. Only half the nation's adult population i.e. around 233 million, possess a bank account, a precursor to a cashless economy. Most retailers don't accept cards or don't have the infrastructure for online payments limiting the ability to use cards. Bank accounts or online banking are not of any use even when people have access to it if retailers want the payment in cash bank accounts or online banking are of no use. After the news of demonetization, the online payment services went into advertising overdrive, bombarding the media with ads to move onto online platforms. But wealthier urbanites or younger generation used most of the services. India being an agrarian economy we have to take them into consideration too. Banks are still doing poorly in rural areas. According to World Bank, there are only 18 ATMs per 100,000 citizens in India, compared to 129 in Brazil. Only 17 percent have smartphones and 22 percent use the Internet according to a Pew Research Center report.

Keywords :

economy,
cashless,
ATMs,
an agrarian,
urbanites,
smartphones

I. INTRODUCTION

Worldwide there is tremendous interest among policy makers, academicians, and commercial enterprises to explore the possibility of moving towards a cashless economy. However, cash still continues to remain the predominant form of transaction. In Europe, it accounted for 78% of Euro 388 billion retail payments in 2008, or nearly Euro 301 billion transactions.[1] In 2008, the total cost of distributing, managing, handling, processing and recycling of cash and that of accepting cash payments was Euro 84 billion or, 0.60% of Europe's GDP. Although it is expected that there will be a significant increase in the use of cashless payments and a general decline in the number of cash payments in Europe by 2014, cash will still remain the continent's main retail payment mode. India will witness $500 billion worth of transactions by 2020, which is 10 times the current level. The country's smartphone users are expected to increase to 520 million. Internet users will increase to 650 million, encouraging people to move towards cashless transactions. Banks have stepped on to the mobile banking arena as well. At the same time, non-banking companies like Airtel, Vodafone, Paytm, Mobiwik are offering wallet services already. To make this transition possible, the government will need to work on digital infrastructure. It also has to waive the service tax on digital payments. The RBI has to resolve issues on cross-border digital payments and shed their conservatism. The motive of the cashless economy needs digital infrastructure and technology to support it. Another big challenge is cybersecurity. With the increase in online transactions, cyber-crime is likely to see an increase. There will be a need for competent encryption technologies at the physical point of sale. Also, efforts have to be made to retain consumers if they face failures on transactions.

There are some important reasons as to why India has to gradually move towards a system of cashless payments.[1] We categorize them as direct and indirect benefits.

II. DIRECT BENEFITS

High maintenance costs*:* The cost of maintaining currency in India is enormous. According to the Reserve Bank of India, the provisional estimates of the amount of currency in circulation (as of June 2010) stands at INR 8,64,333 Crores[1] out of which only 5% of the currency is with the bank, implying that almost the entire volume of currency is transacted every day. Over the period April 2006-June 2010, the currency has shown a yearly growth rate of 17%. It is estimated that, for 2009-10, RBI incurred an annual cost of INR 2,800 Crores to just print the currency notes.[1]This is 0.4% of the total currency in circulation. This cost does not include the cost of storage, transportation, security, detection of counterfeits etc. To the printing cost, if we were to add the cost of storage and maintaining these currencies through ATMs alone, the cost of printing and distributing cash constitutes about 0.2% of India's GDP. Given the growth rate in the volume of currency, the cost of printing and disbursing will soon become enormous. In the face of this, a moderate growth of cashless transactions by 5% a year will save more than Rs 500 Crores annually. Therefore, there is a direct benefit (in terms of cost savings) of moving towards cashless transactions in India. However, it is the indirect benefits that are perhaps much more important for India, especially given its objective of inclusive growth.

III. INDIRECT BENEFITS

There are three distinct yet important indirect benefits from promoting cashless transactions in India. These are:

(a) It will promote financial inclusion;
(b) It will keep records of financial transactions; and
(c) It will lower transaction costs involving any two parties engaged in a financial transaction.

While the last observation is, in general, true for any economy, the first two are particularly relevant for India.

(a) Financial inclusion

Gangopadhyay (2009) shows that more than half the Indian population is not financially included. Overall 525 of the households have a bank account; the relevant percentages are 67% in urban areas and 40% in rural areas. There are about 6.3 bank branches for every 100,000 people in India, less than 3 branches per 100 square kilometers. For rural India, the numbers are 3.5 branches per 100,000 people and less than 1 branch per 100 square kilometers. In particular, 45 percent of the rural, 28 percent of the urban and 38 percent of all households in India, admit that access and availability are the main factors determining their choice of a particular bank. While it is necessary for financial inclusion that every household should have access to the bank, mere physical access to a bank is, of course, not sufficient. This is particularly important given that more than 90% of the workforce in India is in the unorganized sector, and physically accessing banks would mean huge opportunity costs for them (measured in terms of daily earnings). A cashless payment system will reduce this cost tremendously. An enabling system that promotes cashless transactions would, therefore, be the natural extension of the existing policies directed towards financial inclusion.

(b) Financial Records

Recording financial transactions have many advantages. First, it aids the Government to collect appropriate tax revenues; second, it can effectively detect, and help curtail, illegal transactions; third, it will give us a better estimate and understanding of the huge unorganized sector in India; and last, but not the least, it will help plug the 'leakages' in various Government programmes. Although we do not have accurate estimates of the amount of 'black money' in the country, if one were to correlate the black money present in the economy with the black money held abroad, the amount will be enormous. With cashless transactions, almost all transactions will leave a digital footprint. A system that encourages and incentivizes the 'buyer' to pay through cashless instruments (increasing use of the bank to bank transactions without involving the physical currency) will have higher financial transparency. This is perhaps the most direct way of battling issues in corruption and black money in India. Digital footprints have other major advantages. It can make public delivery systems much more efficient. In 2009, the Planning Commission estimated that only 27% of Public Distribution System (PDS) expenditure reached the targeted low-income groups. The Justice Wadhwa committee report on PDS also finds leakages in the PDS subsidy.[1]In fact, the committee also recommends the use of computerized platforms that will keep a record of all transactions pertaining to the PDS. It is fair to assume that, once the records are maintained, misallocation of PDS items can be easily detected and be acted upon.

(c) Lower transaction costs

With appropriate technology and instruments, the need to be physically present during any financial transaction can be dispensed with. This can reduce transaction costs as cashless transactions often reduce processing costs and waiting times. The process of calculating and tendering the exact change is often cumbersome and time-consuming.

Having established the need for cashless payment instruments, the obvious set of questions that arise are (a) what impedes cashless instruments currently and (b) what should be the appropriate enabling system to promote cashlessly?

'Market forces' alone will not work. This is because of the network effect.

Network effect: Switching from an economy that predominantly uses cash to a cashless economy would require a concerted effort to develop a network of critical mass that deals with the cashless transaction. The development of this network is important as there is a switching cost for users to shift from cash to cashless. Network effects are in place when an addition of one more individual to an existing network of individuals increases the value of all the members of the current network. This makes it costlier for the existing members to switch from the current network. Clearly, with each additional transaction conducted in cash or addition of one individual who wishes to transact in cash, the value to all the members currently using cash increases. Therefore, for anyone from the existing network of cash users to switch to the cashless transaction, the benefits must be significantly higher from doing so. Simply put, users will find it more attractive to switch to cashless transactions if more users are using them.[1] Any policy to help users shift to cashless transactions would be much more effective as the size of this network grows. It is important, therefore, that policy initiatives are in place to develop a critical mass of this network (of non-cash users). This critical mass may vary across geographies or across sectors. Once it is developed, it becomes more lucrative for individuals to leave the existing network of cash transactions and join the network involving cashless transactions.[1]Our recommendations to shift towards cashless economy are based on this network effect.

IV. ROLE OF THE GOVERNMENT

Our discussions from household and enterprise surveys bring out two reasons that are common and plaguing cashless transactions tremendously. Firstly, the low acceptability of cashless transactions and secondly, high transaction costs. The role of the government is prominent in removing both these bottlenecks. It needs to create the critical mass or network thereafter which, cashless transactions will be easily acceptable and convenient across parties. Furthermore, it needs to play its role as the policymaker in helping to reduce transaction costs. Finally, the Government is also an important sector for consumption as well as employment generation

Challenges of the Government in developing the network: Country Experiences

It is evident that in order to develop a critical mass of people using the cashless instrument, it is important that exogenous shocks to the system are given to build up the network. How did some of the countries which have a reasonably large proportion of cashless expenditure, achieve this? The theory behind this new order of electronic money dominance is certainly attractive but the actual implementation of such a system is daunting. The pioneers are typically East Asian, with Singapore keen to develop a cashless society through the use of CEPAS (Contactless e-Purse Application) stored-value cards. Their aim is to use these cards to replace those small cash transactions that are most prohibitive to a cashless society such as public transport and retail services. For example, in the public transport, the cost of processing small currencies (to tender exact fare) costs substantial in terms of time usage.

Singapore, one of the economies that have higher percentages of cashless transactions, started moving towards cashless economy as a long run policy initiative almost three decades ago. The National Campaign to Minimise Cash Transactions was launched on 14 March 1985 to urge Singaporeans to carry out their transactions electronically. The three-month long campaign had three specific goals: to encourage Singaporeans to receive their pay through direct credit to the bank, to persuade them to pay their bills electronically via General Interbank Recurring Order (GIRO), and thirdly to promote payments through the Electronic Funds Transfer at Point of Sale system (EFTPOS). On January 1984, a 17-member COMMIT (Committee to Minimise Cash Transactions for Manpower Savings) was set up to carry out COMMIT (Committee to Minimise Cash Transactions for Manpower Savings) was set up to carry out the quarter-million dollar campaign. Members of the public were educated through video shows, automated teller machines (ATMs), demonstrations and hands-on exhibits provided by thirteen organizations, mainly banks and computer companies. Awareness was also created through mobile exhibitions set up at People's Park Centre and Parkway Parade. During the campaign, advertisements were taken out and workers also received letters and brochures promoting the conveniences of cashless paydays. To answer public queries, the Ministry of Finance also set up a hotline number. The notion of cashless paydays was introduced. Though cashless paydays for government departments have been around since 1972, only 51% of the 1.04 million workers were receiving their salaries through direct credit during the start of the campaign. The government also aimed to bring in the private sector and to increase the number to at least 70%. Letters were sent out to employers, encouraging them to pay their employees through the bank instead of cash. The Housing and Development Board (HDB) also relaxed its rule on ATM locations so more ATMs could be added to meet the increased demand. To ensure the smooth implementation of cashless paydays, employers were encouraged to stagger their paydays so demand for bank services could be distributed more evenly. The second phase of the campaign was to encourage members of the public to pay their bills through General Interbank Recurring Order (GIRO). It was reported that 40 million bills paid to government departments and statutory boards were done so in cash. In a year, only a million payments were received by cheque and five million payments were made by GIRO. The third and most challenging part of the campaign was the implementation of accepting electronic payments at the point of sales (EFTPOS).[1] To boost, EFTPOS, ten thousand people and thirty-nine retail outlets took part in a pilot scheme in June 1985. The participants of the scheme comprised of the five top local banks, major retailers, petrol companies and selected government departments were roped in. Gradually electronic money (more commonly known as "stored value cards" in the local context) in Singapore became the usual mode of payment for most services (including public amenities). These cards can be categorized into single purpose stored value cards (SPSVCs) and multipurpose stored value cards (MPSVCs). SPSVCs can only be used to pay for goods and services offered by the issuer (e.g. prepaid phone cards). In contrast, an MPSVC also allows cardholders to pay for goods and services offered by other merchants or organizations.

Mexico is one of the first countries in the world whose legislature may actually ban very large cash transactions of a certain nature. Mexico's reasons are obvious, they need to fight against illegal drug trafficking and ensnare tax evaders. In Greece too, any cash transaction above the value of Euro1500 will be under the scanner. This is part of an austerity drive given the financial precariousness of Greece. In Italy too, discussions are in place such that any and all cash transactions greater than the value of Euro5000 may be outlawed. All of this is being done to clamp down on tax evaders.

Opportunities for Creating a platform: Role of UID

Financial service is one of the most important requirements for the currently excluded segment. And given that one of the key objectives of constituting UID is to extend the delivery of services to the currently excluded, UID is actively looking to facilitate the delivery of financial services.

"In this regard, UIDAI believes that the plan of issuing Aadhaar numbers to the intended 60 crore residents over the next 4 years and setting up an online biometric authentication service will help address many of the current challenges faced by the banks in the delivery of financial services. While covering the entire country may take some time, we believe that these initiatives will ease a large portion of current challenges and will help of a much deeper penetration of financial service delivery in the country".

A critical part of the UID-enabled micropayments architecture is the direct deposit of government benefits into the accounts of the beneficiaries. Government departments should be able to disburse benefits by simply generating a list that contains a UID in one column, the linked bank account in the next column and the amount in the last column.

Two critical pieces of infrastructure are required to implement UID-enabled disbursement of government benefits:

1. Government departments must have IT systems that maintain a list of beneficiaries by UID, and track any program specific information required for disbursing the benefit. At the time of disbursement, a list of UIDs and amounts are generated and sent to the bank servicing the concerned government department.

2. A nation-wide payments infrastructure can then distribute payments into beneficiary's accounts using their UIDs.

Direct Contribution to Cashless by the Government:

There are a large number of nodal points of interaction between a citizen and the Government. The obvious role of the Government in those cases will be to make cashless transactions mandatory for certain payments and make it mandatory for certain services exceeding a certain amount. For example, payment for passports can be made mandatory through cashless (online payments or bank drafts). While payments of various taxes (income, sales or excise duties) can be made mandatory through cashless modes. In addition, a tax rebate (of say 1% to 2%) on payments made by households as salary to the unorganized sector (domestic servants, sweepers etc) can boost cashless payments. This will do two things, One the households will have an incentive to go cashless and two, a large portion of the unorganized sector will be financially included. Apart from the incentives and mandatory prescriptions of cashless mentioned above, there are some direct Government programmes and initiatives where it can create a large platform for cashless transactions.

There are two broad areas where the Government can promote cashless transactions that will be quick, efficient as well as have an enormous impact. These are (a) cashless instruments to avail PDS, and (b) encouraging cashless transactions with Mahatma Gandhi National Rural Employment Guarantee (MNREG) payments.

Role of MFIs in Financial Inclusion through Cashless

While access to banks is of a concern to the urban population, the magnitude of the problem fades in comparison to rural India. There are 60,000 villages with a population exceeding 2000 that have no banking facilities. Despite the network of 82,000 bank branches of commercial banks across the country, India's banks cater to only about 5% of the villages. There are about 6.3 bank branches for every 100,000 people in India. In terms of geographical accessibility, there are, on the average, less than 3 branches per 100 square kilometers. For rural India, the numbers are 3.5 branches per 100,000 people and less than 1 branch per 100 square kilometers of land area. These numbers alone are sufficient to infer that the simple task of accessing the nearest bank branch is often the most severe challenge. Therefore, the necessary condition for cashless-households being financially included is not met in rural parts.

In India, MFIs have a widespread reach. There are more than 74 million MFI clients (IDF 2011a). Around 54 million of these clients are served by NGO-SHGs that are linked to banks. The remaining clients are served by various organization and lending types. While the growing outreach of the NGO - SHG programme in 2009-10 was 8.5%, the growth outreach of other MFIs during this period was 18%. Given the MFI reach (and particularly in rural India as 80% of MFI clientele is in rural India), it is natural to look at the role of MFIs for the half that is financially included. In particular, we are interested in the question: What has been the role of the MFI in promoting financial inclusion among the population who do not have any access to formal financing? These questions are particularly important given that (a) MFIs to have a widespread network where they target a significant poor population; (b) they are often in direct competition to banking. After all, MFIs, who lend at an effective interest rate exceeding 36% (Malegam 2011) to clients, would lose these clients if bank finance at much lower rates were available to these people.

MFIs with their reach among the rural areas often assume the role of financers of an entire community. For example, considering our example of the typical village, while X is an MFI client, in all likelihood Y and Z are also MFI clients (often the same MFI). MFIs apart from disbursing the loans play another important role-that of creating awareness and promoting financial literacy. Financial literacy through prudent financial decision making is essential for MFIs to impart to its clients to maintain the high repayment rates. Therefore, MFIs have some natural advantages which can be exploited and therefore entrust them in creating and maintaining this network. As argued earlier, some of the major advantages that MFIs have over other institutions are:

(a) Their spread and access to households below poverty line (especially in rural parts)

(b) Their access to the financially excluded population

(c) Being the nodal point of financial transactions in village communities;

(d) Their ability to generate financial awareness among the community.

Therefore, MFIs if involved in promoting a cashless economy, will be most efficient? The question, therefore, is why will they do it? This takes us directly to the issue of conflict of interest between MFIs and financial inclusion. As stated earlier, MFIs are often in direct competition to banking. After all, MFIs, who lend at an effective interest rate exceeding 36% (Malegam 2011) to clients, would lose these clients if bank finance at much lower rates were available to these people. Therefore, what is the incentive for MFIs in the current scheme of things to make it easier for its clients to access much lower bank finance? Any system that fails to answer this simple question cannot rely on MFIs to attain financial inclusion.

V. RECOMMENDATIONS

The path to cashless has three important and basic (MIN, henceforth) components –mandatory, incentives and networks. The role of the Government is prominent in all the three cases. It can make certain nature of payments to be made by cashless instruments mandatory. These can be easily achieved for instruments that involve paying directly to the Government for certain goods and services (say Passport fees, tax payment, payment to railways, PDS, State Electricity Boards or to National airlines etc) or where the Government pays (salaries, various schemes like MNREGS, other cash transfer schemes). However, given that enforcing such mandatory requirements are difficult for transactions that involve two private parties (say household and retailers), an incentive scheme will work better. These incentives need to be given to one party to carry the cashless transactions. Finally, for a cashless system to be a long run equilibrium, a critical size of the network must be developed. The role of the Government along with RBI is most crucial here. One is the lack of acceptability and the other is high transaction costs. Therefore, our recommendations must keep these two facets and should be consistent in removing at least one constraint for each consumption sector. However, it is worthwhile to note that, even if these two constraints were to be removed, cashless transactions will not be automatic.

The framework for recommendation must eventually address the 3 A's of promoting financial inclusion through cashless payment instruments. These are accessibility, affordability, and awareness.

Accessibility as a concept should be the cornerstone to expand the reach of the banking systems and the various payment products to all the sections of the society including the 'Aam aadmi' as part of the financial inclusion plan and efforts.

Affordability is a key cornerstone which should guide the product offering as being value for money for the households and enterprises with technology. To ensure this, at least at the initial stages various discounts have to be in place. and innovation being the important drivers for providing cost effective and quality services by the service providers.

Awareness- Creating awareness through financial literacy campaigns is necessary to increase the volumes in the payments business.

VI. CONCLUSION

The need to move towards a cashless economy in India is immense. One, it will save a huge amount of money that is spent annually on printing and maintain currency. Most importantly it will help the Government achieve its objective of inclusive growth (through financial inclusion) and make public utilities more efficient. Currently, less than 1% of all consumption expenditure is incurred through cashless instruments. However, to move towards a cashless economy, the important role of network effect and creation of a critical mass cannot be ignored. Therefore, at least in the initial stages, steps have to be taken to help build the critical network size. The current draft indicates some of those steps.

We identify a MIN Programme for the road to cashless. The key features of the MIN program revolve around two major components- mandatory schemes and incentivized schemes. Mandatory schemes will have to have the direct involvement of the Government while incentivized schemes can be between any two private parties as long as one of the parties have been incentivized to use cashless. We further recommend certain tax incentives for certain specific household expenditures. It is not mere coincidence that while around 3.5% of the households use non cash instruments, the percentage of the taxpaying population is also 3.5%! The specific sectors can depend upon the objectives of the Government (financial inclusion etc). The exact amount of incentives etc can be back calculated by outweighing the (expected) loss in tax revenue and the gains from cashless transactions and financial inclusion. Finally, apart from the incentives, a concerted effort to increase the network size is needed.

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[2] For an overall policy framework to enable financial inclusion, see reports by BCG and TCS. http://www.tcs.com/SiteCollectionDocuments/White%

[3] See http://pdscvc.nic.in/report%20on%20computersisatio n %20of%20PDS.htm. This is also substantiated by similar studies conducted by the Planning Commission of India. Though estimates vary, the conclusion is the same.

[4] **See Oz Shy (2016),** "The Economics of Network Industries", Cambridge University Press, for discussions on various network effects involving banks.

[5] The popularity of fax machines was driven by the fact that the company realized its network effect and to make more users hooked onto the network, they initially subsidized fax machine users. Surely, if only one user has a fax machine, it is useless,

[6] For the evolution of cashless system in Singapore, refer to www.bis.org/cpss/paysys/Singapore Comp.pdf9.http://business.feedfury.com/content/451 62601-the-cashless-society.html-2014

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