

Issues with E-Cash

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Abstract

During the decade of 1990's, the growing popularity of electronic banking made the use of non-cash or cashless dealings and settlements common among the residents of some of the most technologically advanced nations of the world. Digital payment methods became well established in countries across the world by the 2010's. Indian economy is demonetized in 1946, 1978 and 2016. On 8th November 2016, when demonetization is done, the Indian economy is to shift from cash to cashless economy i.e., a world of cash free dealings where coins and paper currency were replaced by digital currency (bits and bytes) and spending, earning, investing get efficient using smartphones. The objectives of which were to curb black money and digitalization of the economy. Cashless economy focuses on the reduction of quantum of cash operating in the system. It also shifts the economy to digital economy. As a result of demonetization, the number of digital transactions increased from 87 crores in August 2016 to 138 crores in August 2017 an increase of 58%. Digital platforms like Paytm faced a twofold upsurge. Advantages of cash: cash is interchangeable, no merchant cost, language compatibility etc. Disadvantages of cash: inconvenient to carry, expensive to print etc. Cashless options: Mobile Banking, Mobile wallets, NEFT, IMPS, UPI, USSD world moving towards less cash: Sweden, Norway, Denmark, Kenya, Canada.

keyword1: Demonetization, keyword2: Digital payments, keyword3: Cashless Economy

Evolution (Journey from Barter system to E-cash)

The first-born trading system was barter system where goods were being exchanged for the desired goods. The difficulty with this system was the lack of standardization on the quantity and goods to be exchange. Later on, coins and paper currency were introduced. The coins and paper currency have a certain market value attached with them to enable handlers to exchange for any desire goods and services. Using this system, the problem that one has to face was, to carry the coins and paper notes around and must has enough value in the pocket for every trading or transaction to complete.

As evolutions, the next in line is payment via checks. The checks are issued with bank contract as a trusted body to authenticate the legitimacy of the payers and the amount written on it. This scheme facilitate consumer to make transactions of large amount without carrying coins or paper notes along with, which reduced the risk of consumer robbery. But using this method, merchants are exposed to invalid checks where there is no money or account exists in the bank. Soon after the checks, automatic teller machine (ATM) cards came as new development to improve payment system and become the first to allow transaction via electronic.

After the success of ATM cards, credit cards were added as a new invention to payment scheme.

Introduction to E-Cash

Since the explosion of the Internet, most of people are being used to the convenience Internet has to offer. Internet has linked people across the world and enables businesses to make their goods and services available across the world without being physically present in front of the consumers. As time passes,

Internet has become a part of the routine, which stresses more and more applications being developed and services being made available to make optimum use of the infrastructure. Along with the online business transaction, E-cash is one of the facility that attract people's attention for doing business transaction electronically. It is a replacement for traditional payment system, which is not practicable for e-commerce. Although E-cash can obtain secrecy in its implementation, it can also be implemented as traceable for high security reason. E-cash can be implemented in two ways, i.e., on-line and off-line. In on-line method E-cash is stored by the bank or issuer and the consumer needs to request for it when a he or she makes payment. In contrast of online, off-line e-cash is kept by consumer in a device such as smart card or other type of token.

Objectives of study:

- ✓ To study the complexity of demonetization.
- ✓ To study the role of cash in Indian economy.
- ✓ To find out the ways to overcome hurdles in the implementation of a cashless system.
- ✓ To study the impacts of demonetization viz. short term and long-term impacts.

Methodology:

The study is descriptive in nature and secondary sources of information like newspapers, internet, books are used to draw conclusions.

How does E-cash work?

So, how does E-cash work? There are number of E-cash system being introduced and developed but the basic idea of E-cash is as follow. It involves at least three parties, issuer not necessarily financial institutions, consumer who use the E-cash and merchant who accept E-cash in exchange with goods or services provided by him.

Consumer needs to open an account with a bank and the merchant who wants to participate in E-cash transaction need to have accounts with numerous banks in order to support consumer's transaction who might use any bank account. The banks will handle both consumers' and merchants' accounts. When consumer want to purchase goods or avail service, he or she will transfer the E-cash from his/her bank account to his/her electronic wallet (on-line system) or E-cash token (off-line system). The E-cash can then be transferred to the merchant in exchange with the goods or services provided by merchant. Hence E-cash payment can be in term of softcopy or token based. Transactions via Internet are normally encoded. After receiving E-cash payment from the consumer, merchant will get confirmation from the bank and the bank will then authenticate the E-cash transaction. Simultaneously the bank will debit consumer's account based on the agreed amount. The merchant will then deliver the products or services and ask the bank to deposit the agreed amount to the merchant's bank account. It is clearer from figure below:

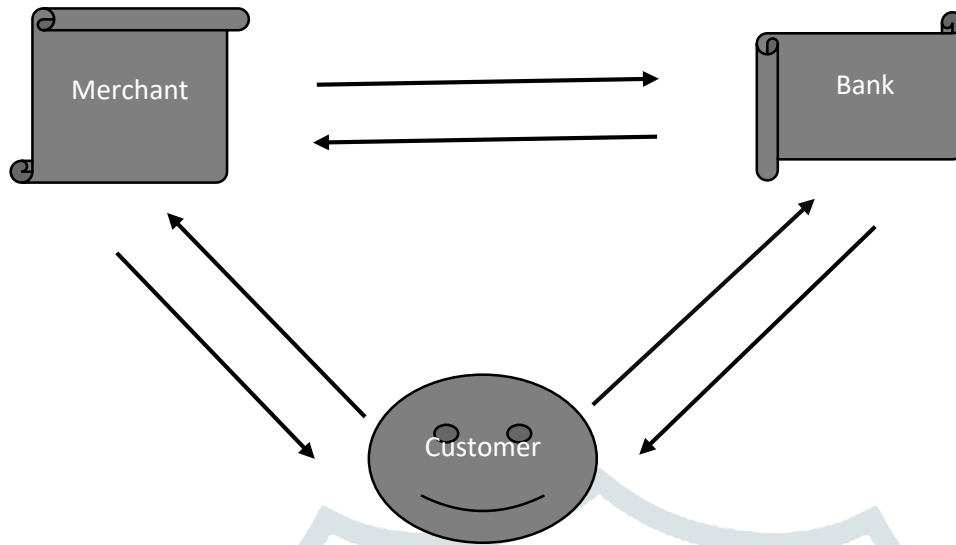
Process of E cash

Figure 1

Issues and Challenges Regarding E Cash or E Payment Systems

1. **Lack of Usability:** Electronic payment system requires large amount of information from users or make transactions more complicated by using complex elaborated websites interfaces. For example, credit card payments through a website are not that easy as this system requires large amount of personal data and contact details in web form.
2. **Lack of Security:** Online payment systems for the internet are an easy target used by hackers for stealing money and personal information. The main problem of e-cash is that it is not commonly accepted because it is necessary that the commercial institution accept it as payment method. Another problem is that when we make payment by using e-cash, the client and the businessmen have accounts in the same bank which issue e-cash.
3. **Lack of Trust:** Electronic payments have a very huge record of fraud, misuse and low reliability as well as it is new system which don't have established positive reputation. Potential customers often remark this risk as the key reason why they do not make online purchases.
4. **Lack of Awareness:** Making online payment is not an easy task and educated people also face problems in making online payments. Therefore, they always prefer traditional way of shopping over online shopping. Sometimes there is a technical problem in server and when customers tried to make online payments due to this they fail to make payments. As a result, they avoid online purchases.

5. *Lack of Feasibility:* Online Payments are not Feasible. Mainly the population of rural areas is not digitally literate even they are not able to operate computers. As they are not aware about technological innovations, they do not show interest in online payments. So, the online payment systems are not feasible for rural areas.

Conclusion

Electronic payment refers to the mode of payment which doesn't include paper currency or cheques. It includes debit card, credit card, smart card and E-wallet etc. E-commerce has its main link with the use of online payment methods. The success of electronic payment system rest largely on the availability of an efficient ICT infrastructure where reliable network connectivity, durable hardware and high proficiency in ICT are available. The risks in the online payments are theft of payments data, personal data and frauds which have become main reasons for rejection of online payments on the part of customers. Therefore, until the use of electronic signatures is wide spread we must use the technology available for the movement to ensure reasonable level of security. The successful implementation of electronic payment system depends on how the security and privacy dimensions perceived by consumers as well as sellers.

References

- i) Bhasker, Bharat (2013). Electronic Commerce, Framework, Technologies and Applications. McGraw Hill Education (India) Private Limited., p.9.2-9.16.
- ii) www.google.com
- iii) www.wikipedia.com
- iv) www.investopedia.com
- v) <https://www.giac.org/paper/gsec/1799/overview-e-cash-implementation-security-issues/103204>