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Issues and Challenges of Demonetization on Digital Banking

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ABSTRACT

By Demonetization, in order to reduce the use of black money, the Govt. of India wants that the citizen of India to do the payments, digitally as much as possible. Now, Digital Banking means that the financial transactions made without the use of paper documents like cheques. It include use of debit card ,credit card, e-wallet like Paytm, Airtel Money, Freecharge, Vodafone m-pesa, etc. Now, Digital payments have several merits and demerits also. So, some methods can be highly adopted while others are relatively less. This research aimed to identify the digital problems and offer some solutions about how to fix and improve them possibly.

Keywords: Encryption; Digital Payment; E-Cash; Cyber Cash; Secure Electronic Transaction Protocol.

1.0 Introduction

By Demonetization, in order to reduce the use of black money, the Govt. of as much as possible. Digital Payment system is a mode of payments over an electrical network like internet. It include use of debit card ,credit card, e-wallet like Paytm, Airtel Money, Freecharge, Vodafone m-pesa, etc. So, it creates an e-business environment. Digital Payment System are Classified as:

1.1 Payment system based on internet

- (a) Digital cash(e-cash)
- (b) credit card
- (c) debit card
- (d) Smart card

1.2 Payment based on electronic transactions

- (a) Secure Electronic Transaction
- (b) Cyber cash
- (c) Net Bill

2.0 Objectives of Present Work

1. To create awareness about different methods of digital payment systems.
2. To create awareness about various frauds or hackers of electronic payments.
3. To motivate people to use digital payment systems.

4. To make digital payments safe and secure.

3.0 Literature Review

3.1 Digital cash (e-cash)

e-Cash is purely software based, anonymous, untraceable, online token payment system, available on Unix, Windows as well as Macintosh platform. The users can easily spend digital money at any shop accepting e-Cash without giving the actual credit card details to the shopkeeper. It can also be stored on electronically sensitive card.

3.2 Credit card

A credit card is a card issued by a financial company giving the holder an option to borrow funds, usually at point of sale. Credit cards charge interest and are primarily used for short-term financing. Interest usually begins one month after a purchase is made, and borrowing limits are pre-set according to the individual's credit rating.

3.3 Debit card

A Debit card is a banking card enhanced with Automated Teller Machine and point of sale features so that it can be used at merchant locations. A Debit card is directly linked to individual's bank account. It is allowing funds to be withdrawn at ATM without the use of a cheque.

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It is a substitute for physical cash and cheque. There are two types of debit cards :

- (a) Online debit card
- (b) Offline debit card

Fig 1: Common Portal Used for Payment



3.4 Smart card

In 1977, Motorola produced the first smart card. It’s characteristics are : thin, credit card sized plastic which contains a half-inch-square area that serves as the card’s input-output system. A smart card contains a combination of two programmable chips ,RAM and ROM. It is known as smart card because it stores the information in digital format.

3.5 Secure electronic transaction

Secure electronic transaction is a system of online payments for ensuring the security of financial transactions on the internet. The SET specification is an open, technical standard for commerce, developed by VISA and master card. It facilitates secure payment card transactions over the internet. Digital certificate create a trust change throughout the transactions, verifying cardholders and merchant validity.

3.6 Cyber cash

Cyber cash is a web-based service that automatically processes and verifies customer’s credit card information and then debiting the customer’s account and crediting the merchant’s account electronically.

3.7 Net bill

Net bill is a micro-payment system. With the help of Net bill payment system one can purchase the goods and services by making a secure and economical payment. The net bill server maintains account for both consumers and merchants, which allows customers to pay merchants for goods to be delivered. The goods are delivered in digital form.

There is a money tool software which verifies receipts of goods. So, net bill system of electronic payment enables the communication between money tool, the merchant server and net bill server.

4.0 Issues and Challenges Related to Digital Banking

4.1 Poor network strength

In many areas especially the rural areas which have very weak strength of internet connection. So, people living in such under-developed areas, facing many technical difficulties while digital payment.

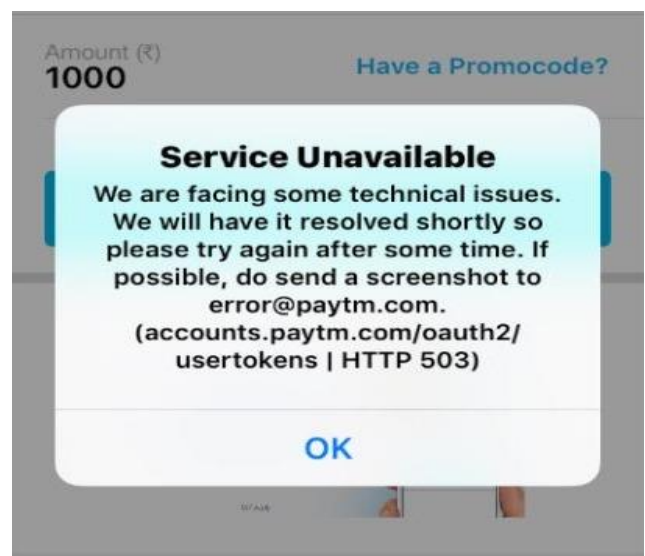
4.2 Lack of trust

Electronic payments have a long history of fraud, misuse and low reliability as well as it is new system without established positive reputation. Potential customers often mention this risk as the key reason why they do not trust a payment services and therefore do not make internet purchases (Lietaer, 2002).

4.3 Lack of awareness in senior citizens

Making online payment is not an easy task. So, Senior citizens face problems while making online payments. Therefore, they always prefer traditional way of shopping. As a result they avoid digital payments.

Fig 2: Common Error



4.4 Feasibility in rural areas

In rural areas, the population of illiterate people is more. They are unable to perform digital payment, as they are not the technocrat people. So the online payment systems are not feasible in villages.

4.5 Cost factor

Digital payment systems are very expensive because it includes set up cost, machine cost, management cost etc.

5.0 Statistical Data

Fig 3: Option Available

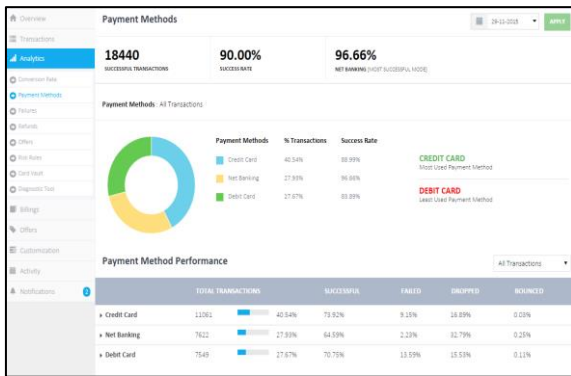
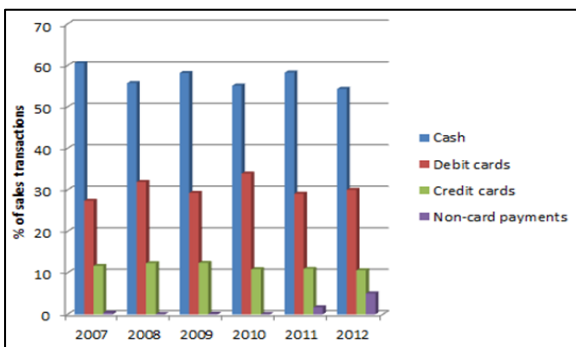


Fig 4: Percentage of Sales Transaction Per Year



6.0 Overcome of Problems of Digital Payment System

6.1 Use of cryptography technique

In this technique, when the data is to be sent from the server, it is being converted into another format, so that any third person can not get any advantage of that data because data is in encrypted form. When this data is reached at the receiver end, it is decrypted and then it can be used.

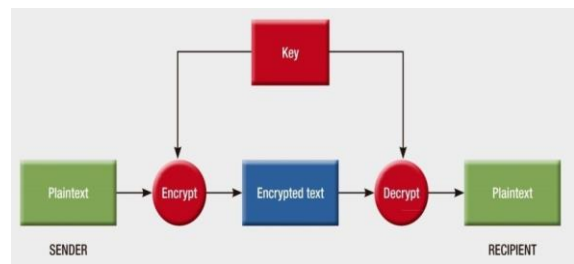
6.2 Digital signatures

The parties involved in online payments, transactions should use digital signatures in order to ensure authentication of transactions.

6.3 Checking of country status

According to a Clear Commerce® survey, the top 12 international sources for online fraud are Ukraine, Indonesia, Yugoslavia, Lithuania, Egypt, Romania, Bulgaria, Turkey, Russia, Pakistan, Malaysia, and Israel. The same survey also showed that the 12 countries with the lowest fraud rates are Austria, New Zealand, Taiwan, Norway, Spain, Japan, Switzerland, South Africa, Hong Kong, the UK, France, and Australia. With IP Geolocation Service, one can identify the country. It is helpful in maintaining the authentication in online payments.

Fig 5: Flow of Information



6.4 Use of firewalls

A firewall is a system that provides network security by filtering incoming and outgoing network traffic based on a set of user-defined rules. In general, the purpose of a firewall is to reduce or eliminate the occurrence of unwanted network communications while allowing all legitimate communication to flow freely. So, it prevents attackers from accessing your servers in malicious ways.

Fig 6: Firewall Shielding



6.5 Identification of secured websites

Always do payments on the websites which have links starting with “https” and not with only “http” because the alphabet ‘s’ in https means secured.

Fig 7: Secured Websites Display



7.0 Conclusions

In order to prevent the use of black money, the Govt. of India wants the citizen of India to do the digital payments as much as possible. Every digital transaction has its own transaction id, which can be used to solve any issues related to that transaction. Each transaction id gives the proper details about that particular transaction. So, it gives the Govt. , a true picture of all the money. In this way, Digital Payments shows full transparency. So, we should do the payments digitally in order for the better development of our country.

References

- [1]. B Bhasker. Electronic Commerce, Framework, Technologies and Applications. McGraw Hill Education (India) Private Limited, 2013,.9.2-9.16.
- [2]. TN Chhabra, RK Suri, S Verma. E-Commerce. Dhanpat Rai & Co. (P) Ltd. 2006,.306-328.
- [3]. A Dennis. Electronic Payment Systems: A User Centred Perspective and Interaction design. Eindhoven: Technical Universiteit Eindhoven. 2004, 1-12
- [4]. Y Jing. Online Payment and Security of E-Commerce. International symposium on web Information system and application (wise '009). 2009, 1-5
- [5]. S Madan. E-Commerce, Mayur Paperbacks. 2013, 4.4-4.35.
- [6]. AAbH Noor, AwY Kheng. A Risk Perception analysis on the Use of Electronic Payment Systems by Young Adult, Wseas Transaction Information Science and Applications.1- 8.
- [7]. Rafael Medran Vioque.Alumno De Dectorad. 2012-13.
- [8]. Ref to paper ijrmp, 2(9), 2013, 23200901
- [9]. Sistemsas de pago.Alfredo Lozano, Josemanuel Agudo, <http://www.icemd.com>
- [10]. DWhiteley. e-Commerce, Strategy, Technologies and Applications. Tata McGraw-Hill Publishing Company Limited. 2007, 200-201.
- [11]. <http://www.fraudlabs.com>
- [12]. <http://www.uaipit.com>
- [13]. <http://whatis.techtarget.com/definition/digital-cash-eCash>
- [14]. <http://www.investopedia.com/terms/c/creditcard.asp>
- [15]. https://en.wikipedia.org/wiki/Debit_card
- [16]. <https://www.digitalocean.com/community/tutorials/what-is-a-firewall-and-how-does-it-work>
- [17]. <https://blog.payubiz.in/wp-content/uploads/2016/04/3.png>
- [18]. http://digitalmoney.shiftthought.co.uk/files/2013/06/image_thumb5.png

- [19]. <http://trak.in/tags/business/2016/12/21/payment-service-outtage/>
- [20]. [https://www.google.co.in/search?q=ecash&source=lnms&tbn=isch&sa=X&ved=0ahUK EwiL1YPC25rTAhWCqo8KHS9qCTgQ_A UICSgC&biw=1366&bih=662#tbn=isch&q=Cryptography+Technique&imgsrc=Du72tRfgO8HVeM:](https://www.google.co.in/search?q=ecash&source=lnms&tbn=isch&sa=X&ved=0ahUKEwiL1YPC25rTAhWCqo8KHS9qCTgQ_AUICSgC&biw=1366&bih=662#tbn=isch&q=Cryptography+Technique&imgsrc=Du72tRfgO8HVeM:)
- [21]. <http://notthenetwork.me/wp-content/uploads/2012/05/firewall.jpg>