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Issues and Challenges of Electronic Payment Systems

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Abstract:

E-commerce (electronic commerce or EC) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the Internet. These business transactions occur business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business. The success of electronic commerce depends upon effective electronic payment systems. The Internet and on-line businesses are growing exponentially. Due to this explosive growth, electronic commerce on the Internet uses various electronic payment mechanisms that can cater for much diversity of applications. Electronic payments are financial transactions made without the use of paper documents such as cheques. Electronic payments include debit card, credit card, smart card, e-wallet, e-cash, electronic cheques etc. E-payment systems have received different acceptance level throughout the world; some methods of electronic payments are highly adopted while others are relatively low. The present paper is focused on the issues and challenges in e payment and to examine the problems faced by consumers during e payments.

Keywords: E-commerce, electronic payments, net banking, plastic cards and payment gateways.

1. Introduction

Electronic payment system is a mode of payments over an electronic network such as the internet. In other words we can say that e-payment is a method in which a person can make online payments for his purchase of goods and services without physical transfer of cash and cheques, irrespective of time and location. Electronic Payment Systems are becoming central to online business process innovations as companies look for ways to serve customers faster and at lower cost. Emerging innovations in the payment for goods and services in electronic commerce promise to offer a wide range of new business opportunities. Electronic payment systems and e-commerce are intricately given that online consumers must pay for products and services. Clearly, payment is an integral part of the mercantile process and prompt payment or account settlement is crucial. If the claims and debits of the various participants-individuals, companies, banks and non banks are not balanced because of payment delay or even worse default then the entire business chain is disrupted. Electronic payment systems are proliferating in banking, retail, health care, online markets and even government. Organizations are motivated by the need to deliver products and services more cost effectively and to provide a higher quality of service to customers. Electronic payments first emerged with the development of wire transfers. Electronic funds transfer is an electronic transfer of information that equates to moving funds from one financial institution to another. Electronic payment systems are alternative cash or credit payment methods using various electronic technologies to pay for products and services in electronic commerce. It involves many security issues.

2. Objectives

- To focus on the issues and challenges in e payment
- To examine the problems faced by consumers during e payments

3. Literature Review

Vassiliou (2004) defines electronic payment as a form of financial exchange that takes place between the buyer and seller facilitated by means of electronic communication. According to (Cobb, 2004), the value of electronic payment goes way beyond the immediate convenience and safety of cards to a greater sphere contributing to overall economic development. According to (Fiallos & Wu, 2005),

the arrival of the internet has taken electronic payments and transactions to an exponential growth level. Consumers could purchase goods online and send credit card numbers across secure network payments schemes that have been developed. According to (Cobb, 2005), efficient, safe and convenient electronic payments carry with them a significant range of macro-economic benefits. "The impact of introducing electronic payments is akin to using the gears on a bicycle. Add an efficient electronic payments system to an economy, and you kick it into a higher gear. Add better-controlled consumer and business credit, and you notch up economic velocity even further" (Cobb, 2005). The emergence of credit, debit and prepaid card systems gives the unbanked an important option for bringing cash into the formal economy. "prepaid cards are particularly interesting, because the funds are actually on deposits at a regulated financial institutions, but the process of establishing and managing the accounts is much more cost effective and less risky than traditional debit accounts for smaller levels of deposit"(Common Wealth Business Council & Visa, 2004). The use of Information Communication Technology (ICT) products to simplify and speed up financial transactions has become a part of everyday life in the developed world. (Ackorlie, 2009). According to (Worku, 2010), e-payment and e-banking applications represent a security challenge as they highly depend on critical ICT systems that create vulnerabilities in financial institutions, businesses and potentially harm customers. "It is imperative for banks to understand and address security concerns in order to leverage the potentials of ICT's in delivering e-banking applications" (Worku, 2010)

3.1. Net banking

Internet Banking Is The Latest Wave In Information Technology. It Is Another Electronic Delivery Channel. In Simple Terms Internet Banking Means Any User With A Personal Computer And A Browser Can Get Connected To His Bank's Website To Perform Any Of The Virtual Banking Functions.(Electronic Delivery Of Services).It Is Thus Of Facility Provided By Banks That Enable The User To Execute Bank Related Transaction Through Internet. The Greatest Advantage of Internet Banking Is the People Sitting At Home Can Transact business.

3.2. Electronic Cheques

An electronic cheque is an electronic copy (scanned image) of a real cheque, which is then transferred by email. In addition to the cheque's 'real' signature, the transfer must be digitally signed using the sender's private key to authenticate the transfer.

3.3. E-cash

E cash is used over the Internet, email, or personal computer to other workstations in the form of secured payments of "cash" that is virtually untraceable to the user. It is backed by real currency from real banks. The way e cash works is similar to that of electronic fund transfers done between banks. The user first must have an e cash software program and an e cash bank account from which e cash can be withdrawn or deposited. The user withdraws the e cash from the account onto her computer and spends it in the Internet without being traced or having personal information available to other parties that are involved in the process. The recipients of the e cash send the money to their bank account as with depositing "real" cash.

3.4. E-wallet

E-wallet is an online prepaid account where one can stock money, to be used when required. As it is a pre-loaded facility, consumers can buy a range of products from airline tickets to grocery without swiping a debit or credit card.

3.5. Plastic cards

3.5.1. Debit Card

A debit card is basically a better way of carrying cash or a cheque book. It is an electronic card that one can use as a convenient payment mechanism. The card is generally issued by the bank and is connected through the ATM. Debit cards allow the holder to spend only what is in his account and purchases should be kept track of just as if one is writing a cheque.

Types of debit cards

- Direct debit cards
- Deferred debit cards

3.5.2. Credit Card

A credit card is part of a system of payments. It is a small plastic card issued to customers. The most point is that the banker who issues card grants a line of credit – a sanctioned limit, up to which the customer can use the card. It is also known as a debt instrument. Its operation is through electronic fund transfer (EFT) installations and interbank network. The objective is to provide convenience and security to eliminate cumbersome cash transactions and protects the holder from the danger of theft of cash.

3.5.3. Smart Card

Smart card is an electronic information carrier system that uses plastic cards, about the size of a credit card, with an embedded integrated circuit that stores and process information. It can be used to store personal identification, medical history and insurance information because it has its own micro processing chip; a smart card can store more bits information than a magnetic stripe card, although it requires a special card – reading device.

3.6. Payment Gateways

A payment gateway is an e-commerce service that allows merchants to accept credit card and other forms of Internet transactions securely via website.

A list of payment gateways are given below

1. Authorize.Net

Founded in 1996, Authorize.Net has come a long way to being known as one of the most sought-after payment gateways. More than 400,000 merchants worldwide use Authorize.Net payment gateway – that accepts online payments through credit cards and electronic checks.

2. PayPal

Though, PayPal was incepted in December 1998, but it was developed and launched in 1999. It's one of the most widely-used payment gateways that accept both credit card or debit card payments.

3. SecurePay.com

This payment gateway began operating in August 1997. SecurePay.com offers online shopping cart, electronic check services (called as Secure Pay), accepts mobile payments, and so on.

4. 2Checkout.com,Inc

2Checkout.com has been in business for 15 years, and was founded in 1999. It offer services in 196 countries and accept payments in the form of: credit cards, PayPal, and debit cards. And, the best part! It doesn't require you to pay any monthly and setup fees.

5. First Data Corporation

This is one of the oldest payment gateways having 30 years of payments industry experience globally. It was initially incepted in 1969, but started providing its transaction processing services in 1998 in US and markets worldwide. It includes credit card, debit card, gift card, and many other prepaid card offerings.

6. BluePay Processing LLC

Although, BluePay Processing is a new payment gateway and started operating in 2002, but within a short span of time has earned good reputation among merchants. BluePay accepts payments via credit card and e-checks. It claims to provide highest level of data security in the payment gateway industry.

7. PaySimple

Accepting all major credit cards and e-checks payments on your iPhone or iPad, PaySimple can rightly be called the new-age payment gateway. According to experts, PaySimple is a great payment gateway for small-and mid-size online stores.

3.7. Issues and Challenges Regarding Electronic Payment Systems

3.7.1. Lack of Usability

Electronic payment system requires large amount of information from end users or make transactions more difficult by using complex elaborated websites interfaces. For example credit card payments through a website are not easiest way to pay as this system requires large amount of personal data and contact details in web form.

3.7.2. Lack of Security

Online payment systems for the internet are an easy target for stealing money and personal information. Customers have to provide credit card and payment account details and other personal information online. This data is sometimes transmitted in an un-secured way, (Kolkata and Whinston, 1997). Providing these details by mail or over the telephone also entails security risks (Guttman, 2003, Laudon and Traver, 2002).

Issues with e-Cash

The main problem of e-cash is that it is not universally accepted because it is necessary that the commercial establishment accept it as payment method. Another problem is that when we makes payment by using e-cash, the client and the salesman have accounts in the same bank which issue e-cash. The payment is not valid in other banks.

3.7.3. 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)

3.7.4. Lack of Awareness

Making online payment is not an easy task. Even educated people also face problems in making online payments. Therefore, they always prefer traditional way of shopping instead of online shopping. Sometimes there is a technical problem in server customers tried to do online payments but they fails to do. As a result they avoid it.

3.7.5. Online Payments are not Feasible in Rural Areas

The population of rural areas is not very literate and they are also not able to operate computers. As they are unaware about technological innovations, they are not interested in online payments. So the online payment systems are not feasible for villagers.

4. Conclusion

Electronic payment refers to the mode of payment which doesn't include physical cash or cheques. It includes debit card, credit card, smart card and E-wallet etc. e-commerce has its main link in its development on-line in the use of payment methods. The effectiveness of electronic payment system depends largely on the availability of an efficient ICT infrastructure where reliable network connectivity, durable hardware and high expertise in ICT are available. The risks in the online payments are theft of payments data, personal data and frauds have become rejection 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 guarantee 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.

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