



CSC-370

E - Commerce

(BSc CSIT, TU)

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Chapter 3 – Electronic Payment Systems

- Method to make payments online in e-commerce systems.
- major cashless payment system in online business process
- Electronic payment systems and e-commerce are linked as online consumers must pay for products and services
- This payment systems must be secure, have a low processing cost, and be accepted widely as global currency
- Issues are :
 - What form and characteristics of payment systems - for example, electronic cash, electronic checks, credit/debit cards will consumers use
 - In online markets, how can we manage the financial risk associated with various payment systems- privacy, fraud, mistakes, as well as other risks like bank failures? What security features (authentication, privacy, anonymity) need to be designed to reduce these risks

Types of Electronic Payment Systems

- Electronic payment systems are growing rapidly in banking, retail, health care, online markets, and even government - in fact, anywhere money needs to change hands.
- Work on EFT(Electronic Fund Transfer) can be segmented into three broad categories
 1. Banking and financial payments
 - Large-scale or wholesale payments (e.g. bank-to-bank transfer)
 - Small-scale or retail payments (e.g. automated teller machines and cash dispensers)
 - Home banking (e.g. bill payments)
 2. Retailing Payments
 - Credit cards (e.g. VISA or MasterCard)
 - Charge cards (e.g. American Express)

Types of Electronic Payment Systems

- Work on EFT(Electronic Fund Transfer) can be segmented into three broad categories
 - 3. Online electronic commerce payments
 - Token-based payment systems
(Electronic cash, Electronic checks, Smart cards or debit cards)
 - Credit card-based payment systems
- Retail payments and large-scale payments between banks and business are widely recognized as the pioneering efforts in electronic commerce that involve the extensive use of EDI for transferring payment information

Risks Associated with Electronic Payment System

- Electronic payment is a popular method of making payments globally.
- It involves sending money from bank to bank instantly, regardless of the distance involved
- Such payment systems use Internet. Electronic payment systems are popular because of their convenience, however, they also may pose serious risks to consumers and financial institutions as :
 - **Tax Evasion**
 - **Fraud**
 - **Impulse Buying**
 - **Payment Conflict**

Risks Associated with Electronic Payment System

- **Tax Evasion :**

- Tax evasion is an illegal activity in which a person or organization deliberately avoids paying a true tax liability
- Businesses are required by law to provide records of their financial transactions to the government so that their tax compliance can be verified but e-payment however can frustrate the efforts of tax collection
- the government may not know the truth, which could cause tax evasion

- **Fraud :**

- Electronic payment systems are prone to fraud.
- The payment is done usually after keying in a password and sometimes answering security questions.
- There is no way of verifying the true identity of the maker of the transaction.
- As long as the password and security questions are correct, the system assumes you are the right person.
- If this information falls into the possession of fraudsters, then they can defraud you of your money

Risks Associated with Electronic Payment System

- **Impulse Buying :**

- Electronic payment systems encourage impulse buying, especially online.
- You are likely to make a decision to purchase an item you find on sale online, even though you had not planned to buy it, just because it will cost you just a click to buy it through your credit card.
- Impulse buying leads to disorganized budgets and is one of the disadvantages of electronic payment systems

- **Payment Conflicts :**

- Payment conflicts often arise because the payments are not done manually but by an automated system that can cause errors.
- This is especially common when payment is done on a regular basis to many recipients.
- If you do not check your pay slip at the end of every pay period, then you might end up with a conflict due to these technical glitches, or anomalies