UNIT-5(EC)

Electronic payment:-An electronic payment is a way of making transaction or paying for goods and services through an electronic medium,without the use of checks or cash.It is also called an electronic payment system or online payment system.E-commerce sites use electronic payment, where electronic payment refers to paperless monetary transactions. Electronic payment has revolutionized the business processing by reducing the paperwork, transaction costs, and labor cost. Being user friendly and less time-consuming than manual processing, it helps business organization to expand its market reach/expansion.
Electronic payment systems are central to on-line business process as companies look for ways to serve customers faster and at lower cost.
Electronic payment systems are becoming central to on-line business transactions nowadays as companies look for various methods to serve customers faster and more cost effectively.

Types of Electronic Payment Systems:

EFT is defined as —any transfer of funds initiated through an electronic terminal telephonic instrument, or computer or magnetic tape so as to order, instruct, or authorize a financial institution.
EFT can be segmented into three broad categories:

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
- Home banking (e.g., bill payment)

Retailing payments

- Credit Cards (e.g., VISA or MasterCard)
- Private label credit/debit cards (e.g., J.C. Penney Card)
- Charge Cards (e.g., American Express)

❖ **On-line electronic commerce payments**

❖ **Token-based payment systems**

- Electronic cash (e.g., DigiCash)

- Electronic checks (e.g., NetCheque)
- Smart cards or debit cards (e.g., Mondex Electronic Currency Card)

Credit card-based payments systems

- Encrypted Credit Cards (e.g., World Wide Web form-based encryption)
- Third-party authorization numbers (e.g., First Virtual)

E-Cash:

- There are many ways that exist for implementing an e-cash system, all must incorporate a few common features.
- Electronic Cash is based on cryptographic systems called —digital signatures‖.
- This method involves a pair of numeric keys: one for locking (encoding) and the other for unlocking (decoding).

E-cash must have the following four properties.

- Monetary value
- Interoperability
- Retrievability
- Security

- Electronic Checks:

- It is another form of electronic tokens.
- Buyers must register with third-party account server before they are able to write electronic checks.
- The account server acts as a billing service.

Advantages of Electronic Checks:

1. They work in the same way as traditional checks.
2. These are suited for clearing micropayments.
3. They create float & availability of float is an important for commerce.
4. Financial risk is assumed by the accounting server & may result in easier acceptance.

Smart Cards & Electronic Payment Systems:

- Smart cards have been in existence since the early 1980s and hold promise for secure transactions using existing infrastructure.
- Smart cards are credit and debit cards and other card products enhanced with microprocessors capable of holding more information than the traditional magnetic stripe.
- The smart card technology is widely used in countries such as France, Germany, Japan, and Singapore to pay for public phone calls, transportation, and shopper loyalty programs

Types of Smart Cards:

1. Relationship-Based Smart Credit Cards
2. Electronic Purses also known as debit cards

1. **Relationship-Based Smart Credit Cards**: It is an enhancement of existing cards services &/ or the addition of new services that a financial institution delivers to its customers via a chip-based card or other device. These services include access to multiple financial accounts, value-added marketing programs, or other information card holders may want to store on their card. It includes access to multiple accounts, such as debit, credit, cash access, bill payment& multiple access options at multiple locations.

2. **Electronic Purses**:To replace cash and place a financial instrument are racing to introduce electronic purses,wallet-sized smart cards embedded with programmable microchips that store sums of money for people to use instead of cash for everything

Credit Card

Payment using credit card is one of most common mode of electronic payment. Credit card is small plastic card with a unique number attached with an account. It has also a magnetic strip embedded in it which is used to read credit card via card readers. When a customer purchases a product via credit card, credit card issuer bank pays on behalf of the customer and customer has a certain time period after which he/she can pay the credit card bill. It is usually credit card monthly payment cycle. Following are the actors in the credit card system.

- **The card holder** − Customer
- **The merchant** − seller of product who can accept credit card payments.
- **The card issuer bank** − card holder's bank
- **The acquirer bank** − the merchant's bank
- **The card brand** − for example , visa or Mastercard.

Debit Card

Debit card, like credit card, is a small plastic card with a unique number mapped with the bank account number. It is required to have a bank account before getting a debit card from the bank. The major difference between a debit card and a credit card is that in case of payment through debit card, the amount gets deducted from the card's bank account immediately and there should be sufficient balance in the bank account for the transaction to get completed; whereas in case of a credit card transaction, there is no such compulsion.

Smart Card

Smart card is again similar to a credit card or a debit card in appearance, but it has a small microprocessor chip embedded in it. It has the capacity to store a customer's work-related and/or personal information. Smart cards are also used to store money and the amount gets deducted after every transaction.

Electronic Fund Transfer

It is a very popular electronic payment method to transfer money from one bank account to another bank account. Accounts can be in the same bank or different banks. Fund transfer can be done using ATM (Automated Teller Machine) or using a computer.

Electronic pay of Advantages :

1. Time saving

2. Expenses control
3. Reduced risk of loss and theft
4. Low commission
5. User friendly

Disadvantages:

A. Restriction
B. The risk of being hacked
C. The lack of anonymity
D. The necessity

Token:-*The digital token based payment system is a new form of electronic payment system which is based on electronic tokens rather than e-cheque or e-cash. The electronic tokens are generated by the bank or some financial institutions. Hence we can say that the electronic tokens are equivalent to the cash which are to be made by the bank.*

Categories of Electronic Tokens:-

I. Cash or Real Time:-

In this mode of electronic tokens transactions takes place via the exchange of electronic currency (e-cash).

2. Debit or Prepaid:-

In this electronic payment system the prepaid facilities are provided. It means that for transactions of information user pay in advance. This technology are used in smart card, electronic purses etc.

3. Credit or Postpaid;-

These types of electronic token based on the identity of customers which issue a card, their authentication and verification by a third party. In this system the server authenticate the customers and then verify their identity through the bank. After all these processing the transaction take place. Example is E-Cheques.

Payment Gateway

Payment Gateway is an online **payment** processing technology which helps businesses to accept credit cards and electronic checks. In other words, payment gateways are "Manin-the-middle" which are located between e-commerce platforms and clients.

A payment gateway allows you to −

Make and take payments quickly and easily.

Keep your customer's data (information) and money secure.

Gain trust of your customers, so they are willing to hand over their money.

Most Popular Payment Gateway Providers

Paypal,Amazon payments,**Stripe,Authorize Net,2Checkout**

EDI

EDI stands for Electronic Data Interchange. EDI is an electronic way of transferring business documents in an organization internally, between its various departments or externally with suppliers, customers, or any subsidiaries. In EDI, paper documents are replaced with electronic documents such as word documents, spreadsheets, etc.

EDI Documents

Following are the few important documents used in EDI −

- Invoices
- Purchase orders
- Shipping Requests
- Acknowledgement
- Business Correspondence letters
- Financial information letters

Advantages of an EDI System

Following are the advantages of having an EDI system.

- **Reduction in data entry errors.** − Chances of errors are much less while using a computer for data entry.

- **Shorter processing life cycle** − Orders can be processed as soon as they are entered into the system. It reduces the processing time of the transfer documents.
- **Electronic form of data** − It is quite easy to transfer or share the data, as it is present in electronic format.
- **Reduction in paperwork** − As a lot of paper documents are replaced with electronic documents, there is a huge reduction in paperwork.
- **Cost Effective –** As time is saved and orders are processed very effectively, EDI proves to be highly cost effective.
- **Standard Means of communication** − EDI enforces standards on the content of data and its format which leads to clearer communication.

Growth of E-Commerce

E-commerce is considered a game-changer for the Indian economy and the future of "Digital India". The success of big players in the Indian market during the Internet Age depended on their ability to adapt and evolve with the times. While few successfully changed the tides to their favour by setting up online businesses, many failed to keep up and thereby declined.

Presently, the key stakeholders in e-commerce include the government, travel services (airlines, Indian Rail, bus operators) retailers/manufacturers, entertainment service providers, and many others; enablers of the e-commerce sector such as logistics providers, financial intermediaries, social networking sites, internet service providers call centres, network service providers, etc. help facilitate transactions online.

Government Initiatives such as Startup India, Digital India, allocation of funds for the BharatNet Project, promotion of 'cashless economy', the launching of the Unified Payment Interface by the RBI and the National Payment Corporation of India have collectively contributed to the growth and success of the e-commerce sector in the country. Other

factors such as constant advertisement of online services leading to increased awareness of the availability of such services have resulted in a greater number of consumers.

The FDI Policy

There are two models of e-commerce as defined in the Indian FDI Policy:

> **Marketplace Model:** Marketplace based model of e-commerce means providing an information technology platform by an e-commerce entity on a digital & electronic network to act as a facilitator between buyer and seller. Further, the marketplace acts as a medium for multiple sellers to interact with buyers and sell their goods. Moreover, the marketplace charges a commission from the sellers for the service it provides. Additionally, Naaptol and Shopclues are the biggest online marketplaces currently functioning in the country.
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> **Inventory Model:** Inventory based model of e-commerce means an e-commerce activity where an inventory of goods and services is owned by an e-commerce entity and is sold to the consumers directly. Likewise, the seller is an e-commerce company that sources directly from brands and sellers and stocks it. Examples include Myntra.

Is FDI permitted in e-Commerce in India?

No FDI is permitted in Business to Consumer (B2C) e-commerce. A single brand retail trading entity operating through brick and mortar stores is permitted to undertake retail trading through e-commerce. An Indian manufacturer is permitted to sell its single-brand products through e-commerce retail.

What is the future of e-commerce in India

There are expected to be more than 600 million internet users in India by 2021. At present India's business sector for internet business areas is developing yearly at a fast pace of 51%. India is jettisoning offline commerce at an alarming pace and switching to E-commerce for most, if not all buys.

What is the new e-commerce policy?

New e-commerce policy: E-commerce companies will be required to make data available to the government within 72 hours. The government has been working to reduce the dominance of global tech giants like Amazon.

What are the government initiatives for e-commerce in India?

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Agenda

E-commerce has transformed the way business is done in India. The Indian E-commerce market is expected to grow to US$ 188 billion by 2025 from US$ 46.2 billion as of 2020. By 2030, it is expected to reach US$ 350 billion. In 2022, the Indian e-commerce market is predicted to increase by 21.5%, reaching US$ 74.8 billion.

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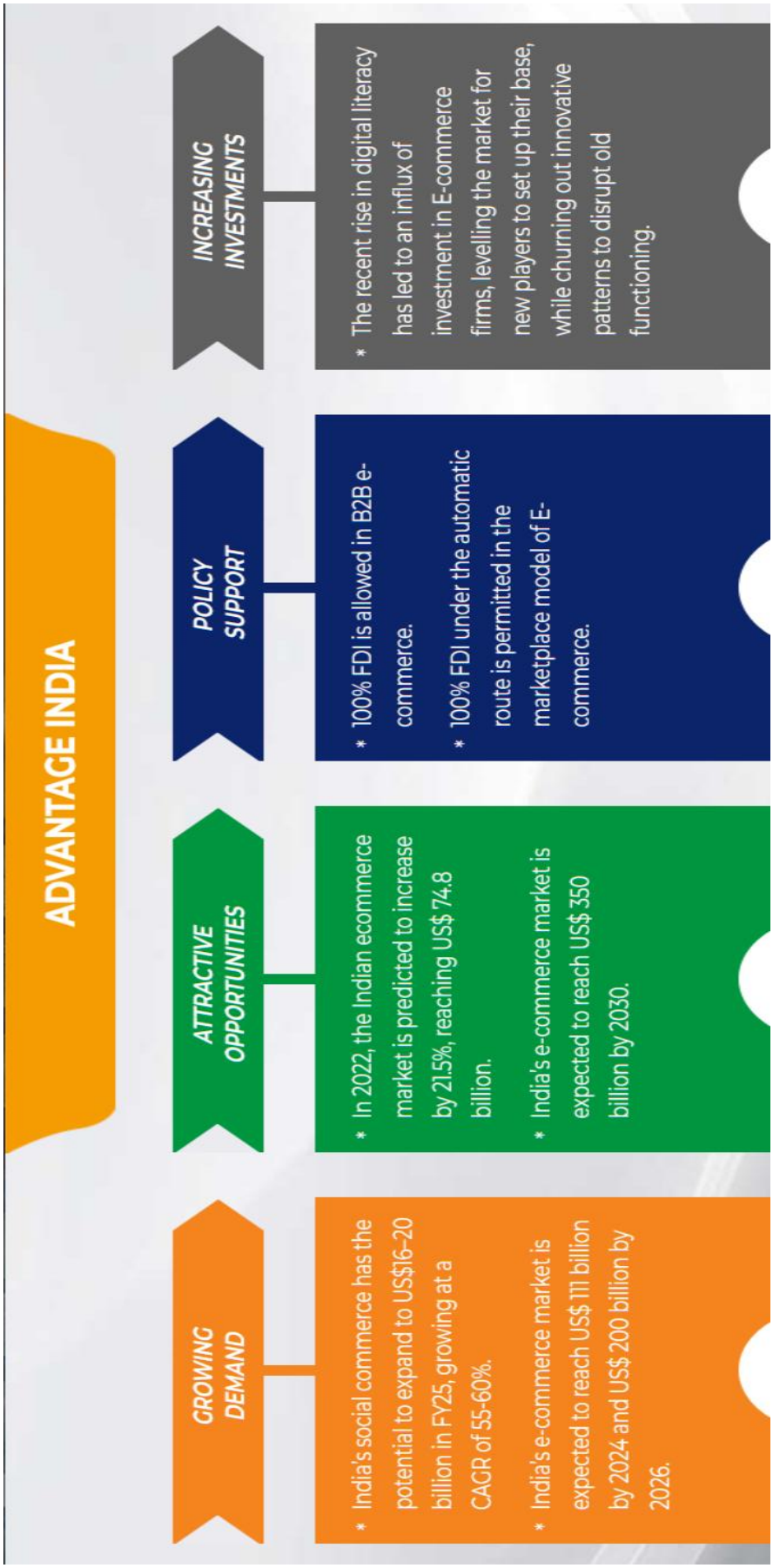

e-commerce market is
expected to reach US$ 111
by 2024 and US$ 200 billion
2026.

of the growth for the industry
been triggered by an increase
internet and smartphone
penetration. The number of
internet connections in 2021
increased significantly to 830
driven by the 'Digital India'
programme. Out of the total
internet connections, ~55% of
connections were in urban
of which 97% connections
wireless.