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E-COMMERCE AND ITS APPLICATIONS

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Unit-1: Introduction to Electronic Business: Meaning - E-Supply Chain Management -Advantages E-Supply Chain Management -Value chain on the Web-EDI: Process of EDI - Components of EDI - Benefits of EDI.

Introduction of e-business:

E-business is similar to e-commerce but encompasses much more than online purchasing transactions. Functions and services range from the development of intranets and extranets to the provision of e-services over the internet by application service providers. The concept of E-Business (electronic business) is any process that a business organization conducts over a computer-mediated network. Business organizations include any for-profit, governmental, or non-profit entity. Their processes include production-, customer-, and internal- or management-focused business processes.

E-business has an important strategic role for companies wanting a stronger performance on the web. With e-business solutions, brands can provide consumers contact points that operate 24/7 and can be accessed anywhere in the world.

What is e-commerce?

E-commerce (electronic commerce) 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 either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business.

The terms e-commerce and e-business are often used interchangeably. The term e-tail is also sometimes used in reference to the transactional processes that make up online retail shopping. Thus E-TAIL is a retail business conducted online via the World Wide Web.

What is the difference between retail and e-tail? Retail is the sale of goods on a physical location where the seller and the buyer meet in person. Whereas e-tail is the sale of goods on the internet where the transaction happens in a digital environment.

Difference between E-Commerce and E-Business :

No.	E-COMMERCE	E-BUSINESS
01.	E-Commerce refers to the performing online commercial activities, transactions over internet.	E-Business refers to performing all type of business activities through internet.
02.	E-Commerce is a narrow concept and it is considered as a subset of E-Business.	E-Business is a broad concept and it is considered as a superset of E-Commerce.
03.	Commercial transactions are carried out in e-commerce.	Business transactions are carried out in e-business.
04.	In e-commerce transactions are limited.	In e-business transactions are not limited.
05.	It includes activities like buying and selling product, making monetary transactions etc over internet.	It includes activities like procurement of raw materials/goods, customer education, supply activities buying and selling product, making monetary transactions etc over internet.
06.	It usually requires the use of only a website.	It requires the use of multiple websites, CRMs, ERPs that connect different business processes.
07.	It involves mandatory use of internet.	It involves the use of internet, intranet or extranet.
08.	E-commerce is more appropriate in Business to Customer (B2C) context.	E-business is more appropriate in Business to Business (B2B) context.
09.	E-Commerce covers outward/external business process.	E-Business covers internal as well as external business process/activities.

E-Supply chain management

It is practiced in manufacturing industries. It involves using the internet to carry out value-added activities so that the products produced by the manufacturer meets customers' and result in a good return on investment.

(E-SCM) Electronic Supply Chain Management is an optimization of business processes and business value in every corner of the extended enterprise right from your supplier's supplier to your customer's customer.

The process of supply chain management is from manufacturer to wholesaler, wholesaler to retailer, and retailer to customer.

In supply chain management, not only the products are supplied by the chain but also any data is supplied with the product. Example- payment, information, product title, etc.

(E-SCM): - It uses e-business concepts and Web technology to manage beyond the enterprise, both upstream and downstream. This strategic approach unites all the steps in the business cycle, from initial product design and procurement of raw materials, through shipping, distribution, and warehousing right up to the point when the finished product is delivered to the customer.

What exactly can E-SCM do for you?

An e-SCM solution can bring about a dramatic reduction in your costs, and integrate your enterprise closely with all the other players involved in your processes.

What is it can do for your company:

E-SCM Tie together all the players in the extended enterprise, from raw materials to final point of distribution.

E-SCM Gives real-time market information to these players, allowing them to anticipate and adjust their operations in response to market conditions.

E-SCM helps eliminate costly stockpiling against demand spikes, freeing up resources, and reducing costs.

E-SCM Lower costs, improve speed, and increase the accuracy of data sharing within the extended enterprise.

E-SCM a truly integrated supply chain creates value-for the enterprise, its supply chain partners, and its shareholders.

E-SCM is particularly relevant to diversified business houses with complex supply chain networks, to companies with wide distribution systems, and to enterprises that depend on a large number of out-sourced products.

Supplier: - A supplier that provides raw material so that the Product is manufactured. The supplier is completely different from the vendor; the supplier supplies raw materials to a company while the vendor sells the products to customers.

Manufacturer: - A producer is one who obtains raw material from the supplier. And manufacture products from it.

Customer - A customer is one who receives the product manufactured and it is the last link in the supply chain.

Stages of E-SCM

1. PLAN: - Keeping in mind the main goal of the organization, the whole process of SCM is planned. How to meet the product-related needs of customers by the organization? This should also be emphasized in the plan.

2. Develop: - The main component of this process is to develop strong relationships with suppliers. Those potential suppliers are then contracted and finalized the payment, delivery status, place, and vehicle.

3. Make: - The product is manufactured completely and then the product is tested and packaging, then it is put on the market.

4. Delivery: - The product is delivered to the end customer by various means.

5. Return: - When the product is received by the customer, if he finds any defect in the product, then he returns it.

Advantages of Electronic Supply Chain Management (E-SCM)

1. In this, data transfer is online, so no paperwork has to be done.

2. This satisfies the wholesaler and distributor as the product is received by the right person at the right time.

3. There is very little possibility of mistakes in this.

4. It is very cheap.

5. In this, the delivery speed of the product is very fast and logical.

6. The quality is very good.

7. An efficient SCM maintains the quality then it satisfies the customer.

Value Chan on the Web:

Research & Development Value

- Expedite market and product research - Almost all the information is available on the web and most of it is free. Finding information to assist in product development is usually much quicker using e-commerce methods, thereby significantly reducing product development time.
- Trade intellectual assets on the web - Also patents and other intellectual assets can be bought,

sold, and licensed in e-markets, making the whole process of acquiring licensing rights, and marketing them much easier.

Marketing Value

- Look bigger
- Use the internet to deliver products and services
- Provide an extensive business profile and online information center
- Track response on the internet
- Send e-newsletters to customers and save time, postage and packaging
- Clearly position your business

Sales value

- Introduce another channel to market
- Automate interactive business processes
- Lower the cost of order processing
- No physical space limitations
- Buy and sell quicker
- Boost sales with exports
- Close sales faster
- Use a website for direct and indirect selling

Procurement value

- Reduce procurement costs and improve efficiency
- E-Procurement systems help to achieve the following business benefits –
    - 73% reduction in transaction costs
    - 70% to 80% reduction in purchase order processing cycles
    - 5% to 10% reduction in prices paid

There are examples of prosperous companies that have correctly developed the supply change management concept and that enforce efficient practices.

EDI (Electronic Data Interchange)

Electronic Data Interchange (EDI) - interposes communication of business information in standardized electronic form. Prior to EDI, business depended on postal and phone systems that restricted communication to those few hours of the workday that overlap between time zones.

Why EDI

- Reduction in transaction costs
- Foster closer relationships between trading partners **EDI & Electronic Commerce**
- Electronic commerce includes EDI & much more
- EDI forges boundary-less relationships by improving interchange of information between trading partners, suppliers, & customers.

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Benefits of EDI

- Cost & time savings, Speed, Accuracy, Security, System Integration, Just-In-Time Support.
- Reduced paper-based systems, i.e. record maintenance, space, paper, postage costs
- Improved problem resolution & customer service
- Expanded customer/supplier base or suppliers with no EDI program lose business

EDI layered architecture

- Semantic (or application) layer
- Standards translation layer
- Packing (or transport) layer
- Physical network infrastructure layer

Components of EDI

The following components and tools necessary for performing EDI are: -

1. Trade Agreement - a legally binding trade agreement between you and your trading partner. o Standard Document Format - the standard agreed-upon format for the document to be electronically transmitted.

2. EDI Translation Management Software - software used to convert the document your application's format into the agreed-upon standard format. For optimum performance, the translation software should be on the same platform as your business application.

3. Communications Software - a programming tool that enables you to write communications protocols or a separate application. It can be a module to the translator or a separate software application.

4. Modem - a hardware device used to transmit electronic information between computer systems. The higher the baud rate, the faster the communications will be.

5. VAN - stands for Value Added Network: A network to which you can connect to transmit data from one computer system to another. One network can act as a gateway to another. o Point-to-Point - a direct communication link from one computer to another. Some trading partners offer a direct connection to their EDI computers. Trading partners may opt for this method of communication instead of using a VAN.
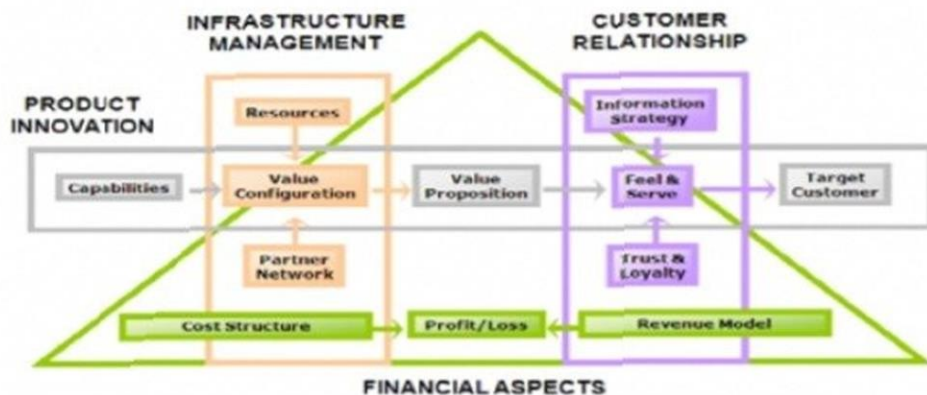
UNIT II

ECOMMERCE MOCELS AND ITS APPLICATIONS

E-Commerce Models

he E-Business model, like any business model, describes how a company makes a plan to generate revenue and make a profit from operations. The model includes the components and functions of the business, as well as the revenues it generates and the expenses it incurs.

Pillars of e-Business Model

APPLICATIONS OF E-COMMERCE:

The applications of E-commerce are used in various business areas such as retail and wholesale and manufacturing. The most common E-commerce applications are as follows:

1. Online marketing and purchasing
2. Retail and wholesale
3. Finance
4. Manufacturing
5. Online Auction
6. E-Banking
7. Online publishing
8. Online booking (ticket, seat.etc)

Online marketing and purchasing

Data collection about customer behavior, preferences, needs and buying patterns is possible through Web and E-commerce. This helps marketing activities such as price fixation, negotiation, product feature enhancement and relationship with the customer.

Retail and wholesale:

E-commerce has a number of applications in retail and wholesale. E-retailing or on-line retailing is the selling of goods from Business-to-Consumer through electronic storesthat are designed using the electronic catalog and shopping cart model. Cybermall is a single Website that offers different products and services at one Internet location. It attracts the customer and the seller into one virtual space through a Web browser.

Finance:

Financial companies are using E-commerce to a large extent. Customers can check the balances of their savings and loan accounts, transfer money to their other account and pay their bill through on-line banking or E-banking. Another application of E-commerce is on-line stock trading. Many Websites provide access to news, charts, information about company profile and analyst rating on the stocks.

Manufacturing:

E-commerce is also used in the supply chain operations of a company. Some companies form an electronic exchange by providing together buy and sell goods, trade market information and run back office information such as inventory control. This speeds up the flow of raw material and finished goods among the members of the business community. Various issues related to the strategic and competitive issues limit the implementation of the business models. Companies may not trust their competitors and may fear that they will lose trade secrets if they participate in mass electronic exchanges.

Auctions:

Customer-to-Customer E-commerce is direct selling of goods and services among customers. It also includes electronic auctions that involve bidding. Bidding is a special type of auction that allows prospective buyers to bid for an item. For example, airline companies give the customer an opportunity to quote the price for a seat on a specific route on the specified date and time.

E-Banking:

Online banking or E- banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, Online banking is also referred as internet banking, e-banking, virtual banking and by other terms.

Online publishing:

Electronic publishing (also referred to as e-publishing or digital publishing) includes the digital publication of e-books, digital magazines, and the development of digital libraries and catalogs.

Online booking (ticket, seat.etc)

An **Internet booking engine** (IBE) is an application which helps the travel and tourism industry support reservation through the Internet. It helps consumers to book flights, hotels, holiday packages, insurance and other services online. This is a much needed application for the aviation industry as it has become one of the fastest growing sales channels.

Classification of E- Commerce Business models

Business organizations, Consumers and Government (also called as Administrations) are the major parties in the E-Commerce. Sometimes Employees (Informal workers) also indulge in this system. Based upon the entities involved in transaction, E-Commerce is classified into the following categories. The model in which the government plays as an entity is termed as e- Governance. See Figure 15.6

	BUSINESS	CONSUMER	GOVERNMENT
BUSINESS	B2B	B2C	B2G
CONSUMER	C2B	C2C	C2G
GOVERNMENT	G2B	G2C	G2G

Figure 15.6 E-Commerce business models

1. Business to Business (B2B)

2. Business to Consumer (B2C)

3. Business to Government (B2G)

4. Consumer to Business (C2B)

5. Consumer to Consumer (C2C)

6. Consumer to Government (C2G)

7. Government to Business (G2B)

8. Government to Consumer (G2C)

9. Government to Government (G2G)

Business to Business (B2B)

In B2B E-Commerce, commercial transactions take place between different business organizations, through the Internet. For example, a cycle company may buy tyres from another company for their cycles. When compared to other models, the value per transaction in B2B transaction is high, because of bulk purchase. The company also might get the advantage of discounts on bulk purchases. See Figure 15.7

Out-sourcing and Off-shoring are generally associated with B2B E-Commerce.

• If a company's work is hired to another company, it would be termed as out-sourcing.

• If the work is outsourced to a company, which is outside its own country, it is called as off-shoring.

Figure 15.7 **Business to Business**

Business to Consumer (B2C)

In B2C E-Commerce, commercial transactions take place between business firms and their consumers. It is the direct trade between companies and end-consumers via the Internet. B2C companies sell goods, information or services to customers through online in a more personalized dynamic environment and is considered as real competitor for a traditional storekeeper. An example of B2C transaction is a book company selling books to customers. This mode is intended to benefit the consumer and can say B2C E-Commerce works as 'retail store' over Internet. See Figure 15.8

Figure 15.8 Business to Consumer

Business to Government (B2G)

B2G is a business model that refers to business organizations sells products, services or information to Governments or to its administrations. In other words, when a company get paid for its goods, services by the Government through Internet it is called as B2G model. e.g. The Government or its administration buys laptops for students. See Figure 15.9

Figure 15.9 Business to Government

Consumer to Business (C2B)

C2B can be described as a form of E-Commerce where, the transaction is originated by the consumers. The consumers will fix a requirement or specific price for a service or a commodity. C2B model, is also called as reverse auction model. Here, customer bid his price for a service or a product. Then E-Commerce business entity will match the requirement of the consumer to the best possible extent.

For instance, in a travel website (eg.yatra.com) a consumer may specify his dates of travel, his source and destination, number of tickets required and range of hotel etc. The website then finds out the various options for him which best meets his requirements. These websites generate revenue through affiliate links, sponsored advertisement or even a small commission in every booking. e.g. Name-your-price websites. See Figure 15.10

Figure 15.10 Consumer to Business

Consumer to Consumer (C2C)

C2C in E-Commerce provides opportunity for trading of products or services among consumers who are connected through the Internet. In brief when something is bought and sold between two consumers using Internet it is called C2C E-Commerce. Here the websites act as a platform to facilitate the transaction. The electronic tools and Internet infrastructure are employed to support transactions between individuals. Typically, this type of E- Commerce works as Consumer to Business to Consumer (C2B2C). It means that a consumer would contact a business in search of a suitable customer. Most of the auction websites and matrimonial websites are working on this methodology.

For example, a consumer who wants to sell his property can post an advertisement on the website (eg:timesclassifieds.com). Another person who is interested in buying a property can browse the property, advertisement posted on this site. Thus, the two consumers can get in touch with each other for sale/purchase of property through another business' website. See Figure 15.11

Figure 15.11 Consumer to Consumer

Consumer to Government (C2G)

Citizens as Consumers and Government engage in C2G E -Commerce. Here an individual consumer interacts with the Government. C2G models usually include income tax or house tax payments, fees for issue of certificates or other documents. People paying for renewal of license online may also fall under this category. See Figure 15.12

Figure 15.12 Consumer to Government

Government to Business (G2B)

G2B is closely related to B2G. G2B in E-Commerce refers to a business model where Government providing services or information to business organization. It may be a formal offer such as a takeover bid for a road project. See Figure 15.13

Figure 15.13 Government to Business

G2B is a part of e- governance. The Government provides information about business rules, requirement and permission needed for starting a new business, and other specifications in its portal. The objective of G2B is to reduce burdens on business, provide one-stop access to information thereby boost the economy. e.g. ebiz.gov.in See Figure 15.14

Government to Consumer (G2C)

G2C in E-Commerce is very similar to C2G. Here the Government provides platform for its citizens to avail its services and information through the Internet. The services may be issue of certificates through online.e.g. https://csc.gov.in/governmenttocitizen. See Figure 15.15

Figure 15.15 Government to Consumer

Government to Government (G2G)

G2G is the online (usually non-commercial) interaction between Government organizations or departments. G2G's principle objective is to implement e-governance rather than commerce. G2G model in e-governance involves distributing data or information between its agencies/departments. G2G systems can be classified into two types

- Internal facing or local level - joining up a single Government's bureaucracy. e.g. https://www.nic.in/

- External facing or international level - joining up multiple Governments' bureaucracy.

See Figure 15.16

Figure 15.16 Government to Government

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E-LEARNING: E-Learning comprises all forms of electronically supported learning and teaching.

E-Learning is essentially the computer and network-enabled transfer of skills and knowledge. E-Learning applications and processes include web-based learning, computer-based learning.

Content is delivered via. The internet, intranet/extranet, audio, or video tape, satellite TV, and ED-ROM.

Computer-Based Learning, sometimes abbreviated to CBL, refers to the use of computers as a key component of the education environment.

E-Learning is naturally suited to distance and flexible learning, but can also be used conjunction with face-to-face teaching.

E-Learning can also refer to the educational website such as those offering learning scenarios worst and interactive exercises for children.

Communication technologies are used in E-Learning.
A learning management system (LMS) is software used for delivering, tracking, and managing training /education.

PLACEMENT

- Placement may be defined as the determination of the job to which a selected candidate is to be assigned, and his assignment to the job.
- It includes the initial assignment of new entrants and the transfer and promotion of the existing employees.
- It is matching of what the supervisor has the reason to think he can do with the job demands; it is matching of what he imposes (in strains, working conditions) and what he offers in the form of payroll, with promotional possibilities.

SIGNIFICANCE OF PLACEMENT

- Reduced labour turnover rate
- Reduced absenteeism rate
- Increased safety of workers and lower accidents
- Increased morale of workers
- Better human relations in the organisations

CONSIDERATIONS IN PLACEMENT

- Job Requirements
- Suitable Qualifications
- Adequate Information to the job incumbent   Commitment and Loyalty
- Flexibility

JOB MARKET

The job market is the market in which employers search for employees and employees search for jobs. The job market is not a physical place as much as a concept demonstrating the competition and interplay between different labor forces. It is also known as the labor market.

What Is the Job Market?

The job market is the market in which employers search for employees and employees search for jobs. The job market is not a physical place as much as a concept demonstrating the competition and interplay between different labour forces. It is also known as the labour market.

The job market can grow or shrink depending on the demand for labor and the available supply of workers within the overall economy. Other factors which impact the market are the needs of a specific industry, the need for a particular education level or skill set, and required job functions. The job market is a significant component of any economy and is directly tied in with the demand for goods and services.

Health services or Health care

IT is the upkeep or improvement of health through the anticipation, determination, therapy, recuperation, or fix of infection, ailment, injury and other physical and mental weaknesses in individuals. Medical care is conveyed by health experts and united health fields.

Medication, dentistry, drug store, maternity care, nursing, optometry, audiology, brain research, word related treatment, active recuperation, athletic preparing and other health callings are all important for medical care. It incorporates work done in giving essential consideration, optional consideration, and tertiary consideration, just as in general health.

Primary care

Primary care alludes to crafted by health experts who go about as a first mark of conference as far as patients inside the health might be concerned framework. A particularly expert would normally be an essential consideration doctor, like an overall specialist or family doctor. Another expert would be an authorized autonomous specialist like a physiotherapist, or a non-doctor essential consideration supplier like a doctor associate or medical caretaker professional.

Contingent upon the region, health framework association the patient may see another medical care proficient first, like a drug specialist or attendant. Contingent upon the idea of the ailment, patients might be alluded for auxiliary or tertiary consideration.

Secondary care

Secondary care incorporates intense consideration: essential therapy for a brief timeframe for a brief however genuine sickness, injury, or other ailment. This consideration is frequently found in a clinic crisis division. Auxiliary consideration additionally incorporates talented participation during labor, concentrated consideration, and clinical imaging administrations.

E-Agriculture

Every day new technology is arriving and billions of people were connected to the Internet. Purchasing goods, groceries, clothes everything is online. He or She can able to place the order from their smartphone within a minute. But Farmers are still lack of benefitting from the internet. As we all knew that Farmers are the backbone of our country and without them, we can't complete a day. Well, this idea is completely dedicated to farmers and helps them in generating good profitable revenue by using our platform.

This is an online eCommerce platform that enables a farmer to buy or sell anything related to the agriculture and farming category by simply creating an account. Strictly all vendors are farmers since it is dedicated to them. The ultimate objective of the idea is to help a farmer with good revenue for their goods. Nowadays smartphone is like a coin in a pocket.

So, it's not a big question of thinking about smartphones with a farmer. Also, most of them are already familiar with social media accounts and it is quite easy to play with our online e-platform. But, there will be demo videos for each like registration, adding products, payment, etc. Safe payment gateway with a good logistic delivery partner, A farmer can do profitable business from his/her home itself. Both time and energy are also saved. Keywords: Agriculture, Cultivator, E-Platform, Multiple Vendor, Store, Payment Gateway Integration, Irrigation.

In India, agriculture is the largest dependent sector. As we all know, farmers are struggling to meet their needs. There comes a thought to use software technologies to help farmers with our hands-on project. We are utilizing the latest tech simple to integrate agricultural efforts.

Farmers are able to get knowledge of cultivation techniques. A simple user-friendly interface easily helps users to get into our website. Fortunate and very responsive which enables it to work effectively on any type of device. The website functions are in different languages like Hindi, English and some regional languages. The farmers who grow crops according to the season, after harvesting the crops they pack them and contact the vendor regarding the stock availability.

The wholesale vendor asks for the price, the farmer tells the price at which he can trade at. T
he vendor who is striving for his profits negotiates with the farmer regarding the price the needy farmer sacrificing their profits generally accept the price told by the vendor. Due to financial conditions and the unavailability of vendors, the farmer will sell their products at low prices demanded by the market.