

E- Marketing

Chapter one

Overview of E-commerce

E-commerce refers to the paperless exchange of business information using the following ways:

- Electronic Data Exchange (EDI)
- Electronic Mail (e-mail)
- Electronic Bulletin Boards
- Electronic Fund Transfer (EFT)
- Other Network-based technologies

•**E-commerce** is a very diverse and interdisciplinary topic, with issues ranging from e-technology, addressed by computer experts, to consumer behavior, addressed by behavioral scientists and marketing research experts.

Definition of E-Commerce

- *It is business transactions take place via telecommunications networks, especially the Internet.*
- *Its buying and selling of products, services, and information via computer networks .*
- *It is doing business electronically.*
- *The conduct of a financial transaction by electronic means.*

E-Business Vs E-commerce

- **E-commerce:** is more specific than e-business. They have created intranets to help employees communicate with each other and access information found in the company's computers.
- **E-business:** includes all electronic-based information exchanges within or between companies and customers. ***E-business*** involves the use electronic platforms, intranets, extranets and Internet to conduct a company's business.

Unique Features of E-Commerce Technology

- **Ubiquity:** available just about Everywhere, at all times and lowers transaction costs & mental effort to complete task.
- **Global Reach:** . It is accessed by any one from any demographic group; age, income, race, gender, religion, etc.
- **Richness:** Video, audio, and text messages are possible.
- **Information density**—the technology reduces information costs and raises quality.
- **Personalization/Customization**—the technology allows personalized messages to be delivered to individuals as well as groups.

Key Drivers of E-Commerce

The criteria that can determine the level of advancement of e-commerce are summarized and categorized as

- **Technological factors** – The degree of advancement of the telecommunications infrastructure which provides access to the new technology for business and consumers.
- **Political factors** – including the role of government in creating government legislation, initiatives and funding to support the use and development of e-commerce and information technology.
- **Social factors** – incorporating the level and advancement in IT education and training which will enable both potential buyers and the workforce to understand and use the new technology.
- **Economic factors** – including the general wealth and commercial health of the nation and the elements that contribute to it.

- 1. Being able to conduct business 24 x 7 x 365:** can operate all day every day. .
- 2. Access the global market place:** it is possible to do business with any business or person who is connected to the Internet.
- 3. Speed:** allow messages to traverse the world almost instantaneously.
- 4. Market space:** The market in which web-based businesses operate is the global market.
- 5. Opportunity to reduce costs:** makes it very easy to 'shop around' for products and services that may be cheaper or more effective than we might otherwise settle for.
- 6. Computer platform-independent:** Customers are not limited by existing hardware systems.
- 7. Efficient applications development environment:** Internet-related technologies provide this capability inherently through

Cont.

8. Allowing customer self service and 'customer outsourcing': People can interact with businesses at any hour of the day that it is convenient to them.

9. Stepping beyond borders to a global view: your business can source and use products and services provided by other businesses in other countries.

Disadvantages and Constraints of e-commerce

- 1. Time for delivery of physical products :** physical goods need to be delivered, which takes time and costs money.
- 2. Physical product, supplier & delivery uncertainty:** not having had physical access to the product, a purchase is made on an expectation of what that product is and its condition.
- 3. Perishable goods :** goods bought and sold via the Internet tend to be durable and non-perishable

Disadvantage cont.

6. Privacy, security, payment, identity, and contract : privacy of information, security of that information and payment details, credit card details will be misused, identity theft... etc. is difficult.

7. Defined services & the unexpected: It is not suitable for dealing with the new or unexpected.

8. Personal service: human interaction can be facilitated via the web than person in which feedback about how people react to product and service offerings also tends to be difficult.

9. Size and number of transactions: size & number of transactions is impacted by the economics of transporting physical goods. E.g. buying a box of pens online from US and has to pay for them to be delivered to you in Ethiopia.

Chapter Two

Internet Marketing Environment

Types of E-Commerce: There are a variety of different types of e-commerce and many different ways to characterize these types.

- Classification of e-commerce by transaction partners.

TRANSACTION ORIGINATING FROM AND BEING FULFILLED BY					
TRANSACTION INITIATED & ACCEPTED BY		Business	Consumer	Government	Peer
	Business	B-to-B	B-to-C	B-to-G	B-to-P
	Consumer	C-to-B	C-to-C	C-to-G	C-to-P
	Government	G-to-B	G-to-C	G-to-G	G-to-P
	Peer	P-to-B	P-to-C	P-to-G	P-to-P

- 1. Business -to- consumer (B2C):** companies sell their online goods to consumers who are the end users of their products or services.
- 2. Business -to- business (B2B) :** companies sell their online goods to other companies without being engaged in sales to consumers, is the largest form of e-commerce.
- 3. Business-to-Government (B-to-G):** The exchange of information, services and products between business organizations and government agencies on-line. May include E-procurement service, Virtual workplace and rental of online application.
- 4. Business-to-Peer Networks (B-to-P):** provision of hardware, software or other services to the peer networks. An example here would be Napster who provided the software and facilities to enable peer networking.
- 5. Consumer-to-Business (C-to-B):** is the exchange of products, information or services from individuals to business.
- 6. Consumer-to-Consumer (C-to-C):** consumers interact directly with other consumers, Such as eBay.com creates a market space where consumers can auction or sell goods directly to other consumers.

7. Consumer-to-Peer Networks (C-to-P): part of what peer-to-peer networking is and so is a slightly redundant distinction since consumers offer their computing facilities once they are on the peer network.

8. Government-to-Business (G-to-B): the exchange of information, services and products between government agencies and business organizations

9. Government-to-Consumer (G-to-C): Government sites offering information, forms and facilities to conduct transactions for individuals, including paying bills and submitting official forms on-line such as tax returns.

10. Government-to-Government (G-to-G): Government- to government transactions within countries linking local governments together and also international governments.

11. Peer-to-Peer Network (P-to-P): enables Internet users to share files and computer resources directly without having to go through a central Web server.

A business model is a set of planned activities (sometimes referred to as business processes) designed to result in a profit in a marketplace. The business model is at the center of the business plan. It aims to use and leverage the unique qualities of the Internet and the World Wide Web.

Key Ingredients of a Business Model

- 1. Value proposition:** answers the question “why should customer buy products and services from a given firm?”
- 2. Revenue model:** Refers to how the company plans to make money from its operations.
- 3. Market Opportunity:** Refers to a company’s intended market space and the overall potential financial opportunities available to the firm in that market space.
- 4. Competitive Environment:** refers to the other companies selling similar products and operating in the same market space

5. Competitive Advantage: Achieved when a firm can produce a superior product and/or bring product to market at a lower price than most, or all, of competitors

6. Market Strategy: A plan that details how a company intends to enter a new market and attract customers.

7. Organizational Development: Describes how the company will organize the work that needs to be accomplished.

8. Management Team: group of individuals retained to guide the company's growth and expansion. Employees of the company responsible for making the business model work.

Major Business-to-Business (B2B) Business Models

The major business models utilized in the B2B arena includes;

- 1. E-Distributor:** Companies that supply products and services directly to individual businesses are e-distributors.
- 2. E-Procurement:** Just as e-distributors provide products to other companies, e-procurement firms create and sell access to digital electronic markets.
- 3. Marketplace/exchanges or B2B hubs:** an exchange is a digital electronic marketplace where suppliers and commercial purchasers can conduct transactions.
- 4. Industry consortia** are industry-owned *vertical marketplaces* that serve specific industries, such as the automobile, aerospace, chemical, floral, or logging industries.
- 5. Private Industrial Networks:** digital network designed to

The major business models utilized in the B2C arena include;

- 1. Portals:** offer users powerful Web search tools as well as an integrated package of content and services, such as news, e-mail, instant messaging, calendars, shopping, music downloads, video streaming, and more, all in one place.
- 2. E-Tailer:** Online retail stores, often called **e-tailers**. E-tailors are similar to the typical bricks and mortar store front, except that customers only have to connect to the Internet to check their inventory and place an order. **Becoming profitable and surviving is very difficult.**
- 3. Content Provider:** distribute information content, such as digital news, music, photos, videos, and artwork over the Web. Retrieving and paying for content is the second largest revenue source for B2C e-commerce. Content providers make money by charging a subscription fee.

4. Transaction Broker: Sites that process transactions for consumers and provide timely information and opinion.

5. Market Creator: build a digital environment in which buyers and sellers can meet, display products, search for products, and establish prices.

6. Service Provider: offer services online. Some charge a fee, while others generate revenue from other sources, such as through advertising and by collecting personal information that is useful in direct marketing.

7. Community Provider: are sites that create a digital online environment where people with similar interests can transact (buy and sell goods), communicate with likeminded people, receive interest-related information, and even play out fantasies by adopting online personalities.

Consumer -to- Consumer (C2C) Business Models: provide a way for consumers to sell to each other, with the help of an online business. E.g. eBay.com

Peer-to-Peer (P2P) Business Models: link users, enabling them to share files and computer resources without a common server. The focus in P2P companies is on helping individuals make information available for anyone's use by connecting users on the Web.

M-Commerce Business Models: short for *mobile-commerce*, takes traditional e-commerce models and leverages emerging new wireless technologies—to permit mobile access to the Web. The **key technologies here are telephone-based 3G** (third generation wireless), **Wi-Fi** (wireless local area networks), **and Bluetooth** (short range radio frequency Web devices).

Chapter Three

Online Business Strategies

Business Strategy for E-commerce

- **Strategy** is a broad-based formula for how a business is going to compete, what its goal should be, and what plans and policies will be needed to carry out those goals. The elements of a **strategy include forecasting, resource allocation, core competency, environmental analysis, company analysis, and business planning.**
- **A business strategy** a set of plans for achieving superior long-term returns on capital invested in a business firm.
- **E-Business Strategy** is the formulation and execution of a vision of how a new or existing company intends to do business electronically.

Phases of strategic planning:

- 1. *Strategy Initiation:*** company analysis, core competencies, industry analysis, forecasts (business, technological, political, economic and other trends) competitor analysis (direct competitors, indirect competitors, potential competitors). Organization prepares information about its vision, mission, purpose, and the contribution tha EC could make (vision and mission for EC within vision and mission for the whole business).
- 2. *Strategy Formulation:*** development of strategies to exploit opportunities and manage threats in the business environment in light of corporate strengths and weaknesses. Identify business opportunities, and then do cost/benefit analysis, risk analysis, assessment and management and a business plan (to ensure that a realistic approach is being taken to implement the business strategy).
- 3. *Implementation:*** detailed short-term plans on “How do we do it”: includes project planning, resource allocation, project management.
- 4. *Assessment:*** continuous evaluation of progress toward the organization’s strategic goals, resulting in corrective action, and if necessary, strategy reformulation.

Internet Presence

- Internet has changed how businesses and organizations interact with participants/learners.
- Internet is a global, interconnected computer network in which every computer connected to it can exchange data with any other connected computer.

Elements of an effective online presence

1. Website: is a site that Can be found in search engines Optimized onsite and offsite.

Types of Web Sites includes:

- A. Informational sites:** provide information about a particular subject or organization .
- B. Transactional sites:** used to conduct some transaction or task.
- C. Community sites:** provide information or transaction-related facilities. focus on a particular topic or type of person and encourage interaction between likeminded individuals

Cont.

D. Entertainment sites: are for game playing or some form of amusing interaction, which may include transactional, community, and informational elements.

E. Other sites: Included here are artistic or experimental sites, personal Web spaces such as Web logs (also called blogs), and sites that may not follow common Web conventions or have a well-defined economic purpose. We might also group sites based upon the organization that is running, or in some sense paying for, the site. [Within this type of categorization we see five major groupings](#)

Commercial: built and run by an organization or individual for commercial gain

Government: purpose of the site is to satisfy some social or legal need

Educational: used to support learning or research goals

Charitable : promote the goals of a nonprofit organization or the charitable activities of an individual or organization.

Personal: site exists at the sole discretion of some person or group for any number of reasons, usually as a creative outlet or form of personal expression.

Social media: is... any tool or service that uses the Internet to facilitate conversations. Forms of social media are Blogs, Twitter, Facebook, Google+, Email marketing ...

Internet Retailing

E-tailing is the buying and selling of retail goods on the Internet.

- The most modern innovation in retailing is **e-tailing**. E-tailing enables consumers to choose from an almost infinite variety of products and purchase them without leaving their own homes.

Services retailers play an important role in our economy by providing specialized skills and expertise most consumers lack and need. Banks, dental offices, and pet groomers are examples of services retailers.

Non-store retailers are able to lower costs by selling directly to consumers without the cost of maintaining a storefront.

Four main types of online retail business models:

- o **Virtual merchant** (Amazon, etc): Single channel Web firm that generates almost all its revenue from online sales
- o **Clicks and bricks**: Company that has a network of physical stores as primary retail channel, but also online offerings
- o **Catalog merchant**: Established company that has a national offline catalog operation as its largest retail channel, but also has online capability
- o **Manufacturer direct (Dell, etc)**: Single or multi-channel manufacturers who sell directly online to consumers without intervention of retailers

Internet Marketplaces

- It is an electronic marketplace in which sellers and buyers exchange goods and services for money (or for other goods and services).
- **Have three main functions:**
 1. Matching buyers and sellers
 2. Facilitating exchange of information, goods, services, & payments associated with market transactions
 3. Providing an institutional infrastructure, such as a legal and regulatory framework, that enables the efficient functioning of the market

Types of E-Marketplaces

1. Private e-marketplaces: Online markets owned by a single company; can be either sellside or buy-side e-marketplaces *Sell-side e-marketplace* is e-marketplace in which a company sells either standard or customized products to qualified companies. *Buy-side marketplace* is e-marketplace in which a company makes purchases from invited suppliers.

2. Public e-marketplaces: B2B marketplaces, usually owned and/or managed by independent third parties that include many sellers and many buyers; also known as ***exchanges***.

3. Consortium: E-marketplaces owned by a small

Internet Marketing is the application of the Internet and related digital technologies to achieve marketing objectives.

E-marketing: Achieving marketing objectives through use of electronic communications technology.

Digital Marketing: has a similar meaning to 'electronic marketing' – both describe the management and execution of marketing using electronic media such as the web, e-mail, interactive TV and wireless media in conjunction with digital data about customers' characteristics

Internet and the Marketing Mix

- **Marketing mix**-The series of seven key variables – Product, Price, Place, Promotion, People, Process and Physical evidence – that are varied by marketers as part of the customer offering.

1. Product Strategies on the Web

- **product** element of the marketing mix refers to characteristics of a product, service or brand.
- Internet-related product decisions can be usefully divided into decisions affecting the **core product** and the **extended product**. Core product refers to the main product purchased by the consumer to fulfill their needs, while the extended or augmented product refers to additional services and benefits that are built around the core of the product.

The main **implications of the Internet for the product aspect of the mix** are:

- 1. Options for varying the core product;**
- 2. Options for changing the extended product;**
- 3. Conducting research online:** Options include *online focus group, Online questionnaire survey, Customer feedback or support forums and Web logs.*
- 4. Velocity of new product development:** Internet can also be used to accelerate new product development since different product options can be tested online more rapidly as part of market research.
- 5. Velocity of new product diffusion:** principles that underpin the rapid spread of ideas, products and behaviors through a population. There are three main laws that are relevant from *The Tipping Point*:
 - A. law of the few:** spread of any new product or service is

B. Stickiness factor: attachment to the characteristics and attributes of a product or a brand. There are key cross-category attributes which are key drivers for product success such as *Excellence, Uniqueness, Association, value, Cost*.

C. Power of context: products and behaviors spread far and wide only when they fit the physical, social and mental context into which they are launched. Products should be devised and tested to fit their context, situation or occasion of use.

2. On-line Distribution Options

- Place element refers to how an organization will chose to distribute the product / service they are offering to the end user.
- Efficient distribution is highly important in order to achieve the overall marketing objectives of an organization.

Major implications of internet upon the place aspect of the mix are:

A. Place of purchase: option of seller & buyer sites

B. Navigation: navigational (Triangulation) advantages which are key to achieving competitive advantage online

C. Localization: strategy of providing a local site, most of the times using the local language. Local sites are especially **important when the culture differences are significant from one marketplace to another**, and the organization finds it more appropriate to address locally.

D. New channel structures: some new structures were born, specific for the internet-based markets.

E. Channel conflicts: sometimes the internet should be used solely as communication channel when conflict **occurs when deciding if an organization should introduce online distribution channels**, a great thought must be given to how distribution arrangements **with existing partners are affected**.

3. On-line promotion

- Promotion as part of the marketing mix refers to how marketing communications are used to inform the audience about an organization and its products.
- We can deploy internet technologies to find new ways to improve and sustain advertising activities, sales promotions, public relations, or to proceed to direct marketing campaigns using e-mail or websites.
- The promotion element of a marketing plan also requires taking strategic decisions about investment in the online communications mix.
- The site must be promoted just like you promote a product, in order to make it efficient and support your business.
- Has advantage of the many creative communication techniques available through the internet in order to develop a better customer relationship management

4. Pricing on the Internet

- Online pricing depends on the range of products offered.
- When looking more deeply into the interactions between the 4 P's of the marketing mix, one observes that Price is a supportive element for the remaining 3 P's, because **it costs to produce and design a Product**, it **costs too distribute it (Place)** and definitely we have **costs to Promote** it.
- **The main implications of the Internet for the price aspect of the mix**

1. Increased price transparency and its implications on differential pricing

- **Price transparency refers to** Customer knowledge about pricing increases due to increased availability of pricing information.
- **Differential pricing concept:** Identical products are priced differently for different types of customers, markets or buying situations. While, **Price elasticity of demand is a** Measure of consumer behavior that

2. Downward pressure on price (including commoditization)

- The Internet also tends to drive down prices since Internet-only retailers which do not have a physical presence do not have the overhead of operating stores and a retailer distribution network.
 - identify a range of options that are available for setting pricing.
- a) *Cost-plus pricing*:** involves adding on a profit margin based on production costs.
- b) *Target-profit pricing* :** involves looking at the fixed and variable costs in relation to income for different sales volumes and unit prices.
- c) *Competition-based pricing*:** companies need to develop online pricing strategies that are flexible enough to compete in the marketplace, but are still sufficient to achieve profitability in the channel.
- d) *Market-oriented pricing*:** known as ‘the elasticity of demand’. There are two approaches. *Premium pricing (or skimming the market)* involves setting a higher price than the competition to reflect the positioning of the product as a high-quality item. *Penetration pricing* is when a price is set below the competitors’ prices to either stimulate demand or increase penetration.

3. New Pricing Approaches (Including auctions)

The new different pricing mechanisms are includes:

- **Forward auctions** (B2C): Item purchased by highest bid made in bidding period.
- **Reverse auction** (B2B): Item purchased from lowest-bidding supplier in bidding period.
- **Offer:** A commitment by a trader to *sell* under certain conditions.
- **Bid:** A commitment by a trader to *purchase* under certain conditions.
- **Aggregated buying:** A form of customer union where buyers collectively purchase a number of items at the same price and receive a volume discount.

4. Alternative pricing structure or policies

- Different types of pricing may be possible on the Internet, particularly for digital, downloadable products such as mp3's, software, e-books. The Internet offers new options such as payment per use, rental at a fixed cost per month or a lease arrangement.
- Further pricing options which could be varied online include:
 - Basic price
 - Discounts
 - Add-ons and extra products and services
 - Guarantees and warranties
 - Refund policies

5. The Extended Marketing Mix (People, Process & Physical evidence)

New element/service elements that has been added to complete marketing mix:

- 1. People;** refers to the how the staff of an organization interacts with customers and other stakeholders. **we can replace the staff with automation capabilities of the internet by using** Auto responders, E-mail notification, Call-back facility , Frequently Asked Questions (FAQs), On-site search engines
- 2. Process;** refers to the methods and procedures companies use to achieve all marketing functions such as new product development, promotion, sales and customer service.
- 3. Physical evidence;** customers' experience of the company through the web site and associated support. **It includes issues such as site ease of use or navigation, availability and performance**

The Internet Branding

- **Brand:** is identity such as the name or logo associated with a company or products.
- **Branding:** is the process of creating and evolving successful brands.
- **Powerful Brands** *is defined as: an identifiable product or service augmented in such a way that the buyer or user perceives relevant unique added values which match their needs most closely.*
- In the online environment, the customer can **experience** or interact with the brand more frequently and to a greater depth.
- **Brand identity:** The totality of brand associations including name and symbols that must be communicated.
- **Options for changing brand identity online** When a company launches or re-launches an online presence, it has the following choices with regards to brand identity:

- 1 Transfer traditional brand online:** Companies with brands that are well established in the real world can build on the brand by duplicating it online.
- 2. Extend traditional brand: variant** companies decide to create a slightly different version of their brand when they create their web site.
- 3. Partner with existing digital brand:** company can best promote its products in association with a strong existing digital or Internet brand such as Google or Yahoo!
- 4. Create a new digital brand:** create an entirely new digital brand if the existing offline brand has negative connotations or is too traditional for the new medium.

The importance of brand online

- The Internet presents a 'double-edged sword' to existing brands.
- Consumer purchasing will depend upon their knowledge of the retailer brand or the product brand

Chapter Five

MOBILE ELECTRONIC COMMERCE

M-Commerce is sometimes referred to as “Mobile E-Commerce”.

- It is basically [electronic transactions conducted using a mobile terminal and a wireless network](#).
- It is the ability to conduct commerce using a mobile device such as: mobile phone, Personal digital assistant (PDA) & Smartphone.

Wireless Industry: Mobile Applications & Methods of Payment

Mobile Applications

- **Mobile Banking:** to complete bank-related transactions
- **Mobile Entertainment:** provide the user digital data with entertainment value on mobile devices. e.g. betting, gaming, dating and chatting.
- **Mobile Information Services:** mobile services that provide subscribers with content of informational character.

- **Mobile Marketing:** services based on mobile communication technologies that provide firms with new, innovative instruments, e.g. to increase sale, win and retain customers.
- **Mobile Shopping:** bundles services that allow for mobile processing of transactions involving purchase of goods of daily use.
- **Mobile Ticketing:** All services that must be paid for, before a lawful utilization can take place, are suitable for Mobile Ticketing. e.g. travelling in public transport, entry to a cultural event or cinema.
- **Telematics Services:** refers to innovative technologies that link telecommunication technologies with informatics. The main services are navigation systems, remote diagnosis as well as access to other mobile applications such as Mobile Entertainment, Mobile Content/Office, Mobile Banking and Mobile Shopping.

Methods of Payment

- **Mobile Payment:** payments that are made via mobile hand-held devices in order to purchase goods and services.

Advantage and disadvantages of M-commerce

Advantages

- Offers many payment options
- Push advertising, direct marketing.
- More efficient and extensive service offered.
- The Internet is going mobile
- Can be easily setup

Disadvantage

- Expensive cost
- Larger screens won't be displayed is clear
- Slow speed
- Limited for longer message
- It hard way to fill the data.
- Security is not protected

Wireless communication platform

1. Mobile Networks by 'Generation'

1G: Analog Communication

- *World's first cellular system launched in Saudi Arabia based on the Analog – 1981*
- Only in certain environments, particularly in government agencies and the military

2G: Based on Digital Technology (Voice+SMS/MMS)

- marked the start of digital voice communication era in early 1990s.
- It implemented the concept of CDMA and GSM(Global System for Mobile Communication).
- More global compatible telecommunication network & SMS (Short Messaging Services)
- Mobile Internet Browsing, via the WAP (Wireless Applications

3G: Third generation wireless communication (Voice + Data)

- decent speed internet connection and awesome voice channels has arrived. They exploited area of Wideband-CDMA (W-CDMA), provided better bandwidth and better connectivity even during motion (like in vehicle, train).
- provide an economically viable and technology-enhanced portal
- digital, supported data, packet switched (WCDMA, EvDO)

4G: Forth generation wireless communication (Only DATA and Voice over data)

- Era of broadband wireless.
- This allows usage of wider bandwidth in the communication channel for data
- Support interactive multimedia
- Wider bandwidth, higher bit rates
- Global mobility and service portability
- Low cost
- Scalability of mobile networks

5G: Fifth generation wireless communication

- 5G = not yet defined
- Much faster. Likely to be real till 2020

Wireless industry

Wireless technology has already had an impact on your life *today*.

Wireless communication: is the transfer of information between two or more points that are not connected by an electrical conductor.

Facilitators of a wireless Environment

- ***WiFi (wireless fidelity):*** Wi-Fi is a wireless local area network that enables portable computing devices to connect easily to the Internet.
- ***Infrared and ultrasonic remote control devices***
- ***Professional LMR (Land Mobile Radio) and SMR***

- **Consumer Two way radio** including FRS Family Radio Service, GMRS (General Mobile Radio Service) and Citizens band ("CB") radios.
- The **Amateur Radio Service** (Ham radio).
- **Airband and radio navigation equipment** used by aviators and air traffic control
- **Cellular telephones and pagers**: provide connectivity for portable and mobile applications, both personal and business.
- **Global Positioning System (GPS)**: allows drivers of cars and trucks, captains of boats and ships, and pilots of aircraft to ascertain their location anywhere on earth.
- **Cordless computer peripherals**: the cordless mouse is a common example; wireless headphones, keyboards, and printers can also be linked to a computer via wireless using technology such as Wireless USB or Bluetooth
- **Cordless telephone sets**: these are limited-range devices, not to be confused with cell phones.
- **Satellite television**: Is broadcast from satellites in geostationary orbit. Typical services use direct broadcast satellite to provide multiple television channels to viewers.

- 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.
- Listed below are some of the modes of electronic payments –
 - Credit Card
 - Debit Card

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.

Debit 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

- 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.
- IT are also used to store money and the amount gets deducted after every transaction.
- IT can only be accessed using a PIN that every customer is assigned with.
- are secure, as they store information in encrypted format and are less expensive/provides faster processing. Mondex and Visa Cash cards are examples of smart cards

E-Money

- situation where payment is done over the network and the amount gets transferred from one financial body to another financial body without any involvement of a middleman.
- E-money transactions are faster, convenient, and saves a lot of time.

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.

Payment Methods

- In B2C e-commerce, payment methods are mainly “electronic” (bank card, paypal) and synchronous (in real time).
- A digital purchase path with card payment consists of a real-time authorisation request, which ensures that the money is available on the buyer’s account. It is quickly debited. The money is therefore transferred almost immediately from the buyer’s to the vendor’s account, which is why it is called a synchronous payment method.

Payment Terms

- B2B e-commerce site based solely on prepayment is not viable. Prepayment can be important and used in certain situations, such as in the case of low-value baskets or for a first purchase, when the buyer is not yet known.

Chapter 7

E-commerce Security and Controls

Security is an essential part of any transaction that takes place over the internet. Customers will lose his/her faith in e-business if its security is compromised.

Following are the essential requirements for safe e-payments/transactions –

- **Confidentiality** – Information should not be accessible to an unauthorized person.
- **Integrity** – Information should not be altered during its transmission over the network.
- **Availability** – Information should be available wherever and whenever required within a time limit specified.
- **Authenticity** – There should be a mechanism to authenticate a user before giving him/her an access to the required information.
- **Non-Repudiability** – It is the protection against the denial of order or denial of payment. Once a sender sends a message, the sender should not be able to deny sending the message. Similarly, the recipient of message should not be able to deny the receipt.
- **Encryption** – Information should be encrypted and decrypted only by an authorized user.
- **Auditability** – Data should be recorded in such a way that it can be audited for integrity requirements

- The ethical, social, and political issues raised in e-commerce, provide a framework for organizing the issues, and make recommendations for managers who are given the responsibility of operating e-commerce companies within commonly accepted standards of appropriateness.

Public Policy Issues in E commerce

- The major ethical, social, and political issues that have developed around e commerce over the past seven to eight years can be loosely categorized into four major dimensions:
- **information rights**, rights to their own personal information
- **property rights**,
- **governance**, and
- **public safety and welfare** certain online content and activities - such as pornography and gambling - a threat to public safety and welfare

Basic Ethical Concepts: Responsibility Accountability, and Liability

Ethics is at the heart of social and political debates about the Internet. Ethics is the study of principles that individuals and organizations can use to determine right and wrong courses of action.

- It is assumed in ethics that individuals are free moral agents who are in a position to make choices.
- As long as there is a decision-making body or individual their decisions can be judged against a variety of ethical principles.

Responsibility means that as free moral agents, individuals, organizations and societies are responsible for the actions they take.

Accountability means that individuals, organizations, and societies should be held accountable *to* others for the consequences of their actions

Liability - extends the concepts of responsibility and accountability *to* the area of law. Liability is a feature of political systems in which a body of law is in place that permits individuals *to* recover the damages done *to* them by other actors, systems, or organizations.

- Ethical, social, and political controversies usually present themselves as dilemmas.
- **Dilemma** is a situation in which there are at least two diametrically opposed actions, each of which supports a desirable outcome.

The following is a five step process that should help.

- 1. Identify and describe clearly the facts.**
- 2. Define the conflict or dilemma and identify the higher order value involved.**
- 3. Identify the stakeholders.**
- 4. Identify the options that you can reasonably take**

Privacy and Information Rights

- The Internet and the Web provide an ideal environment for invading the personal privacy of millions of users on a scale unprecedented in history. Perhaps no other recent issue has raised as much widespread social and political concern as protecting the privacy of over 160 million Web users in the United States alone.
- **Privacy** is the moral right of individuals to be left alone, free from surveillance or interference from other individuals or organizations, including the state.
- The right to information privacy includes both the claim that certain information should not be collected at all by governments or business firms, and the claim of individuals to control over personal of whatever information that is collected about them.