E-Commerce

E-Commerce or Electronics Commerce is a methodology of modern business which fulfills the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery.

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

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

E-Commerce features

Non-Cash Payment: E-Commerce enables use of credit cards, debit cards, smart cards, electronic fund transfer via bank's website and other modes of electronics payment.

24x7 Service availability: E-commerce automates business of enterprises and services provided by them to customers are available anytime, anywhere. Here 24x7 refers to 24 hours of each seven days of a week.

Advertising / Marketing: E-commerce increases the reach of advertising of products and services of businesses. It helps in better marketing management of products /services.

Improved Sales: Using E-Commerce, orders for the products can be generated anytime, anywhere without any human intervention. By this way, dependencies to buy a product reduce at large and sales increases.

Support: E-Commerce provides various ways to provide pre sales and post sales assistance to provide better services to customers.

Inventory Management: Using E-Commerce, inventory management of products becomes automated. Reports get generated instantly when required. Product inventory management becomes very efficient and easy to maintain.

Communication improvement: E-Commerce provides ways for faster, efficient, reliable communication with customers and partners.

E-Commerce advantages can be broadly classified in three major categories:

 Advantages to Organizations
 Advantages to Consumers
 Advantages to Society

Advantages to Organizations

 Using E-Commerce, organization can expand their market to national and international markets with minimum capital investment. An organization can easily locate more customers, best suppliers and suitable business partners across the globe.
 E-Commerce helps organization to reduce the cost to create process, distribute, retrieve and manage the paper based information by digitizing the information.
 E-commerce improves the brand image of the company.
 E-commerce helps organization to provide better customer services.
 E-Commerce helps to simplify the business processes and make them faster and efficient.
 E-Commerce reduces paper work a lot.
 E-Commerce increased the productivity of the organization. It supports "pull" type supply management. In "pull" type supply management, a business process starts when a request comes from a customer and it uses just-in-time manufacturing way.

Advantages to Customers

 24x7 support. Customer can do transactions for the product or enquiry about any product/services provided by a company any time, any where from any location. Here 24x7 refers to 24 hours of each seven days of a week.
 E-Commerce application provides user more options and quicker delivery of products.
 E-Commerce application provides user more options to compare and select the cheaper and better option.
 A customer can put review comments about a product and can see what others are buying or see the review comments of other customers before making a final buy.
 E-Commerce provides option of virtual auctions.
 Readily available information. A customer can see the relevant detailed information within seconds rather than waiting for days or weeks.
 E-Commerce increases competition among the organizations and as result organizations provides substantial discounts to customers.

Advantages to Society

 Customers need not to travel to shop a product thus less traffic on road and low air pollution.
 E-Commerce helps reducing cost of products so less affluent people can also afford the products.
 E-Commerce has enabled access to services and products to rural areas as well which are otherwise not available to them.
 E-Commerce helps government to deliver public services like health care, education, social services at reduced cost and in improved way.

Differences between Traditional Commerce and E-Commerce.

Sr. No.	Traditional Commerce	E-Commerce
1	Heavy dependency on information exchange from person to person.	Information sharing is made easy via electronic communication channels making little dependency on person to person information exchange.
2	Communication/ transaction are done in synchronous way. Manual intervention is required for each communication or transaction.	Communication or transaction can be done in asynchronous way. Electronics system automatically handles when to pass communication to required person or do the transactions.
3	It is difficult to establish and maintain standard practices in traditional commerce.	A uniform strategy can be easily established and maintain in e-commerce.
4	Communications of business depends upon individual skills.	In e-Commerce or Electronic Market, there is no human intervention.
5	Unavailability of a uniform platform as traditional commerce depends heavily on personal communication.	E-Commerce website provides user a platform where al l information is available at one place.
6	No uniform platform for information sharing as it depends heavily on personal communication.	E-Commerce provides a universal platform to support commercial / business activities across the globe.

E -Commerce disadvantages can be broadly classified in two major categories:

- Technical disadvantages
- Non-Technical disadvantages

Technical Disadvantages

1. There can be lack of system security, reliability or standards owing to poor implementation of e-commerce.
2. Software development industry is still evolving and keeps changing rapidly.
3. In many countries, network bandwidth might cause an issue as there is insufficient telecommunication bandwidth available.
4. Special types of web server or other software might be required by the vendor setting the e- commerce environment apart from network servers.
5. Sometimes, it becomes difficult to integrate E-Commerce software or website with the existing application or databases.
6. There could be software/hardware compatibility issue as some E-Commerce software may be incompatible with some operating system or any other component.

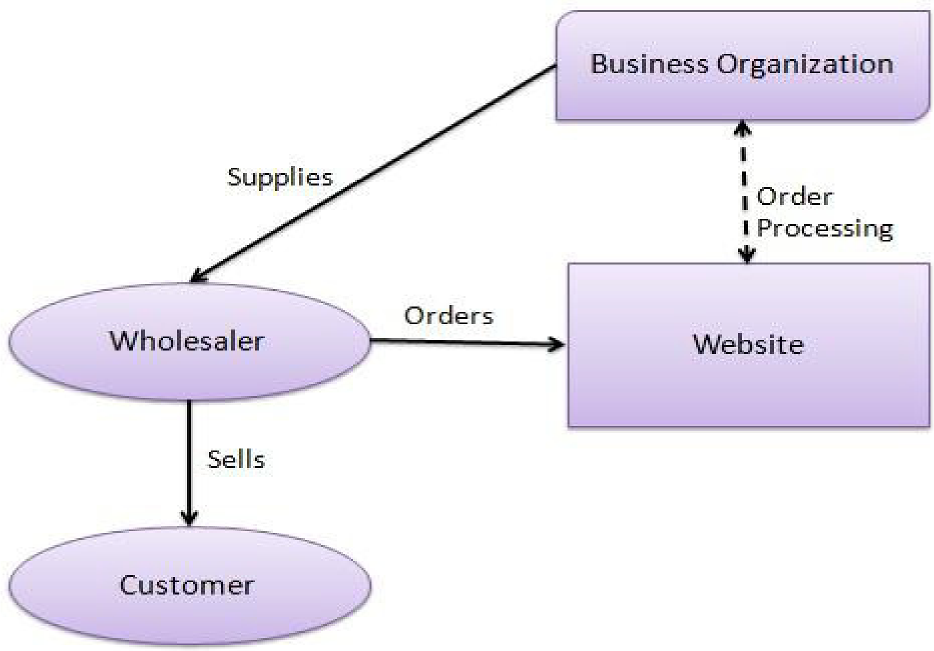
Non-Technical Disadvantages

 Initial cost: The cost of creating / building E-Commerce application in-house may be very high. There could be delay in launching the E-Commerce application due to mistakes, lack of experience.
 User resistance: User may not trust the site being unknown faceless seller. Such mistrust makes it difficult to make user switch from physical stores to online/virtual stores.
 Security / Privacy: Difficult to ensure security or privacy on online transactions.
 Lack of touch or feel of products during online shopping.
 E-Commerce applications are still evolving and changing rapidly.
 Internet access is still not cheaper and is inconvenient to use for many potential customers like one living in remote villages.

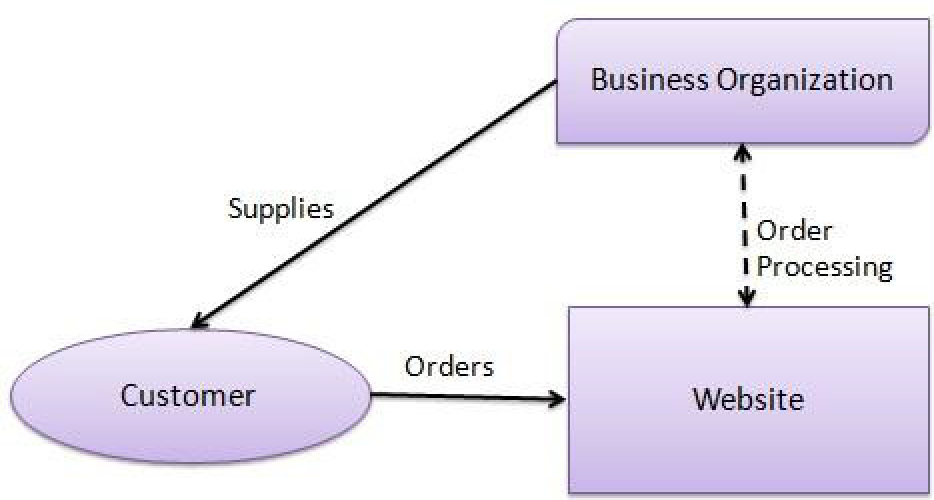
E -Commerce or Electronics Commerce business models can generally categorized in following categories.

- Business - to - Business (B2B)
- Business - to - Consumer (B2C)
- Consumer - to - Consumer (C2C)
- Consumer - to - Business (C2B)
- Business - to - Government (B2G)
- Government - to - Business (G2B)
- Government - to - Citizen (G2C)

Business - to - Business (B2B)
Website following B2B business model sells its product to an intermediate buyer who then sells the product to the final customer. As an example, a wholesaler places an order from a company's website and after receiving the consignment, sells the end product to final customer who comes to buy the product at wholesaler's retail outlet.

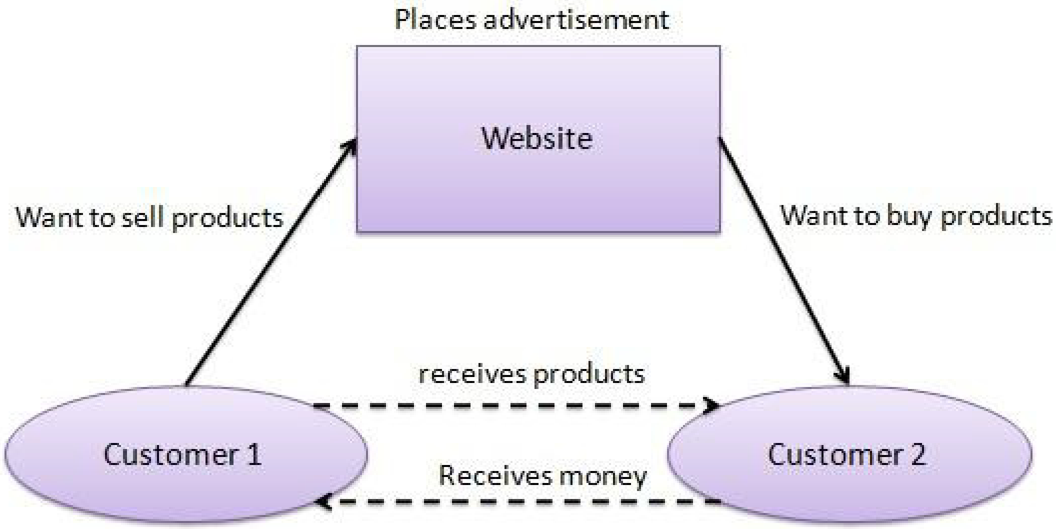


Business - to - Consumer (B2C)
Website following B2C business model sells its product directly to a customer. A customer can view products shown on the website of business organization. The customer can choose a product and order the same. Website will send a notification to the business organization via mail and organization will dispatch the product/goods to the customer.



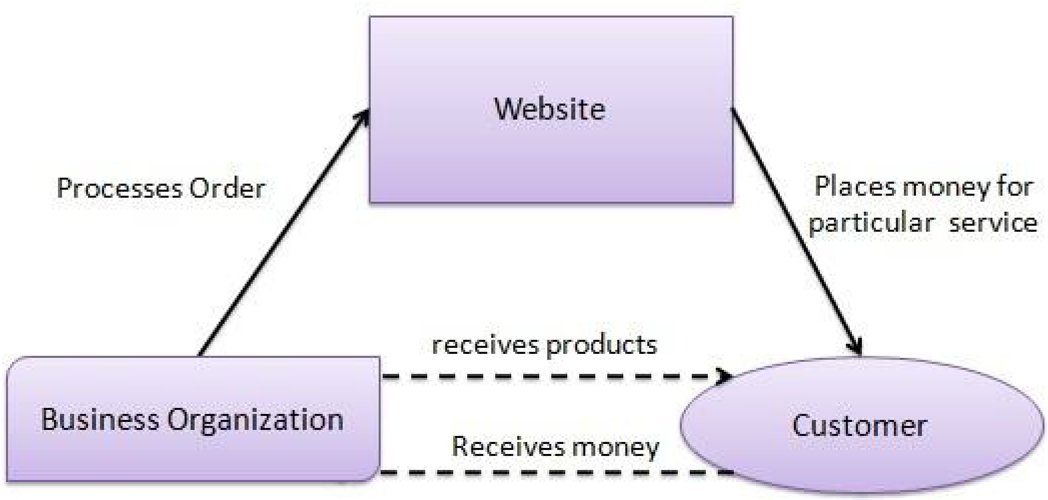
Consumer - to - Consumer (C2C)

Website following C2C business model helps consumer to sell their assets like residential property, cars, motorcycles etc. or rent a room by publishing their information on the website. Website may or may not charge the consumer for its services. Another consumer may opt to buy the product of the first customer by viewing the post/advertisement on the website.



Consumer - to - Business (C2B)

In this model, a consumer approaches website showing multiple business organizations for a particular service. Consumer places an estimate of amount he/she wants to spend for a particular service. For example, comparison of interest rates of personal loan/ car loan provided by various banks via website. Business organization that fulfills the consumer's requirement within specified budget approaches the customer and provides its services.

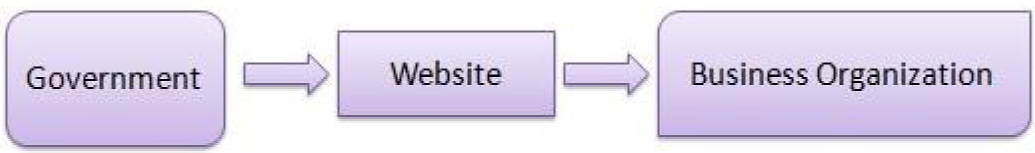


Business - to - Government (B2G)

B2G model is a variant of B2B model. Such websites are used by government to trade and exchange information with various business organizations. Such websites are accredited by the government and provide a medium to businesses to submit application forms to the government.

Government - to - Business (G2B)

Government uses B2G model website to approach business organizations. Such websites support auctions, tenders, and application submission functionalities.



Government - to - Citizen (G2C)

Government uses G2C model website to approach citizen in general. Such websites support auctions of vehicles, machinery or any other material. Such website also provides services like registration for birth, marriage or death certificates. Main objectives of G2C website are to reduce average time for fulfilling people requests for various government services.

Electronic payment refers to paperless monetary transactions. Electronic payment has revolutionized the business processing by reducing paper work, transaction costs, labour cost. Being user friendly and less time consuming than manual processing, helps business organization to expand its market reach / expansion. Some of the modes of electronic payments are following.

- Credit Card
- Debit Card
- Smart Card
- E-Money
- Electronic Fund Transfer (EFT)

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.

Credit card payment process

Step Description

Step 1

Bank issues and activates a credit card to customer on his/her request.

Step 2

Customer presents credit card information to merchant site or to merchant from whom he/she want to purchase a product/service.

Step 3

Merchant validates customer's identity by asking for approval from card brand company.

Step 4

Card brand company authenticates the credit card and paid the transaction by credit. Merchant keeps the sales slip.

Step 5

Merchant submits the sales slip to acquirer banks and gets the service chargers paid to him/her.

Step 6

Acquirer bank requests the card brand company to clear the credit amount and gets the payment.

Step 7

Now card brand company asks to clear amount from the issuer bank and amount gets transferred to card brand company.

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 debit card and credit card is that in case of payment through debit card, amount gets deducted from card's bank account immediately and there should be sufficient balance in bank account for the transaction to get completed whereas in case of credit card there is no such compulsion. Debit cards free customer to carry cash, cheques and even merchants accepts debit card more readily. Having restriction on amount being in bank account also helps customer to keep a check on his/her spending.

Smart Card
Smart card is again similar to credit card and debit card in appearance but it has a small microprocessor chip embedded in it. It has the capacity to store customer work related/personal information. Smart card is also used to store money which is reduced as per usage. Smart card can be accessed only using a PIN of customer. Smart cards are secure as they stores information in encrypted format and are less expensive / provide faster processing. Mondex and Visa Cash cards are examples of smart cards.

E-Money
E-Money transactions refer to situation where payment is done over the network and amount gets transferred from one financial body to another financial body without any involvement of a middleman. E-money transactions are faster, convenient and save a lot of time.
Online payments done via credit card, debit card or smart card are examples of e-money transactions. Another popular example is e-cash. In case of e-cash, both customer and merchant both have to sign up with the bank or company issuing e-cash.

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 same bank or different bank. Fund transfer can be done using ATM (Automated Teller Machine) or using computer. Now a day, internet based EFT is getting popularity. In this case, customer uses website provided by the bank. Customer logins to the bank's website and registers another bank account. He/she then places a request to transfer certain amount to that account. Customer's bank transfers amount to other account if it is in same bank otherwise transfer request is forwarded to ACH (Automated Clearing House) to transfer amount to other account and amount is deducted from customer's account. Once amount is transferred to other account, customer is notified of the fund transfer by the bank.