

E-COMMERCE

Overview & applications

DEFINITIONS AND CONCEPTS

- ◉ **Electronic commerce** describes the process of buying , selling , transferring , serving or exchanging products , services or information via computer networks including internet.
- ◉ **Electronic business** not just buying & selling of goods & services but also servicing customers collaborating with business partners, conducting e-learning & conducting electronic transactions within an organization.

THE EC LANDSCAPE

Pure vs Partial EC:

- ◉ Depending on degree of digitization...can relate to 1) product (or service) 2) process 3) delivery agent (or intermediary)
- ◉ Product, process & delivery agent can be physical or digital.
- ◉ Traditional commerce...all 3 dimensions physical.. **Brick & mortar organizations**
- ◉ **Pure EC**..all dimensions digital
- ◉ Other combinations include mix of digital & physical

EC ORGANIZATIONS

- ◉ Companies engaged only in EC ..Virtual or pure play organizations
- ◉ Organizations that conduct some e-commerce activities yet primary business done in physical world...Click & mortar or click & brick organizations

TYPES OF ECOMMERCE TRANSACTIONS

- ◉ Business to business
- ◉ Collaborative commerce
- ◉ Business to consumers
- ◉ Consumer to consumer
- ◉ Business to business to consumers(B2B2C)..
Alibaba(B2B) uses Tmall(B2C - Taobao Mall) to sell products on Taobao(C2C).
Tmall and TaoBao only serve in China.
- ◉ Consumers to business
- ◉ Intrabusiness (intraorganizational) commerce....Business to employees
- ◉ Government to citizens and to others...G2G,G2B

E COMMERCE BUSINESS MODELS—A METHOD OF DOING BUSINESS BY WHICH A COMPANY CAN GENERATE REVENUE TO SUSTAIN ITSELF

- ◉ Affiliate marketing
- ◉ Bartering online
- ◉ Deep discounters
- ◉ E-classifieds
- ◉ Electronic marketplaces & exchanges
- ◉ Electronic tendering system
- ◉ Find-the best price
- ◉ Group purchasing(e-co-ops)
- ◉ Information brokers & matching services
- ◉ Membership

E COMMERCE BUSINESS MODELS

- ◉ Name-your-own-price
- ◉ Online auctions
- ◉ Online direct marketing
- ◉ Product customization
- ◉ Supply-chain improvers
- ◉ Value-chain integrators
- ◉ Value-chain service providers
- ◉ Viral marketing

EC NEWCOMERS : SOCIAL NETWORK SITES

- ◉ Social commerce: Companies proactively finding ways to engage customers, build relationship & create communities...This trend “social commerce”.
- ◉ Social elements involved differentiates social commerce from ordinary e-business
- ◉ Concerned with creation of places where people can collaborate online , solicit advice from trusted individuals & avail themselves of goods & services.
- ◉ Blogging

BENEFITS OF ECOMMERCE

To organizations

- Expand markets
- Procure rapidly at less cost
- Shortens or eliminates marketing distribution channels
- Decreases cost of creating, processing, distributing storing & retrieving digitizable products & services.

To customers

- More choices
- 24 hrs a day transactions
- Retrieves relevant & detailed information in seconds
- Customized products
- Work & study at home
- Electronic communities..exchange ideas ,interact

To Society

- Do less travelling
- Standard of living increased
- Better facilities

LIMITATIONS OF ECOMMERCE

Technological limitations

- Lack of universally accepted standards for quality, security & reliability
- Insufficient telecommunications bandwidth
- Difficulty in integrating the internet & EC applications & software with some existing applications & databases
- Need for special web servers

Non technological limitations

- Unresolved legal issues
- Lack of national & international government regulations & industry standards
- Customer resistance to changing from real to virtual store
- Paperless faceless transactions

MAJOR EC MECHANISMS

- ⦿ Electronic markets
- ⦿ Electronic catalogs & classifieds
- ⦿ Electronic Auctions
- ⦿ Bartering & negotiations

ELECTRONIC MARKETS

- Virtual marketplace in which sellers & buyers meet & conduct different types of transactions.

- **ELECTRONIC CATALOGS AND CLASSIFIEDS:**

Consists of a product database directory & search capabilities & a presentation function.

Backbone of ecommerce sites.

Advertise & promote products & services

Customer..provide source of information on products & services.

ELECTRONIC AUCTIONS

- ◉ An auction is a competitive process in which either a seller solicits bids from buyers or a buyer solicits bids from sellers.
- ◉ Whether online or offline auctions prices determined dynamically by competitive bidding.
- ◉ Well suited to deal with products & services for which conventional marketing channels are ineffective or inefficient.
- ◉ Electronic auctions...increase revenues for sellers by broadening customer base & shortening cycle time of auctions.
- ◉ Buyers ..opportunity to bargain for lower prices & the convenience of not having to travel to an auctions site to attend auction.

TYPES OF AUCTIONS: FORWARD & REVERSE AUCTIONS

- ◉ FORWARD AUCTIONS: auctions that sellers use a selling channel to many potential buyers.
- ◉ Items placed at a special site for auction
- ◉ Buyers bid continuously for the product
- ◉ Highest bidder wins
- ◉ Sellers & buyers..individuals or organizations
- ◉ eBay.com
- ◉ Two types of forward auctions: **one to liquidate existing inventory**(customers seek lowest price on widely available goods or services);**other to increase marketing outreach & efficiency**(seek access to unique products or services).

REVERSE AUCTIONS

- ◉ There is one buyer(organization) that wants to buy a product or service.
- ◉ Places REQUEST FOR QUOTE(RFQ) on its website or in a 3rd party bidding marketplace.
- ◉ Once posted sellers(usually preapproved suppliers) submit bids electronically.
- ◉ Sellers..manufactures , distributors or retailers.
- ◉ Bids routed via buyers intranet to engineering & finance departments for evaluation.
- ◉ Clarifications made via email & winner notified electronically.

REVERSE AUCTIONS

- ◉ Suppliers invited to submit bids.
- ◉ Online bidding much faster than conventional bidding, usually attracts many more bidders
- ◉ Most common auction model for large purchases in terms of either quantity or price.
- ◉ Governments & large corporations frequently mandate this approach for procurements.
- ◉ Used in B2C, B2B, C2B, e-government, C2C commerce.
- ◉ Dellauction.com

BARTERING AND NEGOTIATIONS

- ◉ Related to auctions
- ◉ Electronically supported exchange of goods or services without a money transaction.
- ◉ Done through means of individual to individual bartering ads that appear in some newsgroups, bulletin boards & chat rooms.
- ◉ Several intermediaries that arrange for corporate e-bartering(barterbrokers.com)
- ◉ These intermediaries try to match online partners to a barter transaction
- ◉ Online negotiation can be done via sites..ioffer.com

BARTERING AND NEGOTIATIONS

- ◉ Until recently e-bartering matched only 2 individuals at a time who basically exchanged products or services(Peerflix , Bookin)
- ◉ Swaptree (swaptree.com) developed a mechanism that allows up to 4 traders to exchange products/services in one transaction
- ◉ Each trade lists what they have to give & what they need
- ◉ Swaptree does the matching assuming all items have the same value.
- ◉ Provides service for free & plans to make money from advertising

BUSINESS TO CONSUMER APPLICATIONS

- ◉ **Electronic storefronts:** extension of physical stores such as walmart..may be new businesses who saw a niche on web cdnow.com..used by manufacturers..may sell to individuals or organizations.
- ◉ **Electronic malls:** known as cybermall or e-mall is a collection of individual shops under one internet address..provide one stop shopping place that offers many products & services...each mall may include thousands of vendors..shopping.msn.com
- ◉ Two types of malls exists

REFERRAL MALLS

- ⦿ Cannot buy
- ⦿ Automatically transferred from mall to a participating storefront

- ◉ Can actually make a purchase
- ◉ Might shop from several stores but make only one purchase transaction at the end
- ◉ Electronic shopping cart enables to gather items from various vendors & pay for them all together in one transaction
- ◉ Mall organizer takes a commission from sellers for this service.

E-TAILING : THE ESSENTIALS

- ◉ Concept of retailing implies sales of goods &/or services from many manufacturers to many individual customers.
- ◉ When done online..e-tailing
- ◉ Ability to offer customized products & services to individual customers at a reasonable price & fairly fast(Dell)
- ◉ Many sites offer product self-configuration from their B2C portals(Nike)

ONLINE SERVICE INDUSTRIES

- ◉ Cyber banking
- ◉ Online securities trading
- ◉ Travel services
- ◉ Real estate
- ◉ Customer service...Requirements ,Acquisition ,Ownership , Retirement

ISSUES IN E-TAILING

- ⦿ Resolving channel conflict
- ⦿ Resolving conflicts within click & mortar organizations
- ⦿ Organizing order fulfillment & logistics
- ⦿ Determining viability & risk of online e- tailers
- ⦿ Identifying appropriate revenue models.

BUSINESS TO BUSINESS APPLICATIONS

- ◉ Buyers , sellers & transactions involve only organizations.
- ◉ 85% of ecommerce
- ◉ Covers applications that enable an enterprise to form electronic relationships with its distributors , resellers , suppliers ,customers & other partners.
- ◉ Using B2B, organizations can restructure their supply chains & partner relationships.

BUSINESS MODELS FOR B2B APPLICATIONS

- ◉ Sell side corporate marketplace
- ◉ Buy side corporate marketplace
- ◉ Public exchanges
- ◉ Partner relationship management
- ◉ Collaborative commerce
- ◉ Supplier relationship management

SELL SIDE MARKETPLACE MODEL

- Organizations attempt to sell their products or services to other organizations electronically from their own private e-marketplace &/or from a 3rd party site.
- Similar to B2C model..but buyer is organization.
- Key mechanisms in sell side model: electronic catalogs customized for each large buyer
- Forward auctions
- Works well for companies having superb reputations
- Seller can be..manufacturer,distributor,retailer

BUY-SIDE MARKETPLACE

- ◉ Organizations attempt to buy needed products or services from other organizations electronically
- ◉ Method used is reverse auction
- ◉ Buy side model uses EC technology to streamline the purchasing process in order to reduce cost of items purchased, administrative cost of procurement & purchasing cycle time.
- ◉ Procurements using 3rd party buy-side marketplace model are popular for medium & small organizations.

E-PROCUREMENT

- Purchasing using electronic support
- Uses reverse auction &
- 2 popular mechanisms: Group purchasing & Desktop purchasing

GROUP PURCHASING

- ◉ orders of many buyers are aggregated so that they total to a large volume, 1 order to merit more seller attention & discounts.
- ◉ Aggregated order can be placed on a reverse auction & volume discount can be negotiated.
- ◉ Orders of small buyers can be aggregated by a 3rd party (independent, not seller or buyer) vendor..united sourcing alliance(usa-llc.com).
- ◉ Popular in healthcare industry(allhealth.com) & in education(tepo.org).

DESKTOP PURCHASING

- ◉ Suppliers catalogs are aggregated into a internal master catalog on the buyers server, so that company's purchasing agents(even end users) can shop more conveniently.
- ◉ Most suitable for indirect maintenance, replacement & operations (MRO) items such as office supplies.
- ◉ Indirect refers to fact that items are not inputs to manufacturing.
- ◉ In this model company has many suppliers but quantities it purchases from each one are relatively small
- ◉ Model most appropriate for government entities & large companies.

PUBLIC EXCHANGES

- ◉ E-marketplaces in which there are many sellers & many buyers & where entry is open to all
- ◉ Frequently owned & operated by 3rd party

4 basic exchanges:

- ◉ Vertical exchanges for direct materials
- ◉ Vertical exchanges for indirect materials
- ◉ Horizontal exchanges
- ◉ Functional exchanges

VERTICAL EXCHANGES FOR DIRECT MATERIALS

- ◉ B2B marketplaces where direct materials that are input to manufacturing are traded..usually in large quantities in an environment of long term relationship known as systematic sourcing.
- ◉ Plasticnet.com...plastics used in furniture industries
- ◉ Papersite.com..paper used in publishing industry.

VERTICAL EXCHANGES FOR INDIRECT MATERIALS

- ◉ Indirect materials in one industry are purchased usually on as needed basis (spot sourcing)
- ◉ Buyers & sellers may not even know each other
- ◉ Chemconnect.com, Isteelasia.com
- ◉ Prices are continually changing, based on matching of supply & demand.
- ◉ Auctions typically used in this kind of B2B marketplace sometimes done in private trading rooms which are available in exchanges like chemconnect.com
- ◉ Companies may trade same commodity or parts of both types of markets

BUSINESS TO EMPLOYEES COMMERCE

- ◉ Companies finding ways to do business electronically with their own employees.
- ◉ They disseminate information to employees over the company intranet..part of employee relationship management.
- ◉ Employees can manage their benefit packages,take training classes electronically
- ◉ Purchase discounted corporate products & services,insurance,travel packages & tickets to events.
- ◉ Disseminate information

EC BETWEEN & AMONG CORPORATE EMPLOYEES

- Many large organizations allow employees to post classified ads on the company intranet through which employees can buy & sell products & services from & to each other.
- Service popular in universities

EC BETWEEN & AMONG UNITS WITHIN THE BUSINESS

- Large corporations frequently consist of independent units or strategic business units which “sell” or “buy” materials , products & services to or from each other (intranet transactions).
- This type transactions can be easily automated & performed over intranet.
- SBU either can be a seller or buyer.
- Eg: company owned dealerships which buy goods from main company...helps improve internal supply chain operations.

COLLABORATIVE COMMERCE

- Refers to use of digital technologies that enable companies to collaboratively plan , design , develop , manage & research products , services & innovative EC applications.
- Company collaborating electronically with a vendor that designs a product or part for the company.
- C-commerce implies communication , information sharing & collaborative planning done electronically using tools such as groupware & specially designed EC collaboration tools.

E-GOVERNMENT

- ◉ Use of internet technology & ecommerce to deliver information & public services to citizens, business partners & suppliers of government entities & people who work in public sector.
- ◉ Improves efficiency & effectiveness of functions of government, including delivery of public services.
- ◉ G2C..provide services to citizens..electronic benefits transfer.
- ◉ G2B...electronic tendering systems
- ◉ G2G..among different government agencies.

CONSUMER TO CONSUMER EC

- ◉ Refers to EC in which both buyer & seller are individuals.
- ◉ C2C auctions
- ◉ Classified Ads
- ◉ Personal services

ELECTRONIC PAYMENT SYSTEMS

- ◉ Electronic credit cards
- ◉ Electronic bill payments: Online banking, biller direct, bill consolidator
- ◉ Digital wallets
- ◉ Virtual credit cards
- ◉ Payment using fingerprints

ETHICAL AND LEGAL ISSUES IN E-BUSINESS

- ◉ Privacy
- ◉ Web tracking
- ◉ Loss of jobs
- ◉ Disintermediation & Reintermediation
- ◉ Buyer protection
- ◉ Seller protection

MANAGERIAL ISSUES

- ◉ Ecommerce failures
- ◉ Failed Ec initiatives within organizations
- ◉ Success stories & lessons learned
- ◉ Managing resistance to change
- ◉ Integration of ecommerce into the business environment
- ◉ Lack of qualified personnel & outsourcing
- ◉ Managing impacts & implementation
- ◉ Alliances
- ◉ Choosing company's strategy towards ecommerce
- ◉ Justifying ec by conducting cost-benefit analysis is very difficult.