P11 Online

E352 – Retail Logistics

REPUBLIC POLYTECHNIC

SCHOOL OF ENGINEERING

What is E-Commerce?

Types of E-Commerce:

❑ <u>Consumer shopping</u> on the web (business-to-consumer): e.g. Walmart.com sells merchandise to consumers through its web site.
This is an example of e-retailing.

❑ <u>Business trading</u> with other businesses (business-to-business): e.g. Grainger.com sells industrial supplies to large and small businesses through its web site.

❑ <u>Transaction & business processes</u> to support buying, selling, hiring, planning: e.g. Dell Computer shares sales forecast information with suppliers. The suppliers can use this information to plan their own production and deliver components parts to Dell in the right quantities at the right time.

Note: E-retailing is a subset of E-Commerce

E-Commerce Trends

- Global enterprises in many countries have participated in e-commerce
    - Reduce cost, higher profit margin, more efficient logistics
- Many e-commerce web site available in multiple languages
    - Different products are sold at different regions / countries
    - Suit the needs of users from various countries
- Rapidly use of broadband technologies / mobile internet for faster internet connections and convenience
    - Online-banking, social websites etc
- E-commerce increasingly are integrated with RFID, biometric devices and random passwords to manage information and product flows effectively
    - Use of ezlink card for online purchases, DBS token for password verification for online banking

E-Commerce Trends

- Customized e-mail strategies now integral to customer contact
  - Product updates newsletter depending on the past purchase / product search history
- Use of multiple sophisticated advertising approaches
  - Spam / direct emails, banners, pop-up ads, social site integration etc
- Integration of e-commerce with existing business processes and strategies
  - Direct shipping from warehouse / retail shops
  - E.g. Apple Store and iTunes Store

E-Commerce Trends

B2C E-Commerce Sales* in Select Countries in the Asia-Pacific Region, 2006-2011 (bilions)

|	2006	2007	2008	2009	2010	2011
Australia	$9.5	$13.6	$20.4	$26.4	$28.7	$31.1
China**	$2.4	$3.8	$6.4	$11.1	$16.9	$24.1
India	$0.8	$1.2	$1.9	$2.8	$4.1	$5.6
Japan	$36.8	$43.7	$56.6	$69.9	$80.0	$90.0
South Korea	$9.6	$10.9	$12.4	$14.0	$15.9	$17.9
Asia-Pacific	**$59.1**	**$73.3**	**$97.7**	**$124.1**	**$145.5**	**$168.7**

Note: converted at average annual exchange rates (projected for future years); total B2C e-commerce sales include all purchases made on a retail Web site, regardless of device used to complete the transaction; *includes online travel, event ticket and digital download sales; **excludes Hong Kong
Source: eMarketer, January 2008

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www.eMarketer.com

Successful E-Commerce Companies

- Amazon: direct and indirect selling to customers / companies
  - B2B, B2C, C2C
- eBay Singapore: indirect selling to customers
  - C2C, B2C
- iTunes
  - B2B, B2C
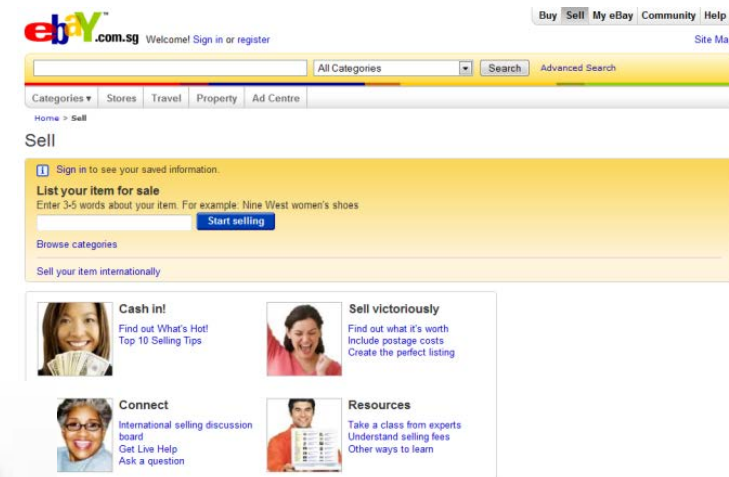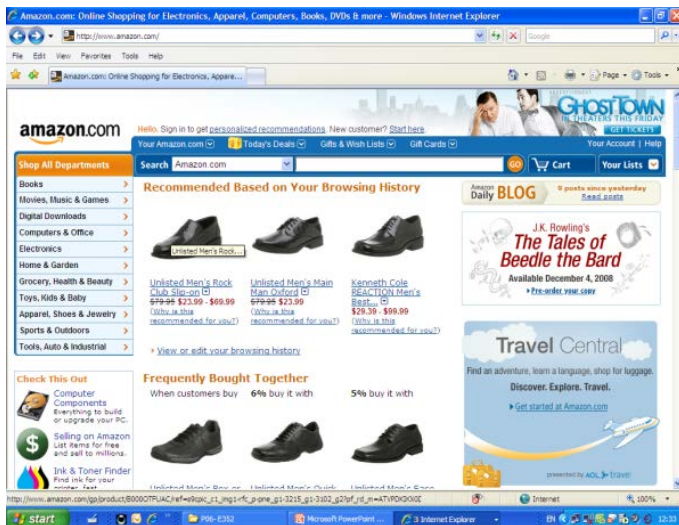
Successful E-Commerce Companies

- Yahoo! Singapore: Information Portal and Search Engine offers e-commerce plan
  - B2B, B2C, C2C
  - Provides information such as News, Weather, Sports
  - Allows companies / individuals to advertise / sells products and services directly
  - Yahoo! Shopping, Yahoo! Travel

Business Processes Suitability

- Identify key business processes that can be streamlined, enhanced or replaced through the web
    - E.g. Purchase of raw materials or goods for resale, managing transportation and logistics
- Physical stores has merchandising (store design, layout and product display) and sales people to convince customers to buy and finding products/services to meet customers' need.
- Some products are more suitable for E-commerce as they can transfer over the web easily.
    - E.g. Books or software as customer does not concerned about fit, freshness or other qualities.

Business Processes Suitability

- **Well suited to e-commerce:**
- Sales/purchase of commodity items (books, CDs, computer, soap, office supplies) or product easily package and delivered at a low shipping cost compared to selling price or high value-to-weight ratio.
- Online delivery of software / online games
- Sales/purchase of travel services
- Online shipment tracking
- Sales/purchase of investment /Insurance products

- **Well suited to traditional commerce:**
- Sales/purchase of impulse items for immediate use
- Low value transactions (total sales/purchase under $10)
- Fresh food and vegetables

- **Suited to combinational of e-commerce and traditional commerce:**
- Sales/purchase of residential real estate
- Online banking
- Matching services

Advantages of E-Commerce

- Ease of promotion messages
- Increase sales & reduce cost
- Speed and accuracy of information exchanged (EDI)
- Bidding for lowest cost, highest profit
- Wide range of choices from different sellers / buyers
- E-payment can be easier to audit and monitor
- Making services available in remote areas
- Packaged goods and branded items that are perceived as quality products are suitable
- Leverage on existing infrastructure (warehouses, purchasing system, physical retail store)

Challenges of E-Commerce

- Perishable foods and high cost unique item (e.g. antiques) might be impossible to inspect adequately
- Difficult to quantify benefits and cost
- Web Technology changing rapidly
- Lack of talents in technological, design and business process skills to make e-commerce effective
- Fearful of security in e-payment / transactions
- Need to have a return policy. Can or cannot return?

Transaction Costs

- Transaction costs are the total costs that a buyer and seller incur as they gather information and negotiate a purchase or sale transaction.

- The cost includes investment cost in equipment or hiring of skilled employee to supply product or services to the buyer.

  E.g. Knitters → Sweater dealer → Retail Clothing shops → Customer

- Transaction cost occurs between 2 parties. E.g. knitters and sweater dealers or sweater dealers and retail shops

Using E-Commerce to Reduce Transaction Costs

- Reducing cost of searching for potential buyers and sellers
  - Increasing number of potential customers / markets segments (network effect)
  - Transactions can be done online / over a trusted platform
    - Eliminate the need of shop floor space and sales person
- Improving communication flow
  - Be able to relate to buyers / sellers quickly without boundary restrictions
  - Improving coordination of actions
- Reduce the need for vertical integration
  - Involvement of partnership (E.g. Dell)

Value Chain

- The functions within a company that add value to the goods or services that the organization sells to customer and for which it receives payment *– APICS Dictionary, 12th edition*

  - Example: Industry value chain for a wooden chair

  - Logger cut down trees → Sawmill converts logs to lumber → Distributor provides selection of lumber → Chair factory assembles chair →Furniture retailer markets and sells chair →Consumer purchases and uses chair → Landfill or recycler disposes of chair

- Through the value chain analysis, e-commerce can be used to reduce costs, reach new customers or suppliers, and create new ways of selling existing products.

Issues of E-Retailing

- **Trust :** Web site visitors will not become customers unless they trust the company behind the site. A plan to establish creditability is essential

- **Language:** Customers are far more likely to buy products/services in their own language or dialects

- **Culture:** Wine.com received complaints from Japanese customer about short shipment. Reason: Wine.com shipped one bottle in a 2-bottled packaging. Japanese consider packaging as important in a high quality product like wine.

- **Specific country laws & regulations:** E-Commerce laws varies from place to place, country to country. E.g. taxing law

- **Infrastructure:** High cost / inconvenience of internet connection

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Today's Problem: Suggested Solution

❖ Joanne operates a retail shop which sells mainly t-shirts.

❖ These products are suitable for e-retailing because:

  ❖ Easily packed and light. Transportation is easily and not too expensive

  ❖ Designs and patterns can be easier seen online

  ❖ Fashion goods, high-value to weight

❖ Those it is recommended that Joanne embark on the e-commerce plan.

Today's Problem: Suggested Solution

❖ We should advise her on:

  ❖ Need to ensure security in e-payment

  ❖ Language used on her website

  ❖ Need to have a return policy in place.

  ❖ Build trust by have good quality goods and meeting promises. Eg, delivery dates.

Learning Outcomes

❑Investigate various types of e-commerce methods

❑Identify the challenges and advantages of e-commerce

❑Identify the various factors that will impact the success in e-retailing