Introduction to B2C E-Commerce

Acknowledgement: H. Chiang
Definitions of E-Commerce

Electronic commerce is a set of technologies, applications, and business processes that link business, consumers, and communities

- For buying, selling, and delivering products and services
- For integrating and optimizing processes within and between participant entities
What is B2C?

• B2C Commerce: Interactions relating to the purchase and sale of goods and services between a business and consumer—retail transactions.

• “Novelty” is that retail transaction is done on the Internet, rather than in a “brick and mortar” store location.

• Technical evolution of B2C from “brick and mortar” model not new.
A Different Approach to Location Retailing

- In 1886, a jeweler unhappy with a shipment of watches refuses to accept them.
- A local telegraphy operator buys the unwanted shipment.
- Uses the telegraph to sell all the watches to fellow operators and railroad employees.
- Becomes so successful that he quits his job and started his own enterprise, specializing in catalog sales.
- Name: Richards Sears of Sears Roebuck
Revenue Models

- Sell goods and services and take a cut (just like B&M retailers). (e.g., Amazon, E*Trade, Dell)

- Advertising
  - Ads only (original Yahoo)
  - Ads in combination with other sources

- Transaction fees

- Sell digital content through subscription. (e.g., WSJ online, Economist Intelligence Wire)
E-Commerce Retail Sales

Estimated Quarterly U.S. Retail E-Commerce Sales 4th Quarter 1999 - 4th Quarter 2000

- 4th Q 1999: $5,198 billion
- 1st Q 2000: $5,24 billion
- 2nd Q 2000: $5,526 billion
- 3rd Q 2000: $6,393 billion
- 4th Q 2000: $8,686 billion


- 2000: $59.7 billion
- 2001: $101.1 billion
- 2002: $167.2 billion
- 2003: $250.0 billion
- 2004: $428.1 billion

Source: eMarketer
## Estimated Quarterly U.S. Retail Sales: Total and E-commerce

Data in millions of dollars. Not adjusted for seasonal, holiday, and trading-day differences.

<table>
<thead>
<tr>
<th>Period</th>
<th>Period</th>
<th>Retail Sales</th>
<th>E-commerce as a Percent of Total Sales</th>
<th>Quarter to Quarter Percent Change</th>
<th>E-commerce Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>E-commerce</td>
<td></td>
<td>Total Sales</td>
<td></td>
</tr>
<tr>
<td>4Q 1999</td>
<td>821,351</td>
<td>5,198</td>
<td>0.63</td>
<td>8035</td>
<td>NA</td>
</tr>
<tr>
<td>1Q 2000</td>
<td>747,934</td>
<td>5,240</td>
<td>0.70</td>
<td>-8.9</td>
<td>0.8</td>
</tr>
<tr>
<td>2Q 2000</td>
<td>815,677</td>
<td>5,526</td>
<td>0.68</td>
<td>9.1</td>
<td>5.5</td>
</tr>
<tr>
<td>3Q 2000</td>
<td>812,158</td>
<td>6,393</td>
<td>0.79</td>
<td>-0.4</td>
<td>15.7</td>
</tr>
<tr>
<td>4Q 2000</td>
<td>856,234</td>
<td>8,686</td>
<td>1.01</td>
<td>5.4</td>
<td>35.9</td>
</tr>
</tbody>
</table>

Source: Commerce Dept.
Top Ten U.S. Purchase Categories

- Books: 52%
- Computers and computer-related products: 49%
- CD, recorded music: 49%
- Clothing: 37%
- Tickets/reservations: 29%
- Toys: 28%
- Electronic products, small "consumer" videos, filmed entertainment: 28%
- Cosmetics, fragrances, health and beauty aids: 27%
- Other: 25%
First-Generation B2C

- Main Attraction: Lower Retail Prices
- “B2C Pure Plays” could eliminate intermediaries, storefront costs, some distribution costs, etc.
- Archetype: www.amazon.com
Amazon.com

- Full Name: Amazon.com, Inc.
- Employees: 9,000
- Stock Price:
  - $6.76 (at close October 3, 2001)
  - 52 Wk Range: $5.51 to $40.87
- 2000 Sales $2,762 M
  1-Year Sales Growth: 68.4%
- Internet’s largest retailer. Best known for books, CDs, DVDs, and Videos.
## Brand Strength

Source: U.S. Bancorp Piper Jaffray (July 24, 2000)

<table>
<thead>
<tr>
<th>Company</th>
<th>Mind Share</th>
<th>Company</th>
<th>Online Purchaser Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon.com</td>
<td>24.1%</td>
<td>Amazon.com</td>
<td>18.7%</td>
</tr>
<tr>
<td>eBay.com</td>
<td>16.1%</td>
<td>eBay.com</td>
<td>15.8%</td>
</tr>
<tr>
<td>Yahoo.com</td>
<td>4.9%</td>
<td>BarnesandNoble.com</td>
<td>6.0%</td>
</tr>
<tr>
<td>priceline.com</td>
<td>2.7%</td>
<td>BMG.com</td>
<td>3.9%</td>
</tr>
<tr>
<td>buy.com</td>
<td>1.9%</td>
<td>CDNow.com</td>
<td>3.3%</td>
</tr>
<tr>
<td>BarnesandNoble.com</td>
<td>1.8%</td>
<td>ColumbiaHouse.com</td>
<td>3.1%</td>
</tr>
<tr>
<td>CDNow.com</td>
<td>1.3%</td>
<td>JCPenney.com</td>
<td>3.0%</td>
</tr>
<tr>
<td>AOL.com</td>
<td>1.1%</td>
<td>priceline.com</td>
<td>2.7%</td>
</tr>
<tr>
<td>Egghead.com</td>
<td>1.0%</td>
<td>buy.com</td>
<td>2.6%</td>
</tr>
<tr>
<td>Iwon.com</td>
<td>0.9%</td>
<td>Yahoo.com</td>
<td>2.3%</td>
</tr>
<tr>
<td>JCPenney.com</td>
<td>0.9%</td>
<td>1800flowers.com</td>
<td>2.3%</td>
</tr>
</tbody>
</table>
Main Lines of Business

• Retail
  - Broad product range, from textbooks to household tools

• Shopping Mall
  - Individuals and companies pay Amazon.com to offer their products on its site.

• “Overseeing” other websites
  - Has invested in some of them
  - Broad range of offerings, from prescription drugs to wedding planning

• 2000 Sales
  - 71% books, CDs, DVDs, Videos
  - 78% US
Amazon.com History

- Founded: 1994
- Website launched: July, 1995
- 1997
  - IPO: 3 million shares, $54.0 million
  - Moves to “cement the Amazon.com brand.”
  - Becomes the sole book retailer on America Online’s public website and on Netscape’s commercial channel.
History (continued)

- 1998: Expansion
  - Launched online CD and video stores.
  - Began selling toys and electronics.
  - Bought online booksellers in the UK and Germany.
  - Bought Internet Movie Database.
  - Expanded online services, buying Junglee (comparison shopping) and PlanetAll (address book, calendar, reminders).
  - Attracted so much attention that its market capitalization equaled the combined values of profitable bricks-and-mortar rivals Barnes & Noble and Borders Group, even though their combined sales were far greater than Amazon's.
History (continued)

• 1999: More Expansion
  - Raised $1.25 billion in a bond offering.
  - Spending spree with deals to buy all or part of several dot-coms
    • Some have since been sold (HomeGrocer.com), and others have gone out of business or bankrupt -- Pets.com, living.com
    • It also bought the catalog businesses of Back to Basics and Tool Crib of the North.
  - Began conducting online auctions and partnered with Sotheby’s.
  - Added distribution facilities, including one each in England and Germany.
History (continued)

• 2000: Yet More Expansion
  - Placed a link to drugstore.com on its homepage; drugstore.com paid more than $100 million for that access.
  - 10-year deal with toysrus.com to set up a co-branded toy and video game store.
  - Added foreign-language sites for France and Japan.
2001: End of the Beginning

- Investors demand profits
- Amazon announces plans to restructure and layoff of 15% of its workforce.
- Takes a $150 million charge.
- Announces a deal with Borders to provide inventory, fulfillment, content, and customer service for borders.com
Amazon.com, Inc.
Stock Quotes (AMZN)
Source: Quicken.com (10/3/2001)


[S] = Stock Split
## Financials and Employees (“Long March to Profitability”)

Source: Hoovers and SEC Filings

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue ($mil.)</th>
<th>Net Income ($mil.)</th>
<th>Net Profit Margin</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 (1Q-2Q only)</td>
<td>1,367.9</td>
<td>-402.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>2,762.0</td>
<td>-1,411.3</td>
<td></td>
<td>9000</td>
</tr>
<tr>
<td>1999</td>
<td>1,639.8</td>
<td>-720.0</td>
<td></td>
<td>7600</td>
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<tr>
<td>1998</td>
<td>610.0</td>
<td>-124.5</td>
<td></td>
<td>2100</td>
</tr>
<tr>
<td>1997</td>
<td>147.8</td>
<td>-27.6</td>
<td></td>
<td>614</td>
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<td>1996</td>
<td>15.7</td>
<td>-5.8</td>
<td></td>
<td>151</td>
</tr>
<tr>
<td>1995</td>
<td>0.5</td>
<td>-0.3</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>1994</td>
<td>0.0</td>
<td>-0.1</td>
<td></td>
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Reminder: Homework For October 9, 2001

• Second written homework assignment is due in class Tuesday.
• Covers readings and lectures through 10/4/2001.
• Available online at http://www.cs.yale.edu/~vijayr/cs155/hw2.pdf