Electronic Commerce

Chapter 1: Introduction

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Objectives

• Two waves of e-commerce
• What is e-commerce?
• E-commerce categories
• Advantages and disadvantages
• Economics and e-commerce
• International nature of e-commerce
Two waves of e-commerce

- Mid 1990s-2000: e-commerce grew rapidly
- 2000-2003: dot com bust
- News stories: death of e-commerce
- Examples: Pets.com, Boo.com, Cisco, Amazon
- From 2003: new life
- Economic recession period started in 2008: is affected less than most of the economy
# Two waves of e-commerce

<table>
<thead>
<tr>
<th>Electronic Commerce Characteristic</th>
<th>First Wave</th>
<th>Second Wave</th>
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<tbody>
<tr>
<td>International character of electronic commerce</td>
<td>Dominated by U.S. companies</td>
<td>Global enterprises in many countries participating in electronic commerce</td>
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<tr>
<td>Languages</td>
<td>Most electronic commerce Web sites in English</td>
<td>Many electronic commerce Web sites available in multiple languages</td>
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<tr>
<td>Funding</td>
<td>Many new companies started with outside investor money</td>
<td>Established companies funding electronic commerce initiatives with their own capital</td>
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<tr>
<td>Connection technologies</td>
<td>Many electronic commerce participants used slow Internet connections</td>
<td>Rapidly increasing use of broadband technologies for Internet connections</td>
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<tr>
<td>E-mail contact with customers</td>
<td>Unstructured e-mail communication with customers</td>
<td>Customized e-mail strategies now integral to customer contact</td>
</tr>
<tr>
<td>Advertising and electronic commerce integration</td>
<td>Overreliance on simple forms of online advertising as main revenue source</td>
<td>Use of multiple sophisticated advertising approaches and better integration of electronic commerce with existing business processes and strategies</td>
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<tr>
<td>Distribution of digital products</td>
<td>Widespread piracy due to ineffective distribution of digital products</td>
<td>New approaches to the sale and distribution of digital products</td>
</tr>
<tr>
<td>First-mover advantage</td>
<td>Rely on first-mover advantage to ensure success in all types of markets and industries</td>
<td>Realize that first-mover advantage leads to success only for some companies in certain specific markets and industries</td>
</tr>
</tbody>
</table>
What is e-commerce

• E-commerce: shopping on the World Wide Web
• E-business: includes other activities
• Definition from IBM: the transformation of key business processes through the use of Internet technologies
• Business model: set of processes that combine to achieve a company’s primary goal
What is e-commerce

• Business process: collection of related activities to produce a specific service or product
• Primary (core) processes: create value directly (purchasing, manufacturing, sales, etc.)
• Supporting processes: support core processes (accounting, recruitment, technical support, etc.)
• Instead of copying business models, a wiser approach is to improve/replace specific business processes
What is e-commerce

- Value chain: a chain of activities for a firm operating in a specific industry
What is e-commerce

- Industry value chain: a chain of various processes that are involved in producing goods (and services), starting with raw materials and ending with the delivered product
- SWOT (strengths, weaknesses, opportunities, threats) analysis
# E-commerce categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Example</th>
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</thead>
<tbody>
<tr>
<td>Business-to-consumer (B2C)</td>
<td>Businesses sell products or services to individual consumers.</td>
<td>Walmart.com sells merchandise to consumers through its Web site.</td>
</tr>
<tr>
<td>Business-to-business (B2B)</td>
<td>Businesses sell products or services to other businesses.</td>
<td>Grainger.com sells industrial supplies to large and small businesses through its Web site.</td>
</tr>
<tr>
<td>Business processes that support buying and selling activities</td>
<td>Businesses and other organizations maintain and use information to identify and evaluate customers, suppliers, and employees. Increasingly, businesses share this information in carefully managed ways with their customers, suppliers, employees, and business partners.</td>
<td>Dell Computer uses secure Internet connections to share current sales and sales forecast information with suppliers. The suppliers can use this information to plan their own production and deliver component parts to Dell in the right quantities at the right time.</td>
</tr>
<tr>
<td>Consumer-to-consumer (C2C)</td>
<td>Participants in an online marketplace can buy and sell goods to each other. Because one party is selling, and thus acting as a business, this book treats C2C transactions as part of B2C electronic commerce.</td>
<td>Consumers and businesses trade with each other in the eBay.com online marketplace.</td>
</tr>
<tr>
<td>Business-to-government (B2G)</td>
<td>Businesses sell goods or services to governments and government agencies. This book treats B2G transactions as part of B2C electronic commerce.</td>
<td>CA.gov procurement site allows businesses to sell online to the state of California.</td>
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</tbody>
</table>
E-commerce categories

- Business processes that support selling and purchasing activities
- Business-to-business electronic commerce
- Business-to-consumer electronic commerce

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Advantages & disadvantages

• Advantages
  • Create virtual community
  • For sellers
    • Increase sales
    • Decrease cost
    • Increase reach and richness
  • For buyers
    • Increase purchasing opportunities
    • Identify new suppliers and business partners
    • Easier negotiating price and delivery terms
    • Increase speed, information exchange accuracy
    • Wider range of choices

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Advantages & disadvantages

• Advantages
  • For society
    • Lower costs to issue:
      • Electronic payments of tax refunds
      • Public retirement
      • Welfare support
    • Secure and quick Internet transmission
    • Fraud, theft loss protection
    • Electronic payments easier to audit and monitor
    • Reduced commuter-caused traffic, pollution due to telecommuting
    • Products and services available in remote areas
Advantages & disadvantages

• Disadvantages
  • Not all products & services suitable for e-commerce
  • Technology and software issues
  • Consumers resistant to change
  • Cultural differences
  • Conflicting laws

• These disadvantages will disappear when
  • Advancing of technologies
  • Buyers willing to buy through the Internet
Advantages & disadvantages

- Products/services for e-commerce

<table>
<thead>
<tr>
<th>Well Suited to Electronic Commerce</th>
<th>Suited to a Combination of Electronic and Traditional Commerce Strategies</th>
<th>Well Suited to Traditional Commerce</th>
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<tbody>
<tr>
<td>Sale/purchase of books and CDs</td>
<td>Sale/purchase of automobiles</td>
<td>Sale/purchase of impulse items for immediate use</td>
</tr>
<tr>
<td>Sale/purchase of goods that have strong brand reputations</td>
<td>Banking and financial services</td>
<td>Low-value transactions (total sale/purchase under $10)</td>
</tr>
<tr>
<td>Online delivery of software and digital content, such as music and movies</td>
<td>Roommate-matching services</td>
<td>Sale/purchase of used, unbranded goods</td>
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<tr>
<td>Sale/purchase of travel services</td>
<td>Sale/purchase of residential real estate</td>
<td></td>
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<tr>
<td>Online shipment tracking</td>
<td>Sale/purchase of high-value jewelry and antiques</td>
<td></td>
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<tr>
<td>Sale/purchase of investment and insurance products</td>
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Economics and e-commerce

- Economics: study of how people allocate scarce resources
- One way people do this is to participate in markets
- Most economists agree that markets are strong and effective mechanisms for allocating scarce resources
- Transaction cost: total cost of a transaction
Economics and e-commerce

• How companies are formed?
Economics and e-commerce

• Agency cost: the cost of using an agency
• Two components:
  • The costs inherently associated with using an agent
  • The costs of techniques used to mitigate the problems associated with using an agent
• Using e-commerce to reduce transaction cost and agency costs
Economics and e-commerce

- Law of diminishing returns: in all productive processes, adding more of one factor of production, while holding all others constant, will at some point yield lower per-unit returns.
- Network effect: more people or organizations participate in a network, the value of the network to each participant increases.
- E-commerce can be used to create network effect.
International nature

• Internet connects computers worldwide
• When companies use Web to improve business process they automatically operate in global environment

• Key issues
  • Trust

“On the Internet, nobody knows you’re a dog.”
International nature

• Key issues
  • Languages
  • Culture
  • Government
  • Infrastructure
End of chapter 1