

# E-commerce: Digital Markets, Digital Goods

Part III

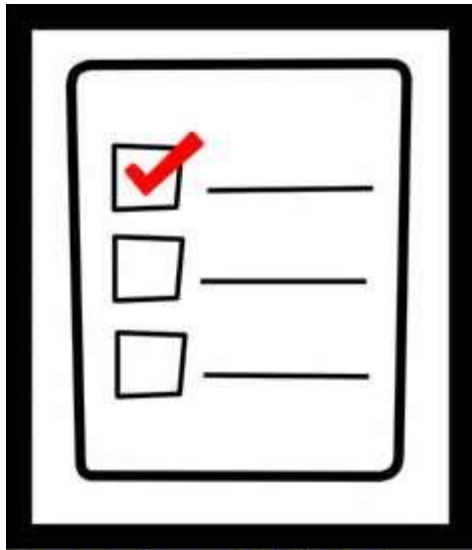
Key System Applications for the Digital Age

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**Information Systems**

Topic 10

## Part III

### Key System Applications for the Digital Age



Learning Objectives

## Learning Objectives

1. What are the unique features of e-commerce, digital markets, and digital goods?
2. What are the principal e-commerce business and revenue models?
3. How has e-commerce transformed marketing?
4. How has e-commerce affected business-to-business transactions?
5. What is the role of m-commerce in business, and what are the most important m-commerce applications?
6. What issues must be addressed when building an e-commerce presence?

- Case 1: Getting Social with Customers
- Case 2: Can Instacart Deliver?
- Case 3: Etsy: A Marketplace and Community

### **Case Study:**

## **Uber Storms Europe: Europe Strikes Back**

- **Problem**

- Opportunities presented by new technology
- Political and regulatory hurdles

- **Solutions**

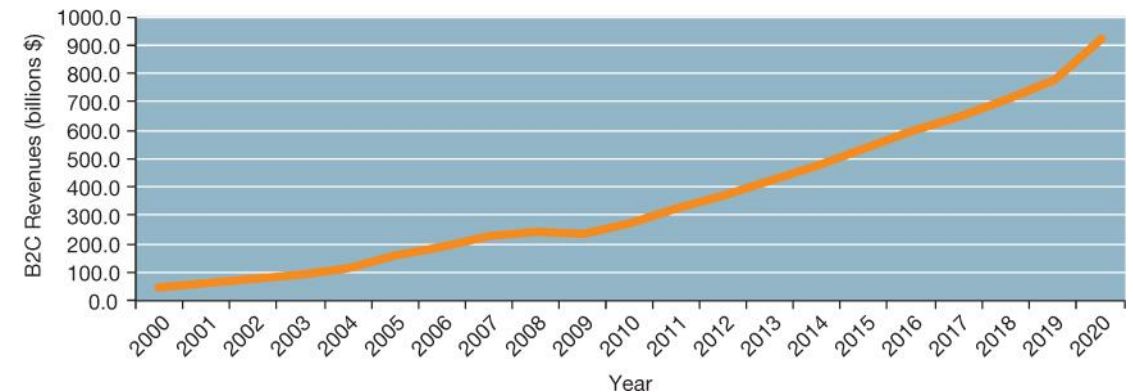
- Driver and rider apps
- Demand prediction software

- **Illustrates the use of IT to create new services as well as business models**

- **Demonstrates the disruptive effects of new technologies**

## E-commerce Today

- **E-commerce: Use of the Internet and web to transact business**
- **Began in 1995 and grew exponentially; still stable even in a recession**
- **Companies that survived the dot-com bubble now thrive**
- **The new e-commerce: social, mobile, local**
- **Move from desktop to smartphone**



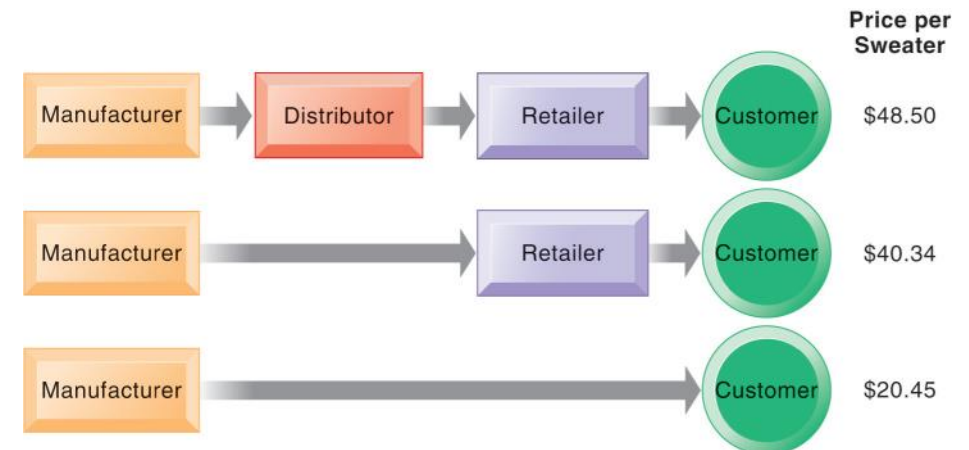
The Growth of E-commerce

## **Why E-commerce Is Different**

- **Ubiquity**
  - Marketplace is virtual
  - Transaction costs reduced
- **Global reach**
  - Transactions cross cultural and national boundaries
- **Universal standards**
  - One set of technology standards: Internet standards
- **Richness**
  - Supports video, audio, and text messages
- **Interactivity**
- **Information density**
  - Greater price and cost transparency
  - Enables price discrimination
- **Personalization/customization**
  - Technology permits modification of messages, goods
- **Social technology**
  - Promotes user content generation and social networking

## Key Concepts in E-commerce: Digital Markets and Digital Goods in a Global Marketplace

- Internet and digital markets have changed the way companies conduct business
- Information asymmetry reduced
- Menu costs, search and transaction costs reduced
- Dynamic pricing enabled
- Switching costs
- Delayed gratification
- Disintermediation



The Benefits of Disintermediation to the Consumer

## Digital Goods

- **Goods that can be delivered over a digital network**
- **Cost of producing first unit is almost entire cost of product**
- **Costs of delivery over the Internet very low**
- **Marketing costs remain the same; pricing highly variable**
- **Industries with digital goods are undergoing revolutionary changes (publishers, record labels, etc.)**

## **Types of E-commerce**

- **Three major types**
  - **Business-to-consumer (B2C)**
    - Example: BarnesandNoble.com
  - **Business-to-business (B2B)**
    - Example: ChemConnect
  - **Consumer-to-consumer (C2C)**
    - Example: eBay
- **E-commerce can be categorized by platform**
  - **Mobile commerce (m-commerce)**

## **E-commerce Business & Revenue Models**

- **Portal**
- **E-tailer**
- **Content provider**
- **Transaction broker**
- **Market creator**
- **Service provider**
- **Community provider**
- **Advertising**
- **Sales**
- **Subscription**
- **Free/Freemium**
- **Transaction fee**
- **Affiliate**

## How Has E-commerce Transformed Marketing?

- Internet provides new ways to identify and communicate with customers
- Long tail marketing
- Internet advertising formats
- Behavioral targeting
  - Tracking online behavior of individuals
- Programmatic ad buying
- Native advertising

Click 1

The shopper clicks on the home page. The store can tell that the shopper arrived from the Yahoo! portal at 2:30 PM (which might help determine staffing for customer service centers) and how long she lingered on the home page (which might indicate trouble navigating the site). Tracking beacons load cookies on the shopper's browser to follow her across the web.

Click 2

Click 3

Click 4

Click 5

The shopper clicks on blouses, clicks to select a woman's white blouse, then clicks to view the same item in pink. The shopper clicks to select this item in a size 10 in pink and clicks to place it in her shopping cart. This information can help the store determine which sizes and colors are most popular. If the visitor moves to a different site, ads for pink blouses will appear from the same or different vendor.

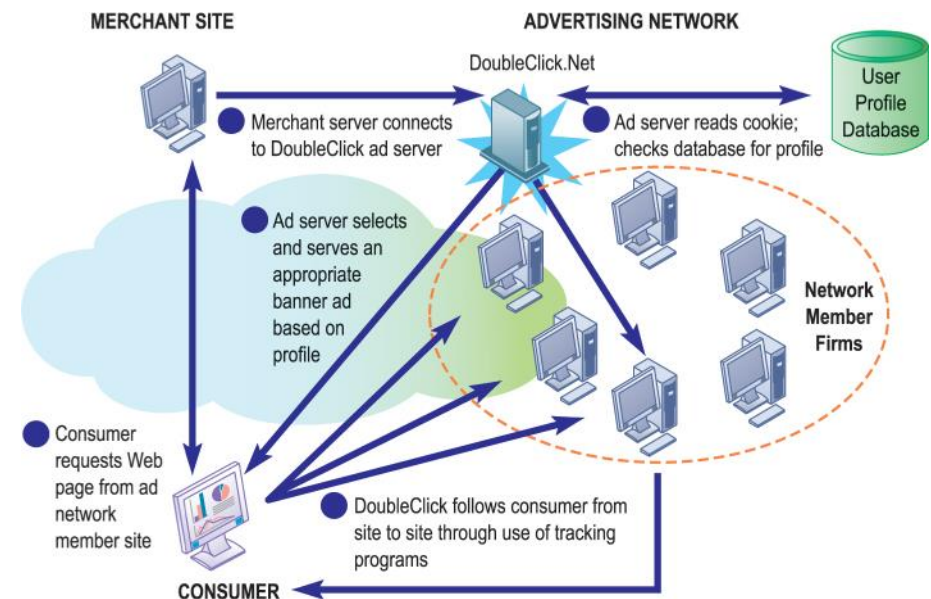
Click 6

From the shopping cart page, the shopper clicks to close the browser to leave the Website without purchasing the blouse. This action could indicate the shopper changed her mind or that she had a problem with the website's checkout and payment process. Such behavior might signal that the website was not well designed.

### Website Visitor Tracking



Website Personalization



How an Advertising Network Such as DoubleClick Works

### **Social E-commerce and Social Network Marketing**

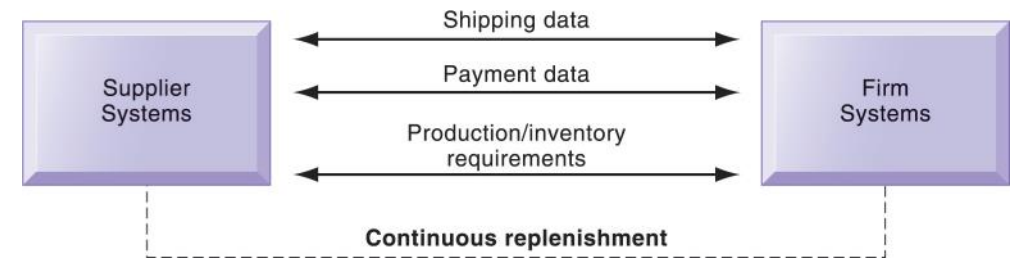
- **Social e-commerce based on digital social graph**
- **Features of social e-commerce driving its growth**
  - Newsfeed
  - Timelines
  - Social sign-on
  - Collaborative shopping
  - Network notification
  - Social search (recommendations)
- **Social media**
  - Fastest growing media for branding and marketing
- **Social network marketing**
  - Seeks to leverage individuals' influence over others
  - Targeting a social network of people sharing interests and advice
  - Facebook's "Like" button
  - Social networks have huge audiences
- **Social shopping sites**
- **Wisdom of crowds**
- **Crowdsourcing**

## **How Has E-commerce Affected Business-to Business Transactions?**

- **U.S. B2B trade in 2015 is \$14.6 trillion**
  - **U.S. B2B e-commerce in 2015 is \$6.2 trillion**
- **Internet and networking helps automate procurement**
- **Variety of Internet-enabled technologies used in B2B**
  - **Electronic data interchange (EDI)**
  - **Private industrial networks (private exchanges)**
  - **Net marketplaces**
  - **Exchanges**

## Electronic Data Interchange (EDI)

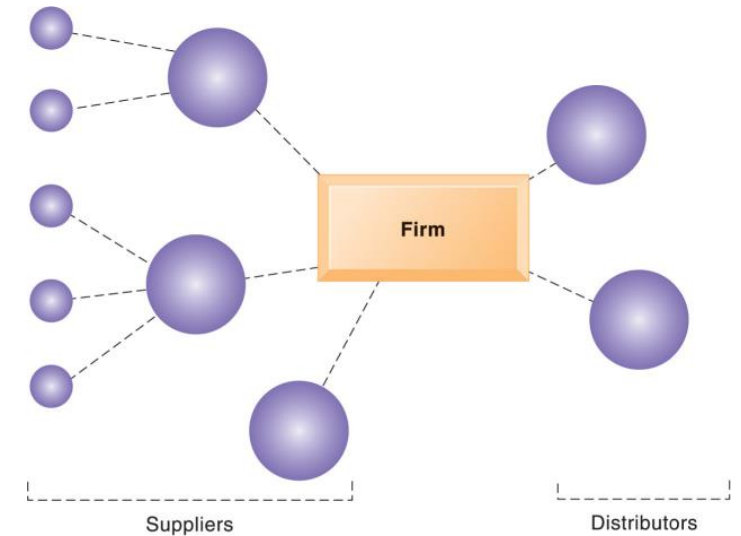
- **Computer-to-computer exchange of standard transactions such as invoices, purchase orders**
- **Major industries have EDI standards**
  - Define structure and information fields of electronic documents
- **More companies are moving toward web-enabled private networks**
  - Allow them to link to a wider variety of firms than EDI allows
  - Enable sharing a wider range of information



Electronic Data Interchange

## New Ways of B2B Buying and Selling

- **Private industrial networks**
  - Private exchanges
  - Large firm using a secure website to link to suppliers and partners
- **Net marketplaces (e-hubs)**
  - Single digital marketplace for many buyers and sellers
  - May focus on direct or indirect goods
  - May be vertical or horizontal marketplaces
- **Exchanges**
  - Independently owned third-party Net marketplaces for spot purchasing



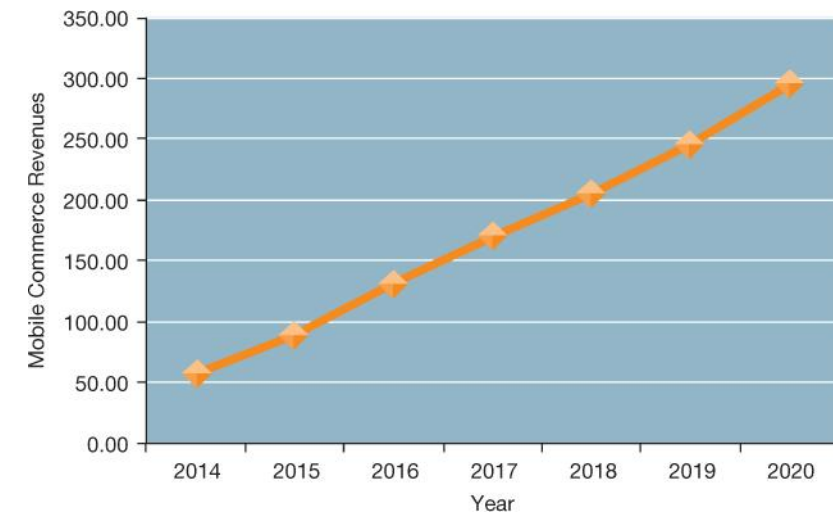
A Private Industrial Network



A Net Marketplace

## What Is the Role of M-commerce in Business, and What Are the Most Important M-commerce Applications?

- **M-commerce in 2017 is 37 percent of all e-commerce**
- **Fastest growing form of e-commerce**
  - Some areas growing at 50 percent or more
- **Main areas of growth**
  - Mass market retailing (Amazon, eBay, etc.)
  - Sales of digital content (music, TV, etc.)
  - In-app sales to mobile devices



Mobile Retail Commerce Revenues

## **Location-Based Services and Applications**

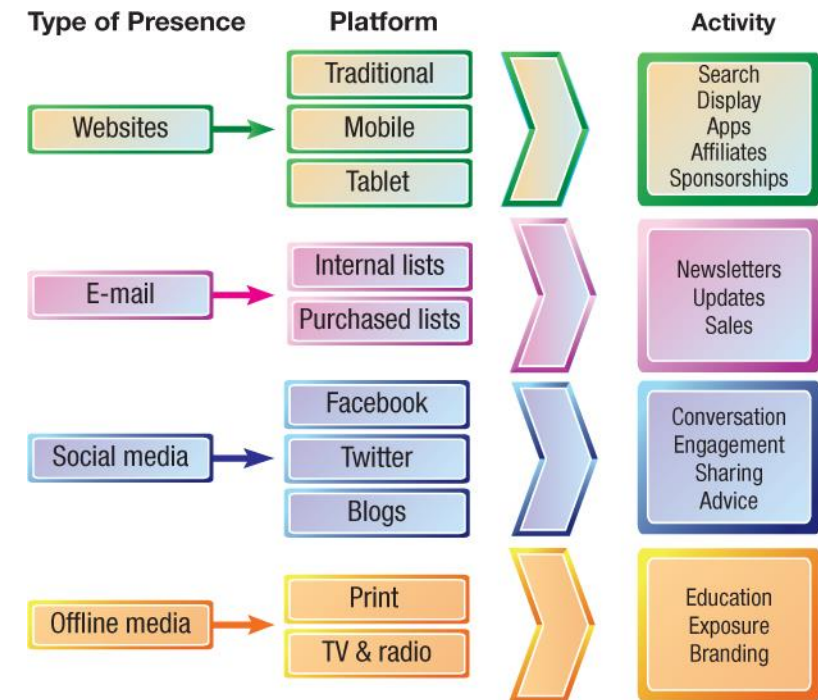
- **Used by 74 percent of smartphone owners**
- **Based on GPS map services**
- **Geosocial services**
  - **Where friends are**
- **Geoadvertising**
  - **What shops are nearby**
- **Geoinformation services**
  - **Price of house you are passing**

## **Other Mobile Commerce Services**

- **Financial account management apps**
  - Banks, credit card companies
- **Mobile advertising market**
  - Google and Facebook are largest markets
  - Ads embedded in games, videos, and mobile apps
- **55 percent of online retailers have m-commerce websites**

## What Issues Must be Addressed when Building an E-commerce Presence?

- **Most important management challenges**
  - Developing clear understanding of business objectives
  - Knowing how to choose the right technology to achieve those objectives
- **Develop an e-commerce presence map**
  - Four areas: websites, e-mail, social media, offline media
- **Develop a timeline: milestones**
  - Breaking a project into discrete phases



E-commerce Presence Map

## *Interactive Session: Technology*

### **Getting Social with Customers**

*Read the Interactive Session and discuss the following questions*

- **Class discussion**

- Assess the management, organization, and technology issues for using social media technology to engage with customers.
- What are the advantages and disadvantages of using social media for advertising, brand building, market research, and customer service?
- Give an example of a business decision in this case study that was facilitated by using social media to interact with customers.
- Should all companies use social media technology for customer service and marketing? Why or why not? What kinds of companies are best suited to use these platforms?

## *Interactive Session: Organization*

### **Can Instacart Deliver?**

*Read the Interactive Session and discuss the following questions*

- **Class discussion**

- Analyze Instacart using the value chain and competitive forces models. What competitive forces does the company have to deal with? What is its value proposition?
- Explain how Instacart's business model works. How does the company generate revenue?
- What is the role of information technology in Instacart's business model?
- Is Instacart's model for selling online groceries viable? Why or why not?

## Part III

### Key System Applications for the Digital Age

## Next Steps

- Answer the Moodle quiz
- Prepare for 11<sup>th</sup> chapter

