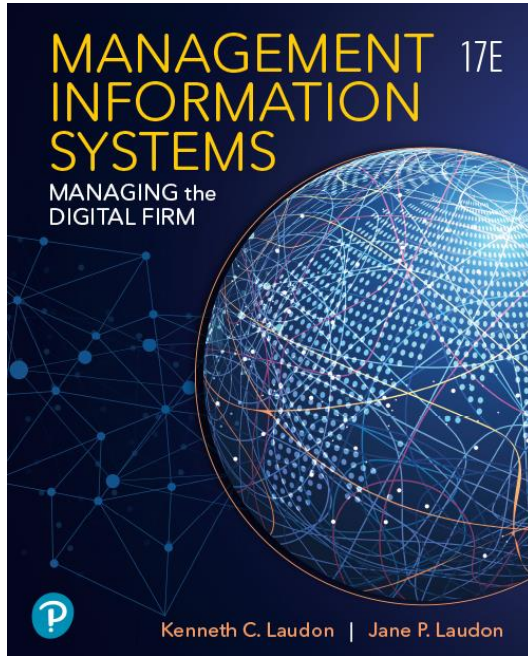


Management Information Systems: Managing the Digital Firm

Seventeenth Edition



Chapter 10

E-commerce: Digital Markets, Digital Goods

Learning Objectives

- 10.1** What are the unique features of e-commerce, digital markets, and digital goods?
- 10.2** What are the principal e-commerce business and revenue models?
- 10.3** How has e-commerce transformed marketing?
- 10.4** How has e-commerce affected business-to-business transactions?
- 10.5** What is the role of m-commerce in business, and what are the most important m-commerce applications?
- 10.6** What issues must be addressed when building an e-commerce presence?
- 10.7** How will MIS help my career?

Video Cases

- Case 1: Walmart Takes on Amazon: A Battle of IT and Management Systems
- Case 2: Groupon: Deals Galore
- Case 3: Etsy: A Marketplace and Community

E-commerce Comes to the Dashboard: The Battle for the “Fourth Screen” (1 of 2)

- Problem
 - Opportunities presented by new technology
- Solutions
 - Design business and revenue model
 - Partner with software providers
 - Data privacy restrictions
 - Design non-distracting interfaces
 - Dashboard display screens
 - Android Auto, Apple CarPlay, Android Automotive
 - Customer and auto databases

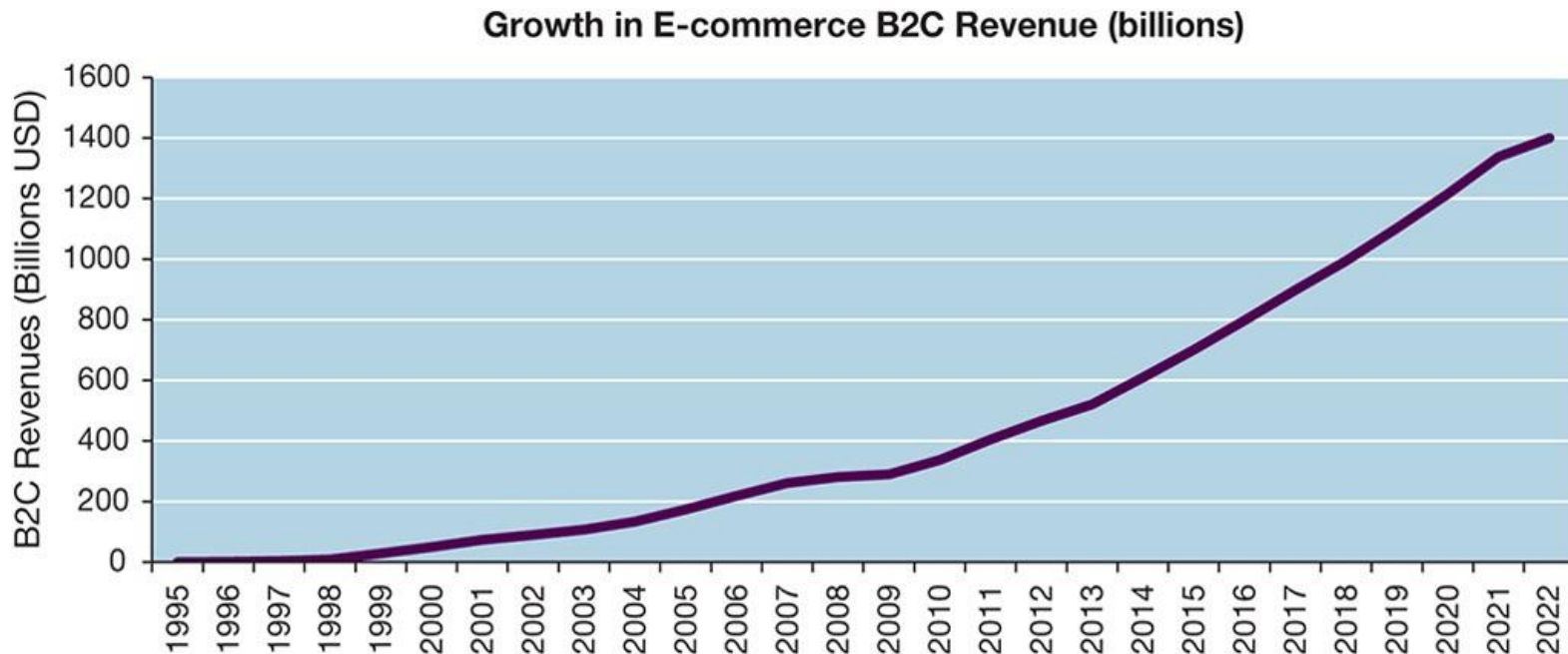
E-commerce Comes to the Dashboard: The Battle for the “Fourth Screen” (2 of 2)

- Illustrates some major trends in e-commerce
 - E-commerce moves to the automobile platform
 - Sales of information and services
 - Use of advanced data mining and location-based advertising
 - Big tech firms competing with major auto makers

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

Figure 10.1 The Growth of E-commerce



Why E-commerce is Different (1 of 2)

- Ubiquity
 - Marketspace 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

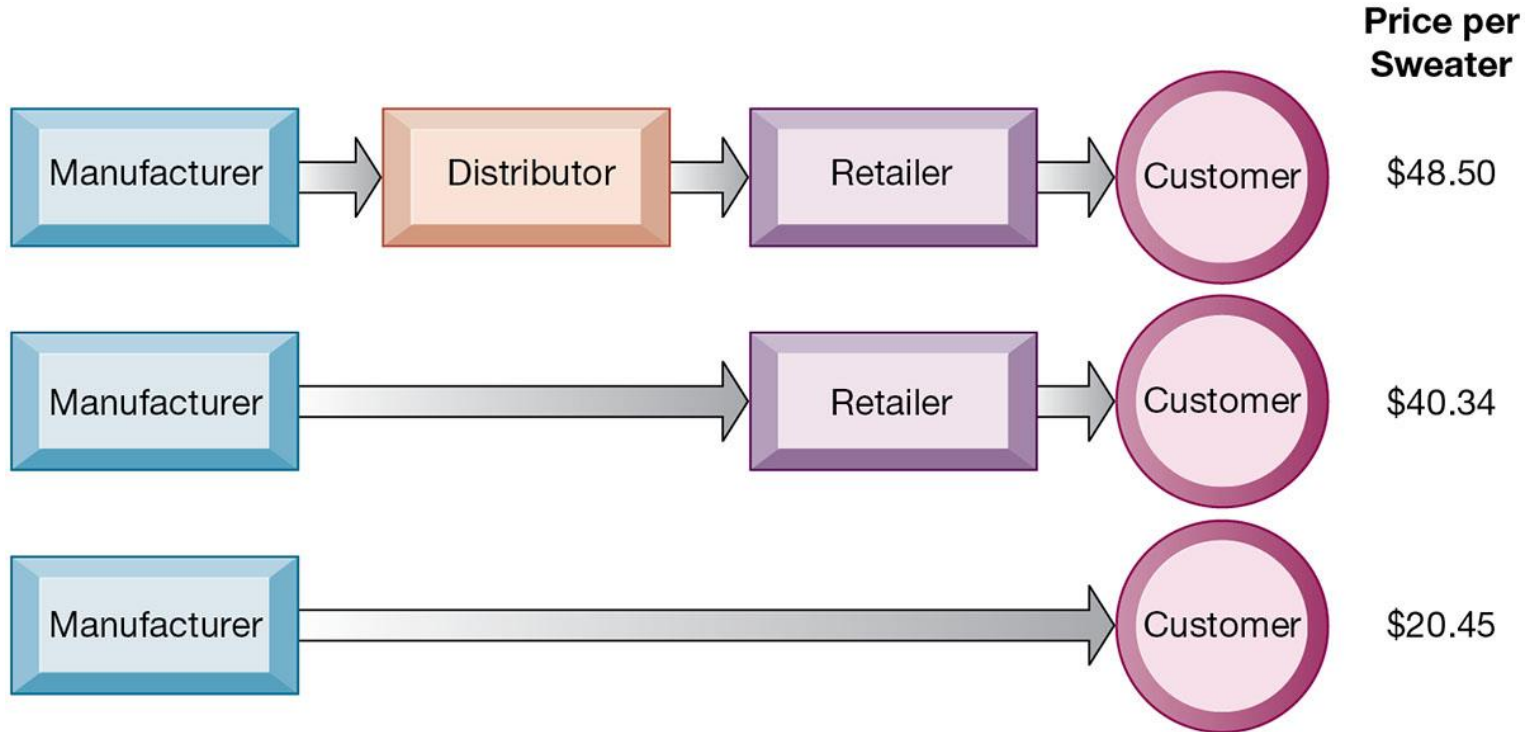
Why E-commerce is Different (2 of 2)

- 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

Figure 10.2 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: Amazon.com
 - Business-to-business (B2B)
 - Example: Elemica
 - Consumer-to-consumer (C2C)
 - Example: eBay
- E-commerce can be categorized by platform
 - Mobile commerce (m-commerce)

E-commerce Business Models

- Portal
- E-tailer
- Content provider
- Transaction broker
- Market creator
- Service provider
- Community provider

E-commerce Revenue Models

- Advertising
- Sales
- Subscription
- Free/Freemium
- Transaction fee
- Affiliate

Interactive Session: Technology: Small Business Loans from a FinTech App

- Class discussion
 - What distinguishes the FinTech services described in this case from traditional banks. Explain your answer.
 - How do the financial services described here use information technology to innovate?
 - What are the advantages and disadvantages of small business obtaining loans from FinTech services?
 - If you were a small business, what factors would you consider in deciding whether to use a FinTech service?

How Has E-commerce Transformed Marketing? (1 of 2)

- Internet provides new ways to identify and communicate with customers
- Long tail marketing
- Different marketing and advertising formats
 - Search
 - Display ads
 - Video and rich media
 - Email

How Has E-commerce Transformed Marketing? (2 of 2)

- Behavioral targeting
 - Tracking online behavior of individuals
 - On individual websites/apps and across advertising networks
- Programmatic ad buying
- Native advertising

Figure 10.3 Website Visitor Tracking

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, then clicks to view a woman's pink blouse. 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 a 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.

Figure 10.4 Website Personalization

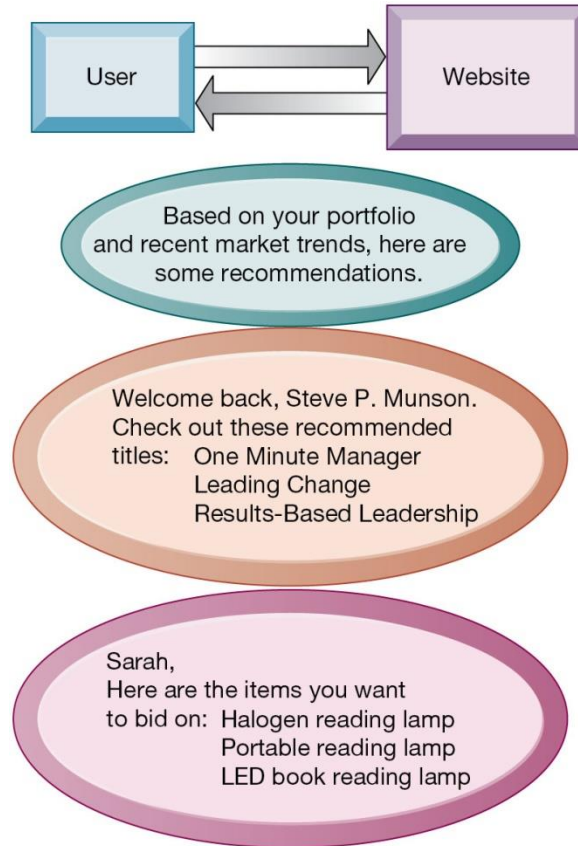
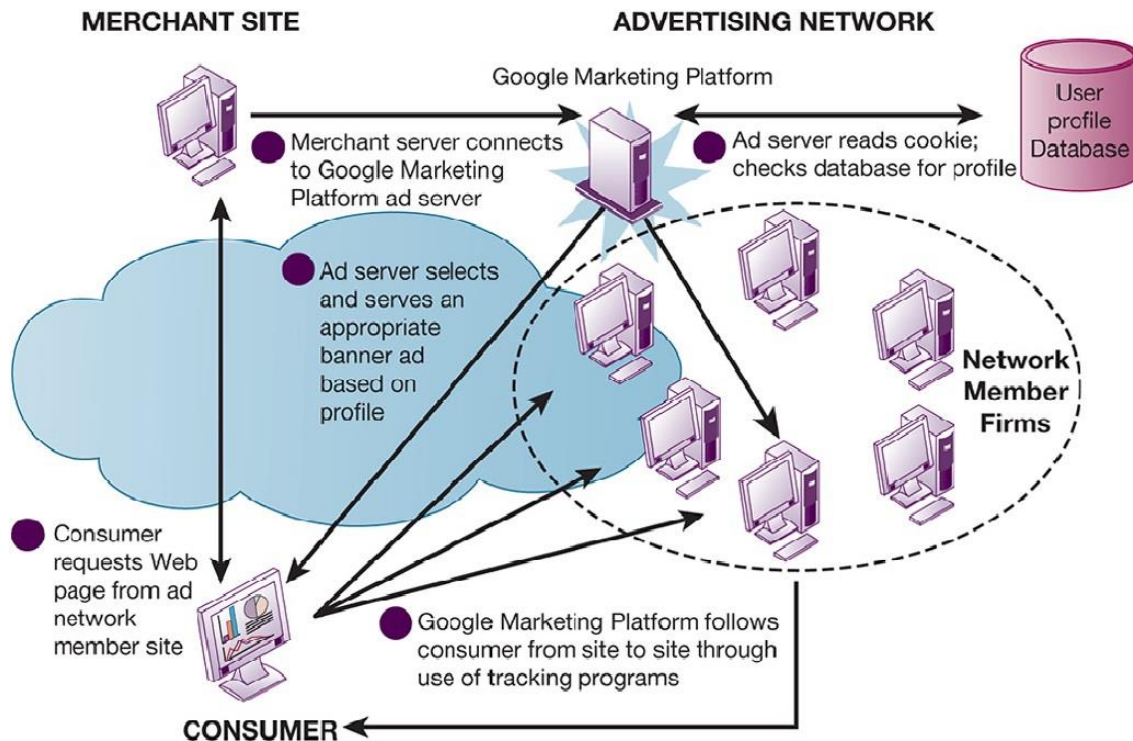


Figure 10.5 How an Advertising Network Works



Social E-commerce and Social Network Marketing (1 of 2)

- Social media one of fastest growing branding and marketing methods
- Social e-commerce based on digital social graph
- Features
 - Newsfeed
 - Timelines
 - Social sign-on
 - Collaborative shopping
 - Network notification
 - Social search (recommendations)

Social E-commerce and Social Network Marketing (2 of 2)

- 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

Interactive Session: Management: Engaging “Socially” with Customers

- 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?

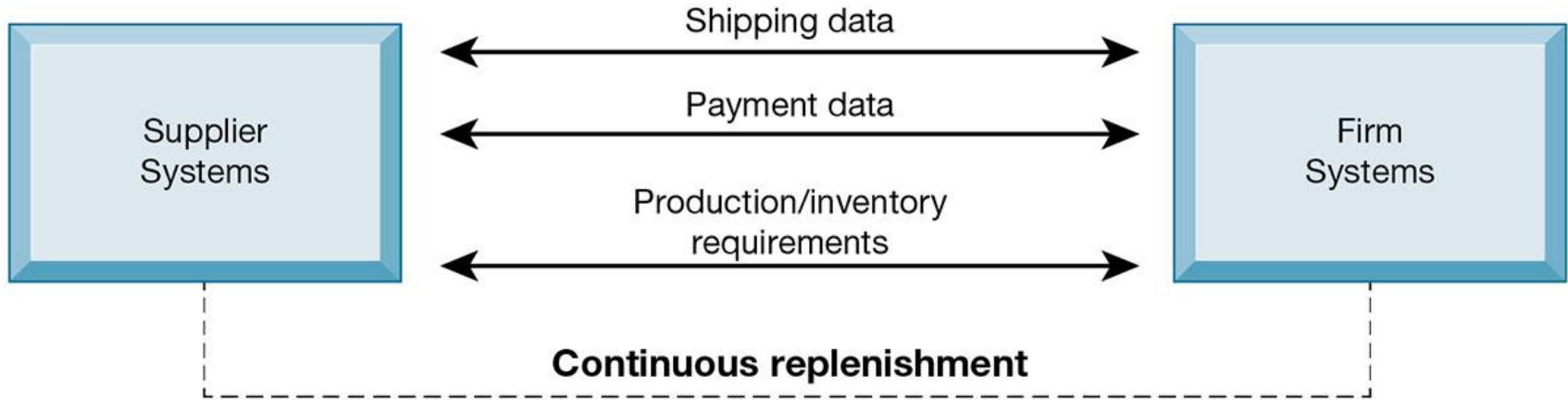
How Has E-commerce Affected Business-To Business Transactions?

- U.S. B2B trade in 2020 estimated at about \$14.5 trillion
 - U.S. B2B e-commerce in 2020 estimated at \$6.7 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

Figure 10.6: Electronic Data Interchange (EDI)



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

Figure 10.7 A Private Industrial Network

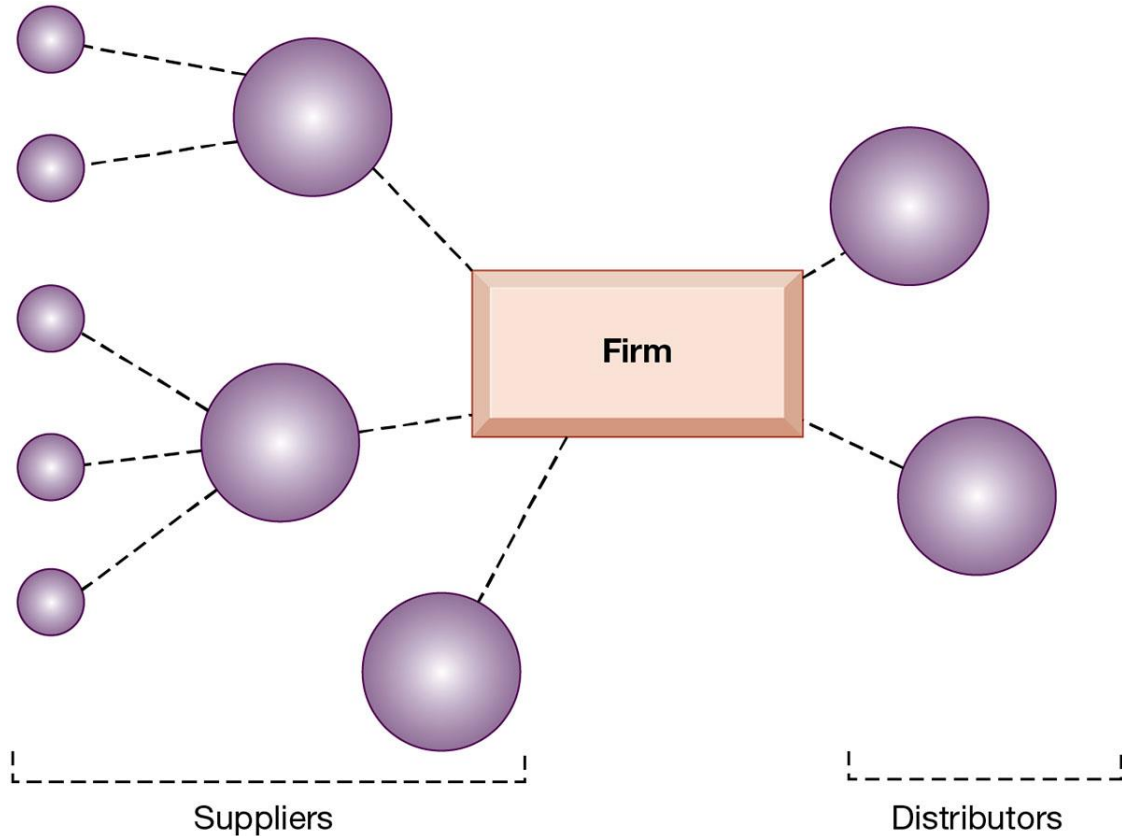
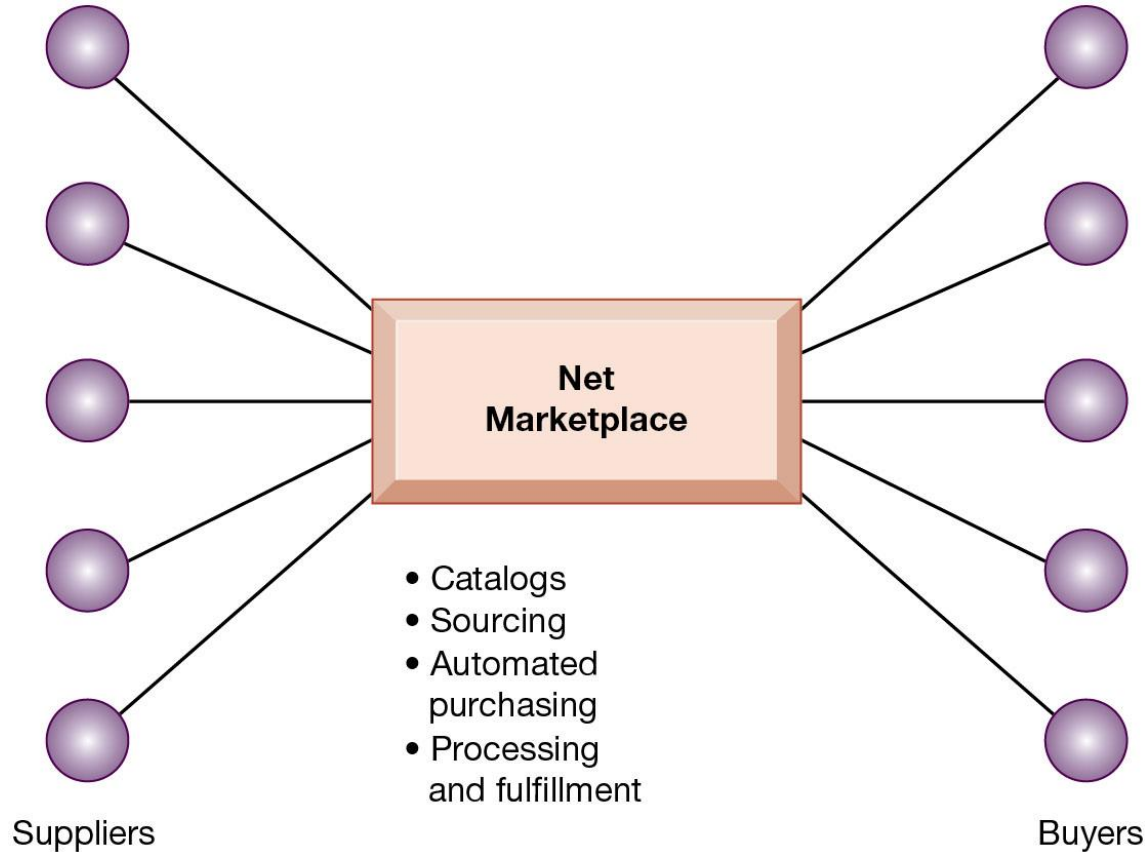


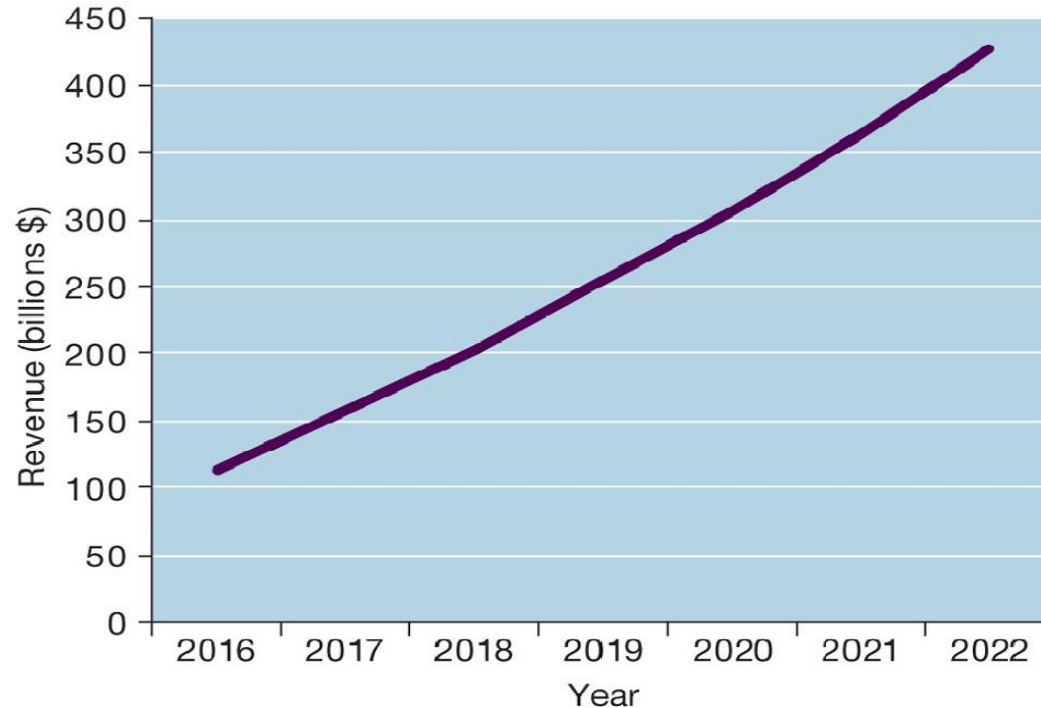
Figure 10.8 A Net Marketplace



What is the Role of M-commerce in Business, and What are the Most Important M-commerce Applications?

- M-commerce in 2020 is about 45 percent of all e-commerce
- Fastest growing form of e-commerce
 - Growing at 20 percent or more per year
- Main areas of growth
 - Mass market retailing (Amazon, eBay, etc.)
 - Sales of digital content (music, TV, etc.)
 - In-app sales to mobile devices

Figure 10.9 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
- Geo advertising
 - What shops are nearby
- Geo information 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
- Over 45 percent of top retailers have m-commerce websites
- Virtually all large traditional and online retailers have m-commerce apps.

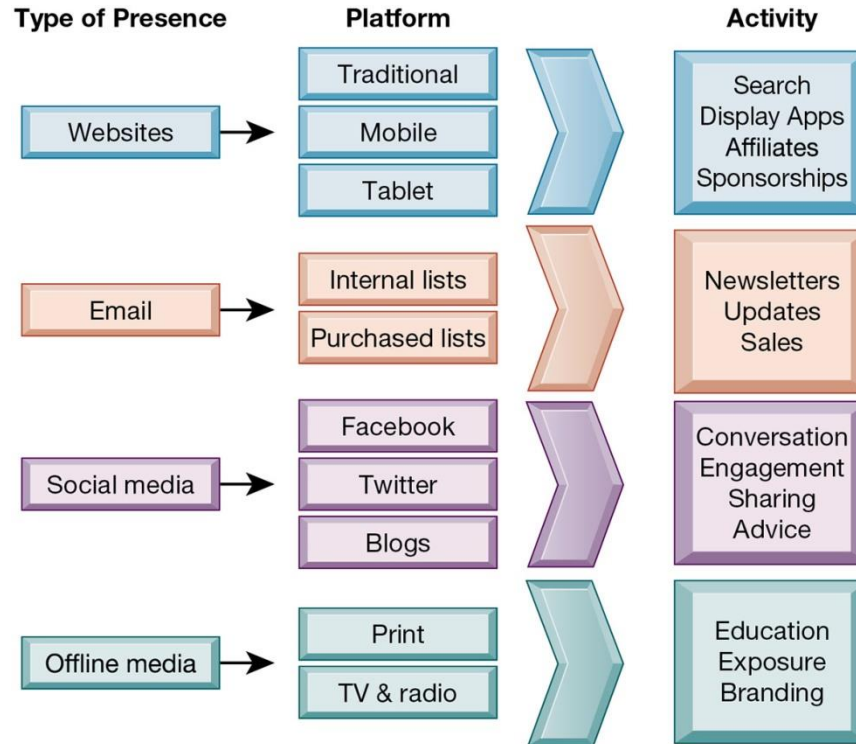
Mobile App Payment Systems

- Three main types
 - Near Field Communication (NFC)
 - Apple Pay, Google Pay, Samsung Pay
 - QR Code
 - Starbucks, Walmart, Target, Dunkin Donuts
 - Peer-to-peer (P2P) payment systems
 - Venmo, Zelle

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

Figure 10.10 E-commerce Presence Map



How Will MIS Help My Career?

- The Company: SportsFantasy Empire
- Position Description: Junior e-commerce data analyst
- Job Requirements
- Interview Questions
- Author Tips

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