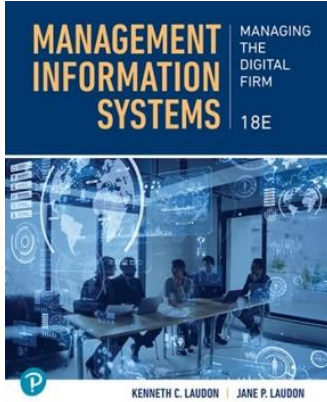


Management Information Systems: Managing the Digital Firm

Eighteenth Edition



Chapter 10

E-commerce: Digital Markets, Digital Goods

Learning Objectives (1 of 2)

- 10.1** Discuss the evolution of e-commerce.
- 10.2** Describe the unique features of e-commerce.
- 10.3** Describe digital markets and digital goods.
- 10.4** Describe types of e-commerce and e-commerce business models.
- 10.5** Describe e-commerce revenue models.

Learning Objectives (2 of 2)

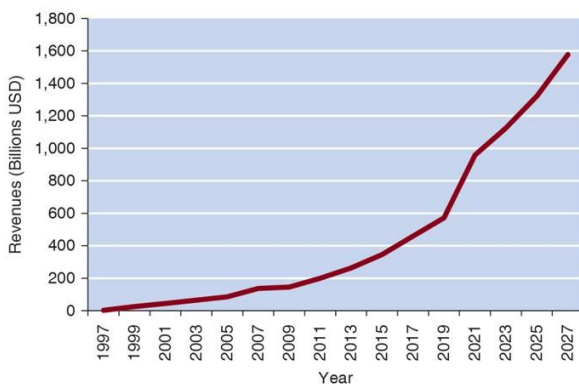
- 10.6** Explain how e-commerce has transformed marketing.
- 10.7** Describe social networks, social marketing, and social e-commerce.
- 10.8** Understand how e-commerce has affected business-to-business transactions.
- 10.9** Describe m-commerce and m-commerce applications.
- 10.10** Discuss how to build an e-commerce presence.

Discuss the Evolution of E-commerce (1 of 2)

•E-commerce

- The use of the Internet and the web, and mobile apps and browsers running on mobile devices to transact business
- Can be defined as digitally enabled commercial transactions between and among organizations and individuals
- Said to have begun in 1995
- Social, mobile, and local e-commerce are connected
- Move from desktop to smartphone

Figure 10.1 The Growth of Retail E-commerce



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Discuss the Evolution of E-commerce (2 of 2)

•AI and E-commerce

- Some real-world examples of how companies are currently using AI for e-commerce
 - Walmart has recently launched a GenAI search tool that delivers more relevant search results and product recommendations
 - eBay's Shop the Look relies on GenAI to provide users with a curated selection of outfits based on shopping histories
 - Target is using GenAI to generate product descriptions and tags to optimize search engine performance.
 - Etsy is using GenAI to remove listings that violate its policies from its search results

Describe the Unique Features of E-commerce (1 of 4)

- Ubiquity
 - Marketspace is virtual
 - Transaction costs reduced
- Global reach
 - Transactions cross cultural and national boundaries
- Universal standards
 - Technical standards of the Internet are universal standards
 - The universal technical standards of the Internet and e-commerce greatly lower market entry costs
 - Market entry costs are the costs merchants must pay simply to bring their goods to market

Describe the Unique Features of E-commerce (2 of 4)

- Richness
 - Refers to the complexity and content of a message
- Interactivity
 - Devices allow for two-way communication between merchant and consumer and peer-to-peer communication among individuals

Describe the Unique Features of E-commerce (3 of 4)

- Information density
 - Total amount and quality of information available to all market participants, consumers, and merchants alike
- Price transparency
 - The ease with which consumers can find out the variety of prices in a market
- Cost transparency
 - The ability of consumers to discover the actual costs that merchants pay for products
- Price discrimination
 - Selling the same goods, or nearly the same goods to different targeted groups at different prices

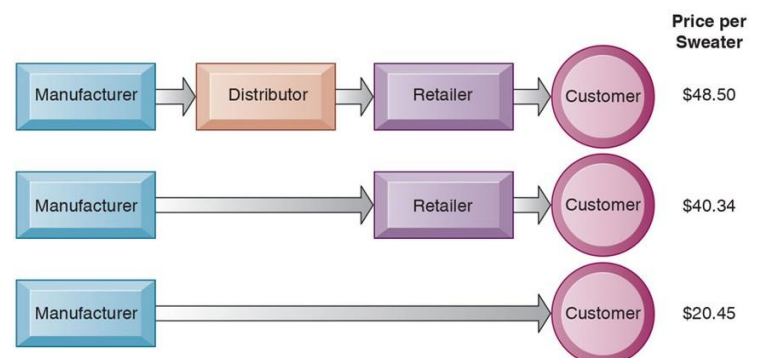
Describe the Unique Features of E-commerce (4 of 4)

- Personalization/customization
 - Personalization
 - When merchants target their marketing messages to specific individuals by adjusting the message to a person's clickstream behavior, name, interests, and past purchases
 - Customization
 - Changing the delivered product or service based on a user's preferences or prior behavior
- Social technology
 - Promotes user content generation and social networking

Describe Digital Markets and Digital Goods (1 of 3)

- 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 may be increased or decreased
 - Disintermediation

Figure 10.2 The Benefits of Disintermediation to the Consumer



Describe Digital Markets and Digital Goods (2 of 3)

- Digital markets are flexible, efficient, and operate with:
 - Reduced search and transaction costs
 - Lower menu costs
 - Merchants' costs of changing prices
 - Greater price discrimination
 - The ability to change prices dynamically based on market conditions
 - Dynamic pricing
 - Price of a product or service varies depending on the demand characteristics of the customer or the supply situation of the seller
 - Disintermediation
 - The removal of organizations or business process layers responsible for intermediary steps in a value chain is called

Describe Digital Markets and Digital Goods (3 of 3)

- Digital goods
 - 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.)

Describe Types of E-commerce and E-commerce Business Models

- Three major types
 - Business-to-consumer e-commerce (B2C)
 - Walmart, Amazon, Apple Music
 - Business-to-business e-commerce (B2B)
 - Grainger
 - Consumer-to-consumer e-commerce (C2C)
 - eBay, Craigslist

E-commerce Business Models

- | | |
|--|--|
| • Online retailer (e-tailer) | • Service provider |
| • Transaction broker | • Community provider <ul style="list-style-type: none">– Social networks |
| • Market creator | • Portal |
| • Content provider <ul style="list-style-type: none">– Download method– Streaming | |

Describe E-commerce Revenue Models (1 of 2)

- A firm's revenue model describes how the firm will earn revenue, generate profits, and produce a return on investment
 - Advertising revenue model
 - Based on generating revenue from online advertising
 - Sales revenue model
 - Based on generating revenue from the sale of goods, content, and/or services to customers
 - Subscription revenue model
 - Based on generating revenue from subscription fees charged for access to some or all of a company's content or services

Describe E-commerce Revenue Models (2 of 2)

- Revenue models
 - Free/Freemium revenue model
 - Basic services or content for free but generates revenue from a premium charged for advanced or special features
 - Transaction fee revenue model
 - Based on generating revenue from fees for enabling or executing transactions
 - Affiliate revenue model
 - A business steers customers to an "affiliate" which then pays the company a referral fee or percentage of the revenue from any resulting sales

Explain How E-commerce Has Transformed Marketing (1 of 4)

- The Internet provides new ways to identify and communicate with customers
 - Long tail marketing
 - The Internet allows marketers to find potential customers inexpensively for products for which demand is low
- The Internet provides ways—often instantaneous and spontaneous—to:
 - Gather information from customers
 - Adjust product offerings
 - Increase customer value

Explain How E-commerce Has Transformed Marketing (2 of 4)

- Different marketing and advertising formats
 - Search engine
 - Display ads
 - Video
 - Classified
 - Rich media
 - Lead generation
 - Sponsorship
 - Email

Explain How E-commerce Has Transformed Marketing (3 of 4)

- Behavioral targeting
 - Also known as interest-based advertising
 - Tacking the clickstreams of individuals to understand their interests and intentions and to expose them to advertisements
 - Behavioral targeting takes place at two levels
 - Individual websites
 - Various advertising networks

Explain How E-commerce Has Transformed Marketing (4 of 4)

- In 2023, about 90 percent of spending on online display advertising and online video advertising was for targeted ads served by programmatic ad networks
- Native advertising
 - Advertising that looks similar to editorial content but typically is inconspicuously tagged as “sponsored”

Figure 10.3 Website Visitor Tracking

Click 1

The shopper clicks on the home page. The store can tell that the shopper arrived from Yahoo.com at 2:30 PM (which might help determine staffing for customer service centers) and how long the shopper 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 shirts, then clicks to view a woman's blue shirt. The shopper clicks to select this item in a size 10 in blue 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 blue shirts will appear from the same or a different vendor.

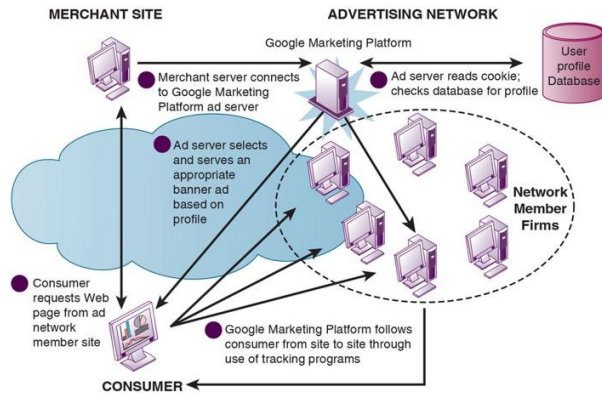
Click 6

From the shopping cart page, the shopper clicks to close the browser to leave the website without purchasing the shirt. This action could indicate the shopper 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



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Describe Social Networks, Social Marketing, and Social E-commerce (1 of 4)

- Social networks in the offline world are collections of people who voluntarily communicate with one another over an extended period of time
- An online social network
 - Enables users to communicate with one another, form group and individual relationships, and share interests, values, and ideas via a website and/or app
- One of the most significant business impacts of the Internet and e-commerce has been the development of online social networks
 - Leveraged for both marketing and e-commerce purposes

Describe Social Networks, Social Marketing, and Social E-commerce (2 of 4)

- Features of social networks
 - Newsfeed
 - Timelines
 - Social sign-on
 - Collaborative shopping
 - Network notification
 - Social search (recommendations)

Describe Social Networks, Social Marketing, and Social E-commerce (3 of 4)

- Social networks provide one of the fastest-growing platforms for marketing and advertising
 - Wisdom of crowds
 - The idea that numbers of people can make better decisions than a single person or even a small committee of experts
 - Social listening
 - Ability for marketers to understand what people are saying about a brand or competitor
 - Crowdsourcing
 - Involves tapping into large online audiences for advice, market feedback, new ideas, and potential solutions to business problems

Describe Social Networks, Social Marketing, and Social E-commerce (4 of 4)

- Social networks platforms for marketing and advertising
 - Social e-commerce
 - the use of social networks to share knowledge about items of interest to other shoppers and enable purchases directly via the social network
 - Social graph
 - Mapping of all significant online social relationships

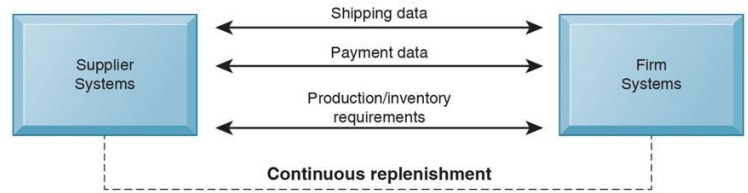
Understand How E-commerce Has Affected Business-to-Business Transactions (1 of 2)

- Total of B2B commerce in the United States in 2024 is estimated to be about \$19 trillion
 - B2B e-commerce involves that portion of B2Bcommerce that is enabled by the Internet and mobile apps
- B2B e-commerce is expected to generate about \$8.1 trillion in 2024 and grow to about \$8.9 trillion by 2028
 - Electronic data interchange (E D I)
 - Private industrial networks (private exchanges)
 - Net marketplaces
 - Exchanges

Understand How E-commerce Has Affected Business-to-Business Transactions (2 of 2)

- Electronic data interchange (E D I)
 - Form of computer-to-computer communication
 - Sharing of standard business documents such as invoices, purchase orders, and shipping bills between two organizations

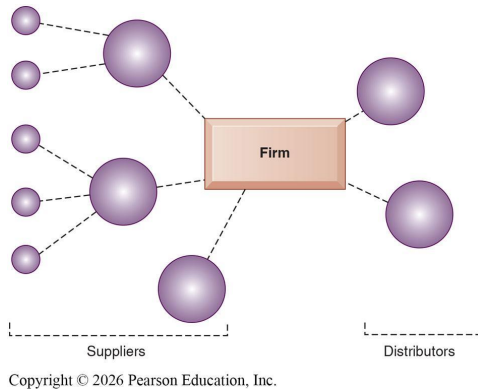
Figure 10.6: Electronic Data Interchange (E D I)



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Figure 10.7 A Private B2B Network

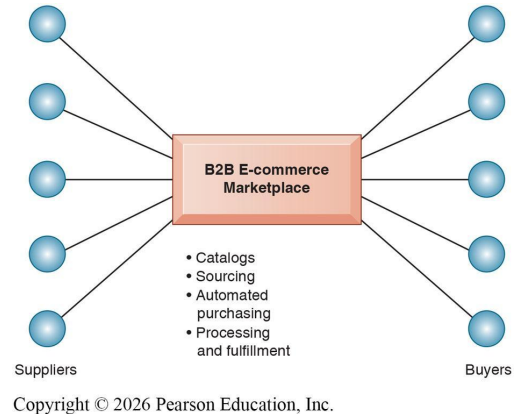
- Private B2B network



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Figure 10.8 A B2B E-commerce Marketplace

- B2B e-commerce marketplace



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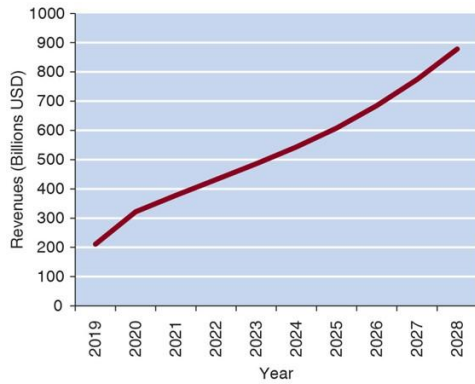
New Ways of B2B Buying and Selling

- There are many types of B2B e-commerce marketplaces and ways of classifying them
 - Direct goods
 - Goods used in a production process, such as sheet steel for auto body production
 - Indirect goods
 - All other goods not directly involved in the production process
 - Exchange
 - An independently owned third-party B2B e-commerce marketplace that is primarily transaction-oriented
 - Connects many suppliers and buyers for spot purchasing

Describe M-commerce and M-commerce Applications

- Mobile e-commerce (m-commerce)
 - Involves the sales of goods and services via mobile devices, such as smartphones, tablets, and wearables
- 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 Retail M-commerce Revenue



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Location-Based Services and Applications (1 of 2)

- Location-based services involve providing services to users based on the users' location
 - Primary technologies that enable location-based services include GPS (global positioning services) enabled by devices
- Location-based services include geosocial, geoadvertising, and geoinformation services

Location-Based Services and Applications (2 of 2)

- Geosocial services
 - Involve social networking based on a user's location
- Geoinformation services
 - Involve delivering advertising to users based on their location
- Geoinformation services
 - Involve providing users with information on local places and things based on the location of the user

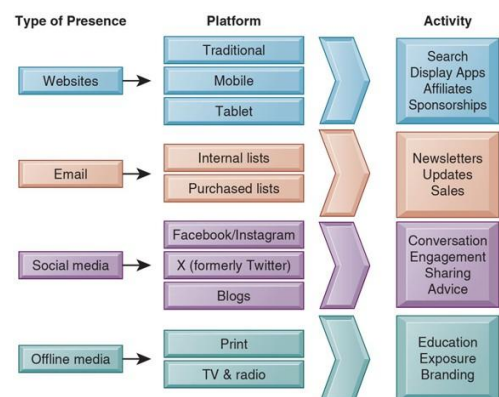
Mobile App Payment Systems

- Three main types
 - Near-field communication (NFC)-driven systems
 - Apple Pay, Google Pay
 - QR Code Payment system
 - Walmart Pay
 - Peer-to-peer (P2P) payment systems
 - Venmo, Zelle QuickPay

Discuss How to Build an E-commerce Presence (1 of 2)

- 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



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Discuss How to Build an E-commerce Presence (2 of 2)

- E-commerce presence timeline

1. Planning
2. Website development
3. Web implementation
4. Social media plan
5. Social media implementation
6. Mobile plan

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