

E-commerce

2014

business. technology. society.

Kenneth C. Laudon | Carol Guercio Traver

10 edition



Complete Listing of Chapter Opening Cases, Insight Cases, E-commerce in Action Cases, and Case Studies

CHAPTER 1 THE REVOLUTION IS JUST BEGINNING

Opening Case: Pinterest: A Picture Is Worth a Thousand Words

Insight on Technology: Will Apps Make the Web Irrelevant?

Insight on Business: Start-Up Boot Camp

Insight on Society: Facebook and the Age of Privacy

Case Study: The Pirate Bay: Searching for a Safe Haven

CHAPTER 2 E-COMMERCE BUSINESS MODELS AND CONCEPTS

Opening Case: Twitter's Business Model

Insight on Society: Foursquare: Check Your Privacy at the Door

Insight on Business: Crowdfunding Takes Off

Insight on Technology: Battle of the Titans: Music in the Cloud

Case Study: Pandora and the Freemium Business Model

CHAPTER 3 E-COMMERCE INFRASTRUCTURE: THE INTERNET, WEB, AND MOBILE PLATFORM

Opening Case: Google Glass: Augment My Reality

Insight on Society: Government Surveillance and Regulation of the Internet

Insight on Technology: Is HTML5 Ready for Prime Time?

Insight on Business: The Apps Ecosystem

Case Study: Akamai Technologies: Attempting to Keep Supply Ahead of Demand

CHAPTER 4 BUILDING AN E-COMMERCE PRESENCE: WEB SITES, MOBILE SITES, AND APPS

Opening Case: USA Today Redesigns

Insight on Business: Curly Hair and Appillionaires

Insight on Society: Designing for Accessibility

Insight on Technology: Building a Mobile Presence

Case Study: Orbitz Charts Its Mobile Trajectory

CHAPTER 5 E-COMMERCE SECURITY AND PAYMENT SYSTEMS

Opening Case: Cyberwar: MAD 2.0

Insight on Business: We Are Legion

Insight on Technology: Think Your Smartphone Is Secure?

Insight on Society: Bitcoin

Case Study: Online Payment Marketplace: Goat Rodeo

CHAPTER 6 E-COMMERCE MARKETING AND ADVERTISING CONCEPTS

Opening Case: Video Ads: Shoot, Click, Buy

Insight on Business: Are the Very Rich Different From You and Me?

Insight on Technology: The Long Tail: Big Hits and Big Misses

Insight on Society: Every Move You Take, Every Click You Make, We'll Be Tracking You

Case Study: Instant Ads: Real-Time Marketing on Exchanges

continued on back inside cover

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P R E F A C E

E-commerce. Business. Technology. Society. 10E provides you with an in-depth introduction to the field of e-commerce. We focus on concepts that will help you understand and take advantage of the evolving world of opportunity offered by e-commerce, which is dramatically altering the way business is conducted and driving major shifts in the global economy.

Just as important, we have tried to create a book that is thought-provoking and current. We use the most recent data available, and focus on companies that you are likely to encounter on a daily basis in your everyday life, such as Facebook, Google, Twitter, Amazon, YouTube, Pinterest, eBay, and many more that you will recognize, as well as some exciting startups that may be new to you. We also have up-to-date coverage of the key topics in e-commerce today, from privacy and piracy, to government surveillance, cyberwar, social, local, and mobile marketing, Internet sales taxes, intellectual property, and more. You will find here the most up-to-date and comprehensive overview of e-commerce today.

The e-commerce concepts you learn in this book will make you valuable to potential employers. The e-commerce job market is expanding rapidly. Many employers expect new employees to understand the basics of e-commerce, social and mobile marketing, and how to develop an e-commerce presence. Every industry today is touched in at least some way by e-commerce. The information and knowledge you find in this book will be valuable throughout your career, and after reading this book, we expect that you will be able to participate in, and even lead, management discussions of e-commerce for your firm.

WHAT'S NEW IN THE TENTH EDITION

New Chapter on Social, Mobile, and Local Marketing

Given the growing importance of social, mobile, and local marketing in e-commerce, we have written an entirely new chapter devoted to providing an in-depth examination of these topics. In this new chapter, you will learn how companies are using Facebook, Twitter, and Pinterest for social marketing, how to begin a social marketing campaign and how to measure results for each of these platforms. We provide similar examination of mobile and local and location-based marketing as well.

New Infographics

A variety of infographics throughout the book provide a more visual and intuitive access to concepts and information. Infographics make it easier to see and remember patterns and relationships than traditional charts and graphs.

Currency

The 10th edition features all new or updated opening, closing, and “Insight on” cases. The text, as well as all of the data, figures, and tables in the book, have been updated through October 2013 with the latest marketing and business intelligence available from eMarketer, Pew Internet & American Life Project, Forrester Research, comScore, Gartner Research, and other industry sources.

What’s New in E-commerce 2014

E-commerce today is greatly different from e-commerce only five years ago. The iPhone was introduced in 2007. The iPad tablet was first introduced in 2010 and has already gone through several generations! The smartphone and tablet devices have changed e-commerce into a social, local, and mobile experience. The 10th edition spotlights the following themes and content:

Headlines

- Social, Mobile, Local: We have included an entirely new chapter describing social, mobile, and local marketing. Content about social networks, the mobile platform and local e-commerce appears throughout the book.
 - » Social networks such as Facebook, Twitter, Pinterest, and LinkedIn continue their rapid growth, laying the groundwork for a social network marketing platform
 - » The mobile platform composed of smartphones and tablet computers takes off and becomes a major factor in search, marketing, payment, retailing and services, and online content. Mobile device use poses new security and privacy issues as well.
 - » Location-based services lead to explosive growth in local advertising and marketing.
- Online privacy continues to deteriorate, driven by a culture of self-revelation and powerful technologies for collecting personal information online without the knowledge or consent of users.
- Internet security risks increase; cyberwarfare becomes a new way of conducting warfare among nation-states and a national security issue.

Business

- E-commerce revenues surge after the recession.
- Internet advertising growth resumes, at a faster rate than traditional advertising.
- Social marketing grows faster than traditional online marketing like search and display advertising.
- E-books take off and expand the market for text, supported by the iPad, Kindle, Nook, and iPhone.
- Streaming of popular TV shows and movies (Netflix, Amazon, and Hulu.com) becomes a reality, as Internet distributors and Hollywood and TV producers strike deals for Web distribution that also protects intellectual property.

- “Free” and “freemium” business models compete to support digital content.
- New mobile payment platforms emerge to challenge PayPal.
- B2B e-commerce exceeds pre-recession levels as firms become more comfortable with digital supply chains.

Technology

- Smartphones, tablets, and e-book readers, along with associated software applications, and coupled with 4G cellular network expansion, fuel rapid growth of the mobile platform.
- Investment in cloud computing increases, providing the computing infrastructure for a massive increase in online digital information and e-commerce.
- Cloud-based streaming services for music and video challenge sales of downloads and physical product.
- Software apps fuel growth in app sales, marketing, and advertising; transforming software production and distribution.
- Touch interface operating systems dominate mobile devices. Windows 8 introduced with a touch screen interface, mimicking Apple's iOS and Google Android smartphones.
- The cost of developing sophisticated Web sites continues to drop due to declining software and hardware prices and open source software tools.
- Internet and cellular network capacity is challenged by the rapid expansion in digital traffic generated by mobile devices; the use of bandwidth caps tier-pricing expands.
- Internet telecommunications carriers support differential pricing to maintain a stable Internet; opposed by Net neutrality groups pushing non-discriminatory pricing.

Society

- The mobile, “always on” culture in business and family life continues to grow.
- Congress considers legislation to regulate the use of personal information for behavioral tracking and targeting consumers online.
- States heat up the pursuit of taxes on Internet sales by Amazon and others.
- Intellectual property issues remain a source of conflict with significant movement toward resolution in some areas, such as Google's deals with Hollywood and the publishing industry, and Apple's and Amazon's deals with e-book and magazine publishers.
- P2P piracy traffic declines as paid streaming music and video gains ground, although digital piracy of online content remains a significant threat to Hollywood and the music industry.
- Governments around the world increase surveillance of Internet users and Web sites in response to national security threats; Google continues to tussle with China and other countries over censorship and security issues.

- Venture capital investing in e-commerce explodes for social, mobile, and local software applications. Crowdfunding becomes a new source of funding for e-commerce start-ups.

WELCOME TO THE NEW E-COMMERCE

Since it began in 1995, electronic commerce has grown in the United States from a standing start to a \$419 billion retail, travel, and media business and a \$4.7 trillion business-to-business juggernaut, bringing about enormous change in business firms, markets, and consumer behavior. Economies and business firms around the globe are being similarly affected. During this relatively short time, e-commerce has itself been transformed from its origin as a mechanism for online retail sales into something much broader. Today, e-commerce has become the platform for media and new, unique services and capabilities that aren't found in the physical world. There is no physical world counterpart to Facebook, Twitter, Google search, or a host of other recent online innovations from Pinterest and iTunes to Tumblr. Welcome to the new e-commerce!

Although e-commerce today has been impacted by the worldwide economic recession, in the next five years, e-commerce in all of its forms is still projected to continue growing at high single-digit rates, becoming the fastest growing form of commerce. Just as automobiles, airplanes, and electronics defined the twentieth century, so will e-commerce of all kinds define business and society in the twenty-first century. The rapid movement toward an e-commerce economy and society is being led by both established business firms such as Walmart, Ford, IBM, Macy's, and General Electric, and newer entrepreneurial firms such as Google, Amazon, Apple, Facebook, Yahoo, Twitter, YouTube, and Photobucket. Students of business and information technology need a thorough grounding in electronic commerce in order to be effective and successful managers in the next decade. This book is written for tomorrow's managers.

While newer firms such as Facebook, Tumblr, YouTube, Twitter, Pinterest, Flickr, and Square have grown explosively in the last two years and grab our attention, the traditional forms of retail e-commerce and services also remain vital and have proven to be more resilient than traditional retail channels in facing the economic recession. The experience of these firms from 1995 to the present is also a focus of this book. The defining characteristic of these firms is that they are profitable, sustainable, efficient, and innovative, with powerful brand names. Many of these now-experienced retail and service firms, such as eBay, Amazon, E*Trade, Priceline, and Expedia, are survivors of the first era of e-commerce, from 1995 to spring 2000. These surviving firms have evolved their business models, integrated their online and offline operations, and changed their revenue models to become profitable. Students must understand how to build these kinds of e-commerce businesses in order to help the business firms they manage to succeed in the e-commerce era.

It would be foolish to ignore the lessons learned in the early period of e-commerce. Like so many technology revolutions in the past—automobiles, electricity, telephones, television, and biotechnology—there was an explosion of entrepreneurial efforts, followed by consolidation. By 2005, the survivors of the early period were

moving to establish profitable businesses while maintaining rapid growth in revenues. In 2013, e-commerce is entering a new period of explosive entrepreneurial activity focusing on social networks and the mobile digital platform created by smartphones and tablet computers. These technologies and social behaviors are bringing about extraordinary changes to our personal lives, markets, industries, individual businesses, and society as a whole. In 2012–2013, the stock values of Apple, Google, and Amazon hit new highs, along with many start-ups. E-commerce is generating thousands of new jobs for young managers in all fields from marketing to management, entrepreneurial studies, and information systems. Today, e-commerce has moved into the mainstream life of established businesses that have the market brands and financial muscle required for the long-term deployment of e-commerce technologies and methods. If you are working in an established business, chances are the firm's e-commerce capabilities and Web presence are important factors for its success. If you want to start a new business, chances are very good that the knowledge you learn in this book will be very helpful.

BUSINESS. TECHNOLOGY. SOCIETY.

We believe that in order for business and technology students to really understand e-commerce, they must understand the relationships among e-commerce business concerns, Internet technology, and the social and legal context of e-commerce. These three themes permeate all aspects of e-commerce, and therefore, in each chapter, we present material that explores the business, technological, and social aspects of that chapter's main topic.

Given the continued growth and diffusion of e-commerce, all students—regardless of their major discipline—must also understand the basic economic and business forces driving e-commerce. E-commerce has created new electronic markets where prices are more transparent, markets are global, and trading is highly efficient, though not perfect. E-commerce has a direct impact on a firm's relationship with suppliers, customers, competitors, and partners, as well as how firms market products, advertise, and use brands. Whether you are interested in marketing and sales, design, production, finance, information systems, or logistics, you will need to know how e-commerce technologies can be used to reduce supply chain costs, increase production efficiency, and tighten the relationship with customers. This text is written to help you understand the fundamental business issues in e-commerce.

We spend a considerable amount of effort analyzing the business models and strategies of “pure-play” online companies and established businesses now employing “bricks-and-clicks” business models. We explore why e-commerce firms fail and the strategic, financial, marketing, and organizational challenges they face. We also discuss how e-commerce firms learned from the mistakes of early firms, and how established firms are using e-commerce to succeed. Above all, we attempt to bring a strong sense of business realism and sensitivity to the often exaggerated descriptions of e-commerce. As founders of a dot.com company and participants in the e-commerce revolution, we have learned that the “e” in e-commerce does not stand for “easy.”

The Web and e-commerce have caused a major revolution in marketing and advertising in the United States. We spend two chapters discussing online marketing

and advertising. Chapter 6 discusses “traditional” online marketing formats like search engine marketing, display advertising, and e-mail, as well as various Internet marketing technologies underlying those efforts, and metrics for measuring marketing success. Chapter 7 provides an in-depth examination of social, mobile, and local marketing, which relies on mobile devices and social networks.

E-commerce is driven by Internet technology. Internet technology, and information technology in general, is perhaps the star of the show. Without the Internet, e-commerce would be virtually nonexistent. Accordingly, we provide three chapters specifically on the Internet and e-commerce technology, and in every chapter we provide continuing coverage by illustrating how the topic of the chapter is being shaped by new information technologies. For instance, Internet technology drives developments in security and payment systems, marketing strategies and advertising, financial applications, media distribution, business-to-business trade, and retail e-commerce. We discuss the rapid growth of the mobile digital platform, the emergence of cloud computing, new open source software tools and applications that enable Web 2.0, and new types of Internet-based information systems that support electronic business-to-business markets.

E-commerce is not only about business and technology, however. The third part of the equation for understanding e-commerce is society. E-commerce and Internet technologies have important social consequences that business leaders can ignore only at their peril. E-commerce has challenged our concepts of privacy, intellectual property, and even our ideas about national sovereignty and governance. Google, Facebook, Apple, Amazon, and assorted advertising networks maintain profiles on millions of shoppers and consumers worldwide. The proliferation of illegally copied music and videos on the Internet, and the growth of social networking sites often based on displaying copyrighted materials without permission, are challenging the intellectual property rights of record labels, Hollywood studios, and artists. And many countries—including the United States—are demanding to control the content of Web sites displayed within their borders for political and social reasons. Tax authorities in the United States and Europe are demanding that e-commerce sites pay sales taxes just like ordinary brick and mortar stores on mainstreet. As a result of these challenges to existing institutions, e-commerce and the Internet are the subject of increasing investigation, litigation, and legislation. Business leaders need to understand these societal developments, and they cannot afford to assume any longer that the Internet is borderless, beyond social control and regulation, or a place where market efficiency is the only consideration. In addition to an entire chapter devoted to the social and legal implications of e-commerce, each chapter contains material highlighting the social implications of e-commerce.

FEATURES AND COVERAGE

Strong Conceptual Foundation The book emphasizes the three major driving forces behind e-commerce: business development and strategy, technological innovations, and social controversies and impacts. Each of these driving forces is represented in every chapter, and together they provide a strong and coherent conceptual frame-

work for understanding e-commerce. We analyze e-commerce, digital markets, and e-business firms just as we would ordinary businesses and markets using concepts from economics, marketing, finance, sociology, philosophy, and information systems. We strive to maintain a critical perspective on e-commerce and avoid industry hyperbole.

Some of the important concepts from economics and marketing that we use to explore e-commerce are transaction cost, network externalities, information asymmetry, social networks, perfect digital markets, segmentation, price dispersion, targeting, and positioning. Important concepts from the study of information systems and technologies play an important role in the book, including Internet standards and protocols, client/server computing, multi-tier server systems, cloud computing, mobile digital platform and wireless technologies, and public key encryption, among many others. From the literature on ethics and society, we use important concepts such as intellectual property, privacy, information rights and rights management, governance, public health, and welfare.

From the literature on business, we use concepts such as business process design, return on investment, strategic advantage, industry competitive environment, oligopoly, and monopoly. We also provide a basic understanding of finance and accounting issues, and extend this through an “E-commerce in Action” case that critically examines the financial statements of Amazon. One of the witticisms that emerged from the early years of e-commerce and that still seems apt is the notion that e-commerce changes everything except the rules of business. Businesses still need to make a profit in order to survive in the long term.

Currency Important new developments happen almost every day in e-commerce and the Internet. We try to capture as many of these important new developments in each annual edition. You will not find a more current book for a course offered for the 2014 academic year. Many other texts are already six months to a year out of date before they even reach the printer. This text, in contrast, reflects extensive research through October 2013, just weeks before the book hits the press.

Real-World Business Firm Focus and Cases From Akamai Technologies to Google, Microsoft, Apple, and Amazon, to Facebook, Twitter, and Tumblr, to Netflix, Pandora, and Elemeica, this book contains hundreds of real-company examples and over 60 more extensive cases that place coverage in the context of actual dot.com businesses. You’ll find these examples in each chapter, as well as in special features such as chapter-opening, chapter-closing, and “Insight on” cases. The book takes a realistic look at the world of e-commerce, describing what’s working and what isn’t, rather than presenting a rose-colored or purely “academic” viewpoint.

In-depth Coverage of Marketing and Advertising The text includes two chapters on marketing and advertising, both traditional online marketing and social, mobile, and local marketing. Marketing concepts, including market segmentation, personalization, clickstream analysis, bundling of digital goods, long-tail marketing, and dynamic pricing, are used throughout the text.

In-depth Coverage of B2B E-commerce We devote an entire chapter to an examination of B2B e-commerce. In writing this chapter, we developed a unique and easily understood classification schema to help students understand this complex arena of e-commerce. This chapter covers four types of Net marketplaces (e-distributors, e-procurement companies, exchanges, and industry consortia) as well as the development of private industrial networks and collaborative commerce.

Current and Future Technology Coverage Internet and related information technologies continue to change rapidly. The most important changes for e-commerce include dramatic price reductions in e-commerce infrastructure (making it much less expensive to develop sophisticated Web sites), the explosive growth in the mobile platform such as iPhones, iPads, tablet computers, and expansion in the development of social technologies, which are the foundation of online social networks. What was once a shortage of telecommunications capacity has now turned into a surplus, PC prices have continued to fall, smartphone and tablet sales have soared, Internet high-speed broadband connections are now typical and are continuing to show double-digit growth, and wireless technologies such as Wi-Fi and cellular broadband are transforming how, when, and where people access the Internet. While we thoroughly discuss the current Internet environment, we devote considerable attention to describing Web 2.0 and emerging technologies and applications such as the advanced network infrastructure, fiber optics, wireless Web and 4G technologies, Wi-Fi, IP multicasting, and future guaranteed service levels.

Up-to-Date Coverage of the Research Literature This text is well grounded in the e-commerce research literature. We have sought to include, where appropriate, references and analysis of the latest e-commerce research findings, as well as many classic articles, in all of our chapters. We have drawn especially on the disciplines of economics, marketing, and information systems and technologies, as well as law journals and broader social science research journals including sociology and psychology.

We do not use references to Wikipedia in this text, for a variety of reasons. Most colleges do not consider Wikipedia a legitimate or acceptable source for academic research and instruct their students not to cite it. Material found on Wikipedia may be out of date, lack coverage, lack critical perspective, and cannot necessarily be trusted. Our references are to respected academic journals; industry sources such as eMarketer, comScore, Hitwise, Nielsen, and Gartner; newspapers such as the *New York Times* and *Wall Street Journal*; and industry publications such as *Computerworld* and *InformationWeek*, among others. Figures and tables sourced to “authors’ estimates” reflect analysis of data from the U.S. Department of Commerce, estimates from various research firms, historical trends, revenues of major online retailers, consumer online buying trends, and economic conditions.

Special Attention to the Social and Legal Aspects of E-commerce We have paid special attention throughout the book to the social and legal context of e-commerce. Chapter 8 is devoted to a thorough exploration of four ethical dimensions of e-commerce: information privacy, intellectual property, governance, and protecting public welfare on the Internet. We have included an analysis of the latest Federal Trade Commission

and other regulatory and nonprofit research reports, and their likely impact on the e-commerce environment.

A major theme throughout this chapter, and the remainder of the book, is the impact of social, mobile, and local commerce on how consumers use the Internet.

Writing That’s Fun to Read Unlike some textbooks, we’ve been told by many students that this book is actually fun to read and easy to understand. This is not a book written by committee—you won’t find a dozen different people listed as authors, co-authors, and contributors on the title page. We have a consistent voice and perspective that carries through the entire text and we believe the book is the better for it.

OVERVIEW OF THE BOOK

The book is organized into four parts.

Part 1, “Introduction to E-commerce,” provides an introduction to the major themes of the book. Chapter 1 defines e-commerce, distinguishes between e-commerce and e-business, and defines the different types of e-commerce. Chapter 2 introduces and defines the concepts of business model and revenue model, describes the major e-commerce business and revenue models for both B2C and B2B firms, and introduces the basic business concepts required throughout the text for understanding e-commerce firms including industry structure, value chains, and firm strategy.

Part 2, “Technology Infrastructure for E-commerce,” focuses on the technology infrastructure that forms the foundation for all e-commerce. Chapter 3 traces the historical development of the Internet and thoroughly describes how today’s Internet works. A major focus of this chapter is mobile technology, Web 2.0 applications, and the near-term future Internet that is now under development and will shape the future of e-commerce. Chapter 4 builds on the Internet chapter by focusing on the steps managers need to follow in order to build a commercial Web site. This e-commerce infrastructure chapter covers the systems analysis and design process that should be followed in building an e-commerce Web presence; the major decisions regarding outsourcing site development and/or hosting; and how to choose software, hardware, and other tools that can improve Web site performance. Chapter 5 focuses on Internet security and payments, building on the e-commerce infrastructure discussion of the previous chapter by describing the ways security can be provided over the Internet. This chapter defines digital information security, describes the major threats to security, and then discusses both the technology and policy solutions available to business managers seeking to secure their firm’s sites. This chapter concludes with a section on Internet payment systems. We identify the stakeholders in payment systems, the dimensions to consider in creating payment systems, and the various types of online payment systems (credit cards, stored value payment systems such as PayPal, digital wallets such as Google Wallet and others), and the development of mobile payment systems.

Part 3, “Business Concepts and Social Issues,” focuses directly on the business concepts and social-legal issues that surround the development of e-commerce. Chapter 6 focuses on e-commerce consumer behavior, the Internet audience, and intro-

duces the student to the basics of online marketing and branding, including traditional browser-based online marketing technologies and marketing strategies. Topics include the Web site as a marketing platform, search engine marketing and advertising, display ad marketing, e-mail campaigns, affiliate and lead generation marketing programs, multichannel marketing, and various customer retention strategies such as personalization (including interest-based advertising, also known as behavioral targeting) and customer service tools. The chapter also covers other marketing strategies such as pricing and long-tail marketing. Internet marketing technologies (Web transaction logs, tracking files, data mining and big data) and CRM are also explored. The chapter concludes with a section on understanding the costs and benefits of various types of online marketing, including a new section on Web analytics software. Chapter 7 is devoted to an in-depth analysis of social, mobile, and local marketing. Topics include Facebook, Twitter, and Pinterest marketing platforms, the evolution of mobile marketing away from browsers and towards in-app marketing, and the growing use of geo-aware technologies to support geo-fencing and in-store geo-marketing.

Part 4, "E-commerce in Action," focuses on real-world e-commerce experiences in retail and services, online media, auctions, portals, and social networks, and business-to-business e-commerce. These chapters take a sector approach rather than the conceptual approach used in the earlier chapters. E-commerce is different in each of these sectors. Chapter 9 takes a close look at the experience of firms in the retail marketplace for both goods and services. Chapter 9 also includes an "E-commerce in Action" case that provides a detailed analysis of the business strategies and financial operating results of Amazon, which can be used as a model to analyze other e-commerce firms. Additional "E-commerce in Action" cases will be available online at the authors' Web site for the text, www.azimuth-interactive.com/ecommerce10e. Chapter 10 explores the world of online content and digital media and examines the enormous changes in online publishing and entertainment industries that have occurred over the last two years, including streaming movies, e-books, and online newspapers and magazines. Chapter 11 explores the online world of social networks, auctions, and portals. Chapter 12 concentrates on the world of B2B e-commerce, describing both electronic Net marketplaces and the less-heralded, but very large arena of private industrial networks and the movement toward collaborative commerce.

PEDAGOGY AND CHAPTER OUTLINE

The book's pedagogy emphasizes student cognitive awareness and the ability to analyze, synthesize, and evaluate e-commerce businesses. While there is a strong data and conceptual foundation to the book, we seek to engage student interest with lively writing about e-commerce businesses and the transformation of business models at traditional firms.

Each chapter contains a number of elements designed to make learning easy as well as interesting.

Learning Objectives A list of learning objectives that highlights the key concepts in the chapter guides student study.

Chapter-Opening Cases Each chapter opens with a story about a leading e-commerce company that relates the key objectives of the chapter to a real-life e-commerce business venture.





"Insight on" Cases Each chapter contains three real-world cases illustrating the themes of technology, business, and society. These cases take an in-depth look at relevant topics to help describe and analyze the full breadth of the field of e-commerce. The cases probe such issues as the ability of governments to regulate Internet content, how to design Web sites for accessibility, the challenges faced by luxury marketers in online marketing, and smartphone security.

Margin Glossary Throughout the text, key terms and their definitions appear in the text margin where they are first introduced.

Real-Company Examples Drawn from actual e-commerce ventures, well over 100 pertinent examples are used throughout the text to illustrate concepts.



Chapter-Closing Case Studies Each chapter concludes with a robust case study based on a real-world organization. These cases help students synthesize chapter concepts and apply this knowledge to concrete problems and scenarios such as evaluating Pandora's freemium business model, ExchangeHunterJumper's efforts to build a brand, and the fairness of the Google Books settlement.

Chapter-Ending Pedagogy Each chapter contains extensive end-of-chapter materials designed to reinforce the learning objectives of the chapter.

Key Concepts Keyed to the learning objectives, Key Concepts present the key points of the chapter to aid student study.

Review Questions Thought-provoking questions prompt students to demonstrate their comprehension and apply chapter concepts to management problem solving.

Projects At the end of each chapter are a number of projects that encourage students to apply chapter concepts and to use higher level evaluation skills. Many make use of the Internet and require students to present their findings in an oral or electronic presentation or written report. For instance, students are asked to evaluate publicly available information about a company's financials at the SEC Web site, assess payment system options for companies across international boundaries, or search for the top 10 cookies on their own computer and the sites they are from.

Web Resources Web resources that can extend students' knowledge of each chapter with projects, exercises, and additional content are available at www.azimuth-interactive.com/ecommerce10e. The Web site contains the following content provided by the authors:

- Additional projects, exercises, and tutorials
- Information on how to build a business plan and revenue models
- Essays on careers in e-commerce



SUPPORT PACKAGE

The following supplementary materials are available to qualified instructors through the Online Instructor Resource Center. Contact your Pearson sales representative for information about how to access them.

- **Instructor's Manual with solutions** This comprehensive manual pulls together a wide variety of teaching tools so that instructors can use the text easily and effectively. Each chapter contains an overview of key topics, a recap of the key learning objectives, additional topics for class discussion and debate, lecture tips, discussion of the chapter-ending case, and answers to the Case Study Questions, Review Questions, and Student Projects.
- **Test Bank** For quick test preparation, the author-created Test Bank contains multiple-choice, true/false, and short-essay questions that focus both on content and the development of critical/creative thinking about the issues evoked by the chapter. The Test Bank is available in Microsoft Word and TestGen format. The TestGen is also available in WebCT and BlackBoard-ready format. TestGen allows instructors to view, edit, and add questions.
- **PowerPoint lecture presentation slides** These slides illustrate key points, tables, and figures from the text in lecture-note format. The slides can be easily converted to transparencies or viewed electronically in the classroom. The slides also include additional questions for the opening cases and the "Insight on" vignettes throughout the book. These questions are very useful for in-class discussions, or quizzes.
- **Learning Tracks** These additional essays, created by the authors, provide instructors and students with more in-depth content on selected topics in e-commerce.

Chapter 1

- 1.1 Global E-commerce Europe
- 1.2 Global E-commerce Latin America
- 1.3 Global E-commerce China

Chapter 6

- 6.1 Basic Marketing Concepts
- 6.2 Consumer Behavior: Cultural, Social, and Psychological Background Factors
- 6.3 Social Media Marketing - Blogging

- **Video Cases** The authors have created a collection of video case studies that integrate short videos, supporting case study material, and case study questions. Video cases can be used in class to promote discussion or as written assignments.

Chapter 1

- 1.1 The Future of E-commerce

Chapter 2

- 2.1 Deals Galore at Groupon

Chapter 3

- 3.1 Google Data Center Efficiency Best Practices
- 3.2 NBA: Competing on Global Delivery

Chapter 4

- 4.1 ESPN Goes to eXtreme Scale
- 4.2 Data Warehousing at REI: Understanding the Customer

Chapter 5

- 5.1 Cyberespionage: The Chinese Threat
- 5.2 Stuxnet and Cyberwarfare
- 5.3 IBM Zone Trusted Information Channel (ZTIC)
- 5.4 Open ID and Web Security

Chapter 6

- 6.1 Nielsen Online Campaign Ratings

Chapter 7

- 7.1 The Power of Like

Chapter 8

- 8.1 Facebook Privacy
- 8.2 What Net Neutrality Means for You
- 8.3 Lawrence Lessig on Net Neutrality

Chapter 9

- 9.1 Etsy: A Marketplace and a Community

Chapter 10

- 10.1 YouTube's 7th Birthday

Chapter 11

- 11.1 Mint Returns for Goodwill's eBay Auctions of Thrift-Store Finds

Chapter 12

- 12.1 Ford AutoXchange B2B Marketplace

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Brief Contents

PART 1 Introduction to E-commerce

1	THE REVOLUTION IS JUST BEGINNING	2
---	----------------------------------	---

2	E-COMMERCE BUSINESS MODELS AND CONCEPTS	54
---	---	----

PART 2 Technology Infrastructure for E-commerce

3	E-COMMERCE INFRASTRUCTURE: THE INTERNET, WEB, AND MOBILE PLATFORM	106
---	---	-----

4	BUILDING AN E-COMMERCE PRESENCE: WEB SITES, MOBILE SITES, AND APPS	182
---	--	-----

5	E-COMMERCE SECURITY AND PAYMENT SYSTEMS	244
---	---	-----

PART 3 Business Concepts and Social Issues

6	E-COMMERCE MARKETING AND ADVERTISING CONCEPTS	324
---	---	-----

7	SOCIAL, MOBILE, AND LOCAL MARKETING	410
---	-------------------------------------	-----

8	ETHICAL, SOCIAL, AND POLITICAL ISSUES IN E-COMMERCE	482
---	---	-----

PART 4 E-commerce in Action

9	ONLINE RETAIL AND SERVICES	560
10	ONLINE CONTENT AND MEDIA	624
11	SOCIAL NETWORKS, AUCTIONS, AND PORTALS	690
12	B2B E-COMMERCE: SUPPLY CHAIN MANAGEMENT AND COLLABORATIVE COMMERCE	744

Contents

PART 1 Introduction to E-commerce

1

THE REVOLUTION IS JUST BEGINNING

2

Learning Objectives 2

Pinterest: A Picture Is Worth a Thousand Words 3

1.1 *E-commerce: The Revolution Is Just Beginning* 6

The First 30 Seconds 9

What Is E-commerce? 10

The Difference Between E-commerce and E-business 10

Why Study E-commerce? 11

Eight Unique Features of E-commerce Technology 12

Ubiquity 12

Global Reach 13

Universal Standards 14

Richness 14

Interactivity 15

Information Density 15

Personalization/Customization 15

Social Technology: User Content Generation and Social Networking 16

Web 2.0: Play My Version 16

Types of E-commerce 19

Business-to-Consumer (B2C) E-commerce 19

Business-to-Business (B2B) E-commerce 20

Consumer-to-Consumer (C2C) E-commerce 20

Social E-commerce 21

Mobile E-commerce (M-commerce) 22

Local E-commerce 22

Growth of the Internet, Web, and Mobile Platform 22

	Origins and Growth of E-commerce	24
	<i>Insight on Technology: Will Apps Make the Web Irrelevant?</i>	26
1.2	<i>E-commerce: A Brief History</i>	28
	E-commerce 1995–2000: Invention	28
	E-commerce 2001–2006: Consolidation	31
	E-commerce 2007–Present: Reinvention	32
	Assessing E-commerce: Successes, Surprises, and Failures	32
	<i>Insight on Business: Start-Up Boot Camp</i>	33
	Predictions for the Future: More Surprises	37
1.3	<i>Understanding E-commerce: Organizing Themes</i>	40
	Technology: Infrastructure	40
	Business: Basic Concepts	42
	Society: Taming the Juggernaut	42
	<i>Insight on Society: Facebook and the Age of Privacy</i>	43
	Academic Disciplines Concerned with E-commerce	45
	Technical Approaches	45
	Behavioral Approaches	45
1.4	<i>Case Study: The Pirate Bay: Searching for a Safe Haven</i>	46
1.5	<i>Review</i>	49
	Key Concepts	49
	Questions	52
	Projects	53

	Learning Objectives	54
	<i>Tweet Tweet: Twitter's Business Model</i>	55
2.1	<i>E-commerce Business Models</i>	58
	Introduction	58
	Eight Key Elements of a Business Model	58
	Value Proposition	59
	Revenue Model	60
	Market Opportunity	61
	<i>Insight on Society: Foursquare: Check Your Privacy at the Door</i>	62
	Competitive Environment	64
	Competitive Advantage	65

	Market Strategy	67
	Organizational Development	67
	Management Team	67
	Raising Capital	68
	<i>Insight on Business: Crowdfunding Takes Off</i>	70
	Categorizing E-commerce Business Models: Some Difficulties	72
2.2	<i>Major Business-to-Consumer (B2C) Business Models</i>	72
	E-tailer	74
	Community Provider	74
	Content Provider	75
	Portal	76
	<i>Insight on Technology: Battle of the Titans: Music in the Cloud</i>	77
	Transaction Broker	79
	Market Creator	80
	Service Provider	80
2.3	<i>Major Business-to-Business (B2B) Business Models</i>	82
	E-distributor	83
	E-procurement	83
	Exchanges	83
	Industry Consortia	84
	Private Industrial Networks	84
2.4	<i>E-commerce Enablers: The Gold Rush Model</i>	85
2.5	<i>How E-Commerce Changes Business: Strategy, Structure, and Process</i>	85
	Industry Structure	87
	Industry Value Chains	90
	Firm Value Chains	91
	Firm Value Webs	92
	Business Strategy	93
2.6	<i>Case Study: Pandora and the Freemium Business Model</i>	97
2.7	<i>Review</i>	101
	Key Concepts	101
	Questions	103
	Projects	103

PART 2 Technology Infrastructure for E-commerce

3

E-COMMERCE INFRASTRUCTURE: THE INTERNET, WEB, AND MOBILE PLATFORM

106

Learning Objectives	106
<i>Google Glass: Augment My Reality</i>	107
3.1 <i>The Internet: Technology Background</i>	110
The Evolution of the Internet: 1961—the Present	112
The Internet: Key Technology Concepts	113
Packet Switching	113
Transmission Control Protocol/Internet Protocol (TCP/IP)	118
IP Addresses	118
Domain Names, DNS, and URLs	120
Client/Server Computing	121
The New Client: the Mobile Platform	123
The Internet “Cloud Computing” Model: Software and Hardware as a Service	124
Other Internet Protocols and Utility Programs	125
Internet Protocols: HTTP, E-mail Protocols, FTP, Telnet, and SSL/TLS	125
Utility Programs: Ping and Tracert	126
3.2 <i>The Internet Today</i>	127
The Internet Backbone	129
Internet Exchange Points	130
Campus Area Networks	130
Internet Service Providers	132
Intranets	134
Who Governs the Internet?	134
3.3 <i>The Future Internet Infrastructure</i>	136
Limitations of the Current Internet	136
<i>Insight on Society: Government Regulation and Surveillance of the Internet</i>	137
The Internet2® Project	140
The First Mile and the Last Mile	142
Fiber Optics and the Bandwidth Explosion in the First Mile	142
The Last Mile: Mobile Internet Access	143
The Future Internet	147
Latency Solutions	147

Guaranteed Service Levels and Lower Error Rates	147
Declining Costs	147
The Internet of Things	148
3.4 The Web	148
Hypertext	149
Markup Languages	150
HyperText Markup Language (HTML)	150
eXtensible Markup Language (XML)	152
<i>Insight on Technology: Is HTML5 Ready for Prime Time?</i>	153
Web Servers and Clients	155
Web Browsers	157
3.5 The Internet and the Web: Features and Services	158
E-mail	158
Instant Messaging	158
Search Engines	159
Online Forums and Chat	161
Streaming Media	162
Cookies	162
Web 2.0 Features and Services	163
Online Social Networks	163
Blogs	163
Really Simple Syndication (RSS)	164
Podcasting	164
Wikis	164
Music and Video Services	165
Internet Telephony	166
Video Conferencing, Video Chatting, and Telepresence	166
Online Software and Web Services: Web Apps, Widgets, and Gadgets	167
Intelligent Personal Assistants	167
3.6 Mobile Apps: The Next Big Thing Is Here	168
<i>Insight on Business: Apps for Everything: The App Ecosystem</i>	169
Platforms for Mobile Application Development	171
App Marketplaces	171
3.7 Case Study: Akamai Technologies: Attempting to Keep Supply Ahead of Demand	172
3.8 Review	176
Key Concepts	176
Questions	180
Projects	181

Learning Objectives	182
<i>USA Today Redesigns</i>	183
4.1 <i>Imagine Your E-commerce Presence</i>	186
What's the Idea? (The Visioning Process)	186
Where's the Money: Business and Revenue Model	186
Who and Where is the Target Audience	187
What Is the Ballpark? Characterize the Marketplace	188
Where's the Content Coming From?	188
Know Yourself: Conduct a SWOT Analysis	189
Develop an E-commerce Presence Map	190
Develop a Timeline: Milestones	191
How Much Will This Cost?	191
4.2 <i>Building an E-commerce Presence: A Systematic Approach</i>	192
Planning: The Systems Development Life Cycle	194
Systems Analysis/Planning: Identify Business Objectives, System Functionality, and Information Requirements	194
System Design: Hardware and Software Platforms	196
Building the System: In-house Versus Outsourcing	196
Build Your Own versus Outsourcing	196
Host Your Own versus Outsourcing	200
<i>Insight on Business: Curly Hair and Appillionaires</i>	201
Testing the System	203
Implementation and Maintenance	203
Factors in Optimizing Web Site Performance	204
4.3 <i>Choosing Software and Hardware</i>	205
Simple versus Multi-tiered Web Site Architecture	205
Web Server Software	206
Site Management Tools	208
Dynamic Page Generation Tools	209
Application Servers	211
E-commerce Merchant Server Software Functionality	211
Online Catalog	212
Shopping Cart	212
Credit Card Processing	213
Merchant Server Software Packages (E-commerce Suites)	213
Choosing an E-commerce Suite	213
Web Services and Open Source Options	214
The Hardware Platform	216

Right-Sizing Your Hardware Platform: The Demand Side	216
Right-Sizing Your Hardware Platform: The Supply Side	219
4.4 Other E-Commerce Site Tools	221
Web Site Design: Basic Business Considerations	221
Tools for Web Site Optimization	222
Tools for Interactivity and Active Content	223
Common Gateway Interface (CGI)	223
Active Server Pages (ASP and ASP.NET)	224
Java, Java Server Pages (JSP), and JavaScript	224
ActiveX and VBScript	225
ColdFusion	225
Web 2.0 Design Elements	225
Personalization Tools	226
The Information Policy Set	227
4.5 Developing a Mobile Web Site and Building Mobile Applications	227
<i>Insight On Society: Designing for Accessibility</i>	228
Planning and Building a Mobile Web Presence	230
Mobile Web Presence: Design Considerations	231
Mobile Web Presence: Performance and Cost Considerations	232
<i>Insight on Technology: Building a Mobile Presence</i>	233
4.6 Case Study: Orbitz Charts Its Mobile Trajectory	235
4.7 Review	239
Key Concepts	239
Questions	242
Projects	243

5**E-COMMERCE SECURITY AND PAYMENT SYSTEMS****244**

Learning Objectives	244
<i>Cyberwar: MAD 2.0</i>	245
5.1 The E-commerce Security Environment	248
The Scope of the Problem	249
The Underground Economy Marketplace: The Value of Stolen Information	250
What Is Good E-commerce Security?	251
Dimensions of E-commerce Security	253
The Tension Between Security and Other Values	254
Ease of Use	254
Public Safety and the Criminal Uses of the Internet	255

5.2	<i>Security Threats in the E-commerce Environment</i>	256
	Malicious Code	257
	Potentially Unwanted Programs (PUPs)	260
	Phishing	260
	Hacking, Cybervandalism, Hacktivism, and Data Breaches	263
	<i>Insight on Business: We Are Legion</i>	265
	Credit Card Fraud/Theft	267
	Spoofing, Pharming, and Spam (Junk) Web Sites	268
	Identity Fraud	268
	Denial of Service (DOS) and Distributed Denial of Service (DDOS) Attacks	269
	Sniffing	269
	Insider Attacks	270
	Poorly Designed Server and Client Software	271
	Social Network Security Issues	271
	Mobile Platform Security Issues	272
	Cloud Security Issues	273
5.3	<i>Technology Solutions</i>	273
	<i>Insight on Technology: Think Your Smartphone Is Secure?</i>	274
	Protecting Internet Communications	276
	Encryption	276
	Symmetric Key Encryption	277
	Public Key Encryption	278
	Public Key Encryption Using Digital Signatures and Hash Digests	280
	Digital Envelopes	282
	Digital Certificates and Public Key Infrastructure (PKI)	283
	Limitations to Encryption Solutions	284
	Securing Channels of Communication	285
	Secure Sockets Layer (SSL) and Transport Layer Security (TLS)	285
	Virtual Private Networks (VPNs)	287
	Wireless (Wi-Fi) Networks	287
	Protecting Networks	287
	Firewalls	287
	Proxy Servers	288
	Intrusion Detection and Prevention Systems	289
	Protecting Servers and Clients	289
	Operating System Security Enhancements	289
	Anti-Virus Software	290
5.4	<i>Management Policies, Business Procedures, and Public Laws</i>	290
	A Security Plan: Management Policies	290
	The Role of Laws and Public Policy	293
	Private and Private-Public Cooperation Efforts	295

	Government Policies and Controls on Encryption Software	295
5.5	<i>Payment Systems</i>	296
	Types of Payment Systems	296
	Cash	296
	Checking Transfer	297
	Credit Card	297
	Stored Value	298
	Accumulating Balance	298
	Payment Systems Stakeholders	298
5.6	<i>E-commerce Payment Systems</i>	299
	Online Credit Card Transactions	301
	Credit Card E-commerce Enablers	303
	Limitations of Online Credit Card Payment Systems	303
	Alternative Online Payment Systems	303
	Mobile Payment Systems: Your Smartphone Wallet	305
	Digital Cash and Virtual Currencies	305
5.7	<i>Electronic Billing Presentment and Payment</i>	306
	Market Size and Growth	306
	<i>Insight on Society: Bitcoin</i>	307
	EBPP Business Models	309
5.8	<i>Case Study: Online Payment Marketplace: Goat Rodeo</i>	311
5.9	<i>Review</i>	316
	Key Concepts	316
	Questions	321
	Projects	322

PART 3 Business Concepts and Social Issues

6

E-COMMERCE MARKETING AND ADVERTISING CONCEPTS

324

	Learning Objectives	324
	<i>Facebook: Does Social Marketing Work?</i>	325
6.1	<i>Consumers Online: The Internet Audience and Consumer Behavior</i>	328
	Internet Traffic Patterns: The Online Consumer Profile	328
	Intensity and Scope of Usage	329
	Demographics and Access	330

	Type of Internet Connection: Broadband and Mobile Impacts	331
	Community Effects: Social Contagion in Social Networks	331
	Consumer Behavior Models	332
	Profiles of Online Consumers	332
	The Online Purchasing Decision	333
	Shoppers: Browsers and Buyers	336
	What Consumers Shop for and Buy Online	337
	Intentional Acts: How Shoppers Find Vendors Online	337
	Why More People Don't Shop Online	338
	Trust, Utility, and Opportunism in Online Markets	338
6.2	<i>Digital Commerce Marketing and Advertising Strategies and Tools</i>	339
	Strategic Issues and Questions	339
	The Web Site as a Marketing Platform: Establishing the Customer Relationship	341
	Traditional Online Marketing and Advertising Tools	342
	Search Engine Marketing and Advertising	344
	Display Ad Marketing	347
	E-mail Marketing	352
	Affiliate Marketing	355
	Viral Marketing	355
	Lead Generation Marketing	356
	Social, Mobile, and Local Marketing and Advertising	356
	Multi-Channel Marketing: Integrating Online and Offline Marketing	359
	Other Online Marketing Strategies	360
	<i>Insight on Business: Are the Very Rich Different From You and Me?</i>	361
	Customer Retention Strategies	364
	Pricing Strategies	369
	Long Tail Marketing	374
6.3	<i>Internet Marketing Technologies</i>	375
	The Revolution in Internet Marketing Technologies	375
	Web Transaction Logs	375
	<i>Insight on Technology: The Long Tail: Big Hits and Big Misses</i>	376
	Supplementing the Logs: Tracking Files	379
	Databases, Data Warehouses, Data Mining, and Big Data	380
	<i>Insight on Society: Every Move You Take, Every Click You Make, We'll Be Tracking You</i>	381
	Databases	383
	Data Warehouses and Data Mining	383
	Hadoop and the Challenge of Big Data	385

Customer Relationship Management (CRM) Systems	386
6.4 Understanding the Costs and Benefits of Online Marketing Communications	388
Online Marketing Metrics: Lexicon	388
How Well Does Online Advertising Work?	391
The Costs of Online Advertising	394
Web Analytics: Software for Measuring Online Marketing Results	396
6.5 Case Study: Instant Ads: Real-Time Marketing on Exchanges	399
6.6 Review	404
Key Concepts	404
Questions	407
Projects	408

7**SOCIAL, MOBILE, AND LOCAL MARKETING****410**

Learning Objectives	410
<i>Facebook: Putting Social Marketing to Work</i>	411
7.1 Introduction to Social, Mobile, and Local Marketing	414
From Eyeballs to Conversations	414
From the Desktop to the Smartphone and Tablet	414
The Social, Mobile, Local Nexus	416
7.2 Social Marketing	416
Social Marketing Players	417
The Social Marketing Process	418
Facebook Marketing	420
Basic Facebook Features	420
Facebook Marketing Tools: A New Marketing Vocabulary	422
Starting a Facebook Marketing Campaign	425
Measuring Facebook Marketing Results	427
Twitter Marketing	429
Basic Twitter Features	429
<i>Insight on Technology: Fairmont Hotels: Using Google Analytics to Optimize Social and Mobile Marketing</i>	430
Twitter Marketing Tools: A New Marketing Vocabulary	432
Starting a Twitter Marketing Campaign	434
Measuring Twitter Marketing Results	436
Pinterest Marketing	437

	Basic Pinterest Features	438
	Pinterest Marketing Tools: A New Marketing Vocabulary	439
	Starting a Pinterest Marketing Campaign	440
	Measuring Pinterest Marketing Results	442
	The Downside of Social Marketing	442
7.3	<i>Mobile Marketing</i>	443
	<i>Insight on Society: Marketing to Children of the Web in the Age of Social Networks</i>	444
	Overview: M-commerce Today	446
	How People Actually Use Mobile Devices	447
	In-App Experiences and In-App Ads	449
	How the Multi-Screen Environment Changes the Marketing Funnel	450
	Are Mobile Devices a Good Marketing Platform?	450
	Basic Mobile Marketing Features	451
	The Technology: Basic Mobile Device Features	452
	Mobile Marketing Tools: Ad Formats	453
	Starting a Mobile Marketing Campaign	455
	<i>Insight on Business: Mobile Marketing: Land Rover Seeks Engagement on the Small Screen</i>	456
	Measuring Mobile Marketing Results	458
7.4	<i>Local and Location-Based Marketing</i>	460
	The Growth of Local Mobile Marketing	460
	The Growth of Location-Based Mobile Marketing	461
	Location-Based Marketing Platforms	463
	Location-Based Mobile Marketing: The Technologies	464
	Why Is Local Mobile Attractive to Marketers?	466
	Location-Based Marketing Tools	466
	A New Lexicon: Location-Based Digital Marketing Features	466
	Local Marketing Ad Formats	466
	Starting a Location-Based Marketing Campaign	467
	Measuring Location-Based Marketing Results	469
7.5	<i>Case Study: ExchangeHunterJumper.com: Building a Brand with Social Marketing</i>	470
7.6	<i>Review</i>	476
	Key Concepts	476
	Questions	480
	Projects	480

Learning Objectives 482

Free Speech on the Internet: Who Decides? 483

8.1 *Understanding Ethical, Social, and Political Issues in E-commerce* 486

A Model for Organizing the Issues 487

Basic Ethical Concepts: Responsibility, Accountability, and Liability 489

Analyzing Ethical Dilemmas 491

Candidate Ethical Principles 491

8.2 *Privacy and Information Rights* 493

Information Collected at E-commerce Sites 494

Social Networks and Privacy 495

Mobile and Location-Based Privacy Issues 497

Profiling and Behavioral Targeting 498

The Internet and Government Invasions of Privacy: E-commerce
Surveillance 501

Legal Protections 503

Informed Consent 503

The Federal Trade Commission's Fair Information Practices Principles 506

The European Data Protection Directive 511

Private Industry Self-Regulation 512

Privacy Advocacy Groups 513

The Emerging Privacy Protection Business 514

Technological Solutions 514

8.3 *Intellectual Property Rights* 514

Types of Intellectual Property Protection 516

Copyright: The Problem of Perfect Copies and Encryption 517

Look and Feel 517

Fair Use Doctrine 518

The Digital Millennium Copyright Act of 1998 519

Patents: Business Methods and Processes 522

E-commerce Patents 523

*Insight on Technology: Theft and Innovation: The Patent Trial of the
Century* 524

Trademarks: Online Infringement and Dilution 528

Trademarks and the Internet 529

Cybersquatting and Brandjacking 529

Cyberpiracy 530

	Metatagging	531
	Keywording	532
	Linking	533
	Framing	533
	Challenge: Balancing the Protection of Property with Other Values	534
8.4	<i>Governance</i>	534
	Who Governs the Internet and E-commerce?	534
	Can the Internet Be Controlled?	536
	Public Government and Law	537
	Taxation	537
	<i>Insight on Business: Internet Sales Tax Battle</i>	539
	Net Neutrality	541
8.5	<i>Public Safety and Welfare</i>	543
	Protecting Children	543
	Cigarettes, Gambling, and Drugs: Is the Web Really Borderless?	545
	<i>Insight on Society: The Internet Drug Bazaar</i>	546
8.6	<i>Case Study: The Google Books Settlement: Is It Fair?</i>	549
8.7	<i>Review</i>	553
	Key Concepts	553
	Questions	557
	Projects	558

PART 4 E-commerce in Action

	Learning Objectives	560
	<i>Blue Nile Sparkles for Your Cleopatra</i>	561
9.1	<i>The Online Retail Sector</i>	565
	The Retail Industry	566
	Online Retailing	567
	E-commerce Retail: The Vision	567
	The Online Retail Sector Today	568
	Multi-Channel Integration	570

9.2	<i>Analyzing the Viability of Online Firms</i>	572
	Strategic Analysis	572
	Financial Analysis	573
9.3	<i>E-commerce in Action: E-tailing Business Models</i>	575
	Virtual Merchants	575
	Amazon.com	576
	The Vision	576
	Business Model	577
	Financial Analysis	579
	Strategic Analysis—Business Strategy	579
	Strategic Analysis—Competition	581
	Strategic Analysis—Technology	582
	Strategic Analysis—Social and Legal Challenges	582
	Future Prospects	583
	Multi-channel Merchants: Bricks-and-Clicks	583
	Catalog Merchants	584
	Manufacturer-Direct	586
	Common Themes in Online Retailing	587
	<i>Insight on Technology: Using the Web to Shop 'Till You Drop</i>	589
9.4	<i>The Service Sector: Offline and Online</i>	591
9.5	<i>Online Financial Services</i>	592
	Online Financial Consumer Behavior	592
	Online Banking and Brokerage	593
	Multi-Channel vs. Pure Online Financial Services Firms	594
	Financial Portals and Account Aggregators	595
	Online Mortgage and Lending Services	595
	Online Insurance Services	596
	Online Real Estate Services	597
9.6	<i>Online Travel Services</i>	599
	Why Are Online Travel Services So Popular?	599
	The Online Travel Market	600
	<i>Insight on Business: Zipcar Shifts into High Gear</i>	601
	Online Travel Industry Dynamics	603
9.7	<i>Online Career Services</i>	604
	<i>Insight on Society: Phony Reviews</i>	605
	It's Just Information: The Ideal Web Business?	607
	Online Recruitment Industry Trends	609
9.8	<i>Case Study: OpenTable: Your Reservation Is Waiting</i>	612

9.9	Review	616
	Key Concepts	616
	Questions	622
	Projects	623

	Learning Objectives	624
	<i>YouTube and the Emerging Internet Broadcasting System (IBS)</i>	625
10.1	Online Content	629
	Content Audience and Market: Where Are the Eyeballs and the Money?	631
	Media Utilization	632
	Internet and Traditional Media: Cannibalization versus Complementarity	633
	Media Revenues	634
	Three Revenue Models for Digital Content Delivery: Subscription, A La Carte, and Advertising-Supported (Free and Freemium)	634
	Online Content Consumption	635
	Free or Fee: Attitudes About Paying for Content and the Tolerance for Advertising	636
	Digital Rights Management (DRM) and Walled Gardens	638
	Media Industry Structure	639
	Media Convergence: Technology, Content, and Industry Structure	640
	Technological Convergence	640
	Content Convergence	640
	Industry Structure Convergence	642
	Making a Profit with Online Content: From Free to Fee	642
10.2	The Online Publishing Industry	643
	Online Newspapers	644
	Audience Size and Growth	645
	Newspaper Business Models	646
	Challenges: Disruptive Technologies	647
	<i>Insight on Society: Can Apps and Video Save Newspapers?</i>	648
	E-Books and Online Book Publishing	650
	Amazon and Apple: The New Digital Media Ecosystems	652
	What Are the Challenges of the Digital E-Book Platform?	654
	E-Book Business Models	655
	Interactive Books: Converging Technologies	656
	Magazines Rebound on the Tablet Platform	657

10.3	<i>The Online Entertainment Industry</i>	658
	<i>Insight on Business: Read All About It: Rival Digital Newsstands Fight</i>	659
	Online Entertainment Audience Size and Growth	662
	User-Generated Content: Where Does It Fit?	663
	Television and Premium Video	664
	Movies	667
	Music	671
	Games	674
	The Online Entertainment Industry Structure	676
	<i>Insight on Technology: Hollywood and the Internet: Let's Cut a Deal</i>	679
10.4	<i>Case Study: Netflix: The Next Blockbuster?</i>	682
10.5	<i>Review</i>	686
	Key Concepts	686
	Questions	688
	Projects	689

11**SOCIAL NETWORKS, AUCTIONS, AND PORTALS****690**

	Learning Objectives	690
	<i>Social Network Fever Spreads to the Professions</i>	691
11.1	<i>Social Networks and Online Communities</i>	693
	What Is an Online Social Network?	695
	The Difference Between Social Networks and Portals	695
	The Growth of Social Networks and Online Communities	696
	Turning Social Networks into Businesses	698
	Types of Social Networks and Their Business Models	700
	<i>Insight on Society: The Dark Side of Social Networks</i>	701
	Social Network Features and Technologies	704
	The Future of Social Networks	704
	<i>Insight on Technology: FaceBook Has Friends</i>	706
11.2	<i>Online Auctions</i>	709
	Defining and Measuring the Growth of Auctions and Dynamic Pricing	709
	Why Are Auctions So Popular? Benefits and Costs of Auctions	712
	Benefits of Auctions	712
	Risks and Costs of Auctions for Consumers and Businesses	713
	Market-Maker Benefits: Auctions as an E-commerce Business Model	714
	Types and Examples of Auctions	714
	Internet Auction Basics	715

- Types of Auctions 716
- When to Use Auctions (and for What) in Business 721
- Seller and Consumer Behavior at Auctions 723
 - Seller Profits: Arrival Rate, Auction Length, and Number of Units 723
 - Auction Prices: Are They the Lowest? 724
 - Consumer Trust in Auctions 724
- When Auction Markets Fail: Fraud and Abuse in Auctions 725
- 11.3 E-commerce Portals 725**
 - The Growth and Evolution of Portals 727
 - Types of Portals: General-purpose and Vertical Market 728
 - Insight on Business: The Transformation of AOL* 729
 - Portal Business Models 732
- 11.4 Case Study: eBay Evolves 734**
- 11.5 Review 738**
 - Key Concepts 738
 - Questions 743
 - Projects 743

12	B2B E-COMMERCE: SUPPLY CHAIN MANAGEMENT AND COLLABORATIVE COMMERCE	744
-----------	---	------------

- Learning Objectives 744
- Volkswagen Builds Its B2B Platform* 745
- 12.1 B2B E-commerce and Supply Chain Management 749**
 - Defining and Measuring the Growth of B2B Commerce 750
 - The Evolution of B2B Commerce 750
 - The Growth of B2B E-commerce 2012–2017 753
 - Industry Forecasts 753
 - Potential Benefits and Challenges of B2B E-commerce 754
 - The Procurement Process and the Supply Chain 755
 - Insight on Society: Where’s My iPad? Supply Chain Risk and Vulnerability* 756
 - Types of Procurement 758
 - The Role of Existing Legacy Computer Systems and Enterprise Systems 760
 - Trends in Supply Chain Management and Collaborative Commerce 760
 - Just-in-Time and Lean Production 761
 - Supply Chain Simplification 761
 - Supply Chain Black Swans: Adaptive Supply Chains 761
 - Accountable Supply Chains: Labor Standards 763
 - Sustainable Supply Chains: Lean, Mean, and Green 764

Electronic Data Interchange (EDI)	765
Supply Chain Management Systems: Mobile B2B in Your Palm	768
Collaborative Commerce	769
<i>Insight on Technology: RFID Autoidentification: Giving a Voice to Your Inventory</i>	770
Social Networks and B2B: The Extended Social Enterprise	773
Main Types of Internet-based B2B Commerce	774
12.2 Net Marketplaces	775
The Variety and Characteristics of Net Marketplaces	775
Types of Net Marketplaces	776
E-distributors	777
E-procurement	778
Exchanges	780
Industry Consortia	782
The Long-term Dynamics of Net Marketplaces	784
<i>Private Industrial Networks</i>	786
What Are Private Industrial Networks?	786
Characteristics of Private Industrial Networks	787
Private Industrial Networks and Collaborative Commerce	788
<i>Insight on Business: Walmart Develops a Private Industrial Network</i>	789
Implementation Barriers	792
12.4 Case Study: Elemica: Cooperation, Collaboration, and Community	793
12.5 Review	798
Key Concepts	798
Questions	803
Projects	803

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PART

1

- **CHAPTER 1**
The Revolution Is Just Beginning
- **CHAPTER 2**
E-commerce Business Models and Concepts

Introduction to E-commerce



CHAPTER

1

The Revolution Is Just Beginning

LEARNING OBJECTIVES

After reading this chapter, you will be able to:

- Define e-commerce and describe how it differs from e-business.
- Identify and describe the unique features of e-commerce technology and discuss their business significance.
- Recognize and describe Web 2.0 applications.
- Describe the major types of e-commerce.
- Understand the evolution of e-commerce from its early years to today.
- Identify the factors that will define the future of e-commerce.
- Describe the major themes underlying the study of e-commerce.
- Identify the major academic disciplines contributing to e-commerce.

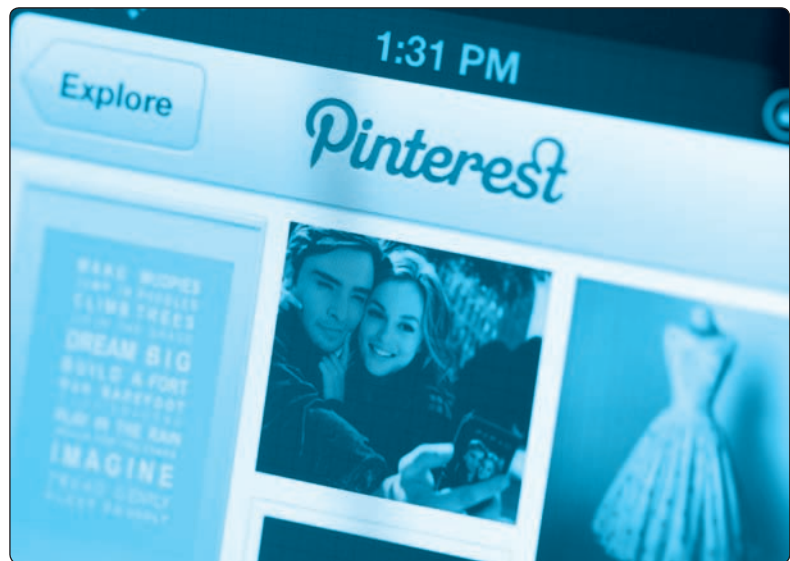
P i n t e r e s t :

A Picture Is Worth a Thousand Words

Like all of the most successful e-commerce companies, Pinterest taps into a simple truth. In Pinterest's case, the simple truth is that people love to collect things, and show off their collections to others. And like other Internet firms that have goals of global scope, such as Google, Facebook, and Amazon, Pinterest also has a global mission: to connect everyone in the world through the things they find interesting. How? Founded in 2009 by Ben Silbermann, Evan Sharp, and Paul Sciarra and launched in March 2010, Pinterest allows you to create virtual scrapbooks of images, video, and other content that you "pin" to a virtual

bulletin board or pin board on the Web site. Categories range from Animals to Videos, with Food & Drink, DIY & Crafts, and Women's Fashion among the most popular. Find something that you particularly like? In addition to "liking" and perhaps commenting on it, you can re-pin it to your own board, or follow a link back to the original source. Find someone whose taste you admire or who shares your passions? You can follow one or more of that pinner's boards to keep track of everything she or he pins.

Reportedly the fastest Web site in history to reach 10 million users, Pinterest currently has more than 50 million users, more than double from the previous year. According to some tracking services, it is now the third most visited social network in the United States, behind Facebook and Twitter. It is also one of the "stickiest" sites on the Web—according to comScore, users spend an average of 80 minutes per session on Pinterest, and almost 60% of users with accounts visit once or more a week. Jeff Jordan, a partner at Andreessen Horowitz, a venture capital firm and investor in Pinterest, says he has seen only one other site with similar numbers—Facebook. And like Facebook before it, Pinterest has begun a transition toward monetizing that appeal. The first step, in November 2012, was to offer business accounts that provide additional resources for brands. Currently, there is no charge for a business account, but that clearly may change in the future. In March 2013, Pinterest introduced a new Web analytics tool, also currently free, that helps Web site owners understand how people are using pinned material that has originated from their Web sites. Shortly thereafter,



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SOURCES: “Stick with Pinterest,” by Thad Rueter, *Internet-Retailer.com*, May 22, 2013; “Pinterest (Officially) Jumps the Pond,” by Zak Stambor, *Internet-Retailer.com*, May 10, 2013; “Why Is Pinterest a \$2.5 Billion Company? An Early Investor Explains,” by J.J. Colao, *Forbes.com*, May 8, 2013; “Pinterest Gets a New Look,” by Zak Stambor, *InternetRetailer.com*, March 19, 2013; “Introducing Pinterest Web Analytics,” *blog.Pinterest.com*, March 12, 2013; “Meet Django,” *Djangoproject.com*, accessed August 13, 2012; “Going Mobile with Pinterest,” *Pinterestinvite.org*, accessed August 13, 2012; “Pinterest Gives Copyright Credit to Etsy, Kickstarter, SoundCloud,” by Sarah Kessler, *Mashable.com*, July 19, 2012; “Whole Foods: The King of Pinterest?,” by Vicky Garza, *Austin Business Journal*, July 13, 2012; “Pinterest on Wish List of Rakuten, Japan’s Amazon,” by Evelyn M. Rusli, *New York Times*, July 12, 2012; “A Mobile Shopping App Takes an Interest in Pinterest,” by Katie Deatsch, *InternetRetailer.com*, July 11, 2012; “Pinterest Tops Tumblr in National Popularity?,” by Stephanie Mlot, *PC Magazine*, June 28, 2012; “Pinterest Whets Consumer Desire with Images that Turn Window Shoppers into Online Buyers,” by Matt Butter, *Forbes*, June 6, 2012; “Gemvara Raises \$25 Million,” by Stefany Moore, *InternetRetailer.com*, June 5, 2012; “Pinterest Raises \$100 Million with \$1.5 Billion Valuation,” by Pui-Wing Tam, *Wall Street Journal*, May 17, 2012; “Japanese E-commerce Company Rakuten Invests in Pinterest,” by Zak Stambor, *InternetRetailer.com*, May 17, 2012; “Now on Pinterest: Scams,” by Riva Richmond, *New York Times*, May 16, 2012; “Real Simple is First Print Mag to Reach 100K Pinterest Followers,” *Advertising Age*, May 11, 2012; “Pinterest Plagued by More Scams, Fake Android Apps,” by Fahmida Y. Rashid, *PCMag.com*, April 30, 2012; “Nearly 1/3 Online Shoppers Have Made Purchases from What They’ve Seen on Pinterest,” by Zak Stambor, *InternetRetailer.com*, April 25, 2012; “E-commerce Giants Amazon and eBay Add Pinterest Buttons,” by Kate Kaye,

it began a revamp of its look, in an effort to help users discover new content more effectively and interact with it and other Pinterest users. In May 2013, it introduced its first localized site, for the United Kingdom, with another localized site for France reportedly in the wings.

Whole Foods, the natural foods supermarket chain, was one of the first companies to develop a presence on Pinterest, and now has more than 120,000 followers. It doesn’t use Pinterest to advertise its own products in an overt way. Instead, it uses Pinterest as a way to communicate Whole Foods’ core values through carefully curating and presenting images relevant to those values. Pinterest is also having an impact on the magazine world. For instance, Time Inc.’s *Real Simple*, also an early adopter, is one of the most-followed brands on Pinterest, with more than 300,000 followers. Pinterest has become a leading source of traffic to the Real Simple Web site, providing twice as many referrals as Facebook and Twitter combined. Other publishers are experiencing similar results.

For consumers, Pinterest can function both as a source of inspiration and aspiration. It has proven to be very popular for creating shopping wish lists and a great way to get ideas. Retailers, in particular, have taken notice and for good reason: several reports have shown that Pinterest helps drive shoppers to make purchases. For example, a study of 25,000 online stores using the Shopify e-commerce platform found there was as much traffic originating from Pinterest as from Twitter, and that Pinterest users spent an average of \$80 each time they made an online purchase, twice the amount of Facebook users. Bizrate Insights found that almost a third of online shoppers surveyed had made a purchase based on what they had seen on Pinterest and other image-sharing sites; an even higher percentage (37%) had seen items they wanted to buy but had not yet purchased. There clearly remains room for growth, however. According to *Internet Retailer*, almost half of the retailers it surveyed in 2013 did not yet have a presence on Pinterest.

Pinterest’s Web site was created using Django, an open source Web 2.0 framework that uses the Python programming language, which enables rapid development and reusability of components, coupled with elegant design. As with Facebook and Twitter, many third-party developers have also joined the party, with additional apps, browser extensions, and other third-party content that leverage off of the Pinterest platform. For instance, Zoomingo offers both a Web site and a mobile shopping app that allows you to find and get sale alerts for items you and others have pinned. Pinterest is also aggressive about leveraging ties to other social networks such as Facebook and Twitter—when you register, you can do so via Facebook, Twitter, or e-mail. Once you’ve registered, you can easily add Pinterest to your Facebook Timeline or link to your Twitter account.

On the mobile front, Pinterest introduced its own iPhone app in March 2011 and has frequently updated it since then, and an iPad app is also available. However, rather than develop additional stand-alone apps for Android, BlackBerry, or Windows smartphones, Pinterest chose a different route: to create a mobile version of its Web site using HTML5. Unlike an app, Pinterest Mobile runs inside the smartphone’s browser rather than as a stand-alone program, and is able to serve multiple platforms.

Despite all the good news for Pinterest, there are some significant issues lurking just behind the scenes that may cloud its future; chief among them is copyright infringement. The basis of Pinterest’s business model involves users potentially violating others’

copyrights by posting images without permission and/or attribution. Although Pinterest's Terms of Service puts the onus on its users to avoid doing so, the site knowingly facilitates such actions by, for example, providing a "Pin it" tool embedded in the user's browser toolbar. Much of the content on the site reportedly violates its Terms of Service. Pinterest has provided an opt-out code to enable other sites to bar its content from being shared on Pinterest, but some question why they should have to take action when Pinterest is creating the problem. Further, the code does not necessarily resolve the issue, since it does not prevent someone from downloading an image and then uploading it to Pinterest. Another thing Pinterest has done to try to ameliorate the problem is to automatically add citations (attribution) to content coming from certain specified sources, such as Flickr, YouTube, Vimeo, Etsy, Kickstarter, and SlideShare, among others. It also complies with the Digital Millennium Copyright Act, which requires sites to remove images that violate copyright, but this too requires the copyright holder to be proactive and take action to demand the images be removed. Although no major copyright cases have been filed against it so far, how Pinterest resolves this issue may have a major impact on its ultimate success.

Pinterest is also not immune to the spam and scams that plague many e-commerce initiatives. Security analysts believe Pinterest will have to adapt its systems to deal with scammers and warn users to be wary of requests to pin content before viewing it and to be suspicious of "free" offers, surveys, and links with questionable titles. Pinterest has acknowledged the problem and has promised to improve its technology.

Another issue facing Pinterest is competition. Will Pinterest be like MySpace, destined to be eclipsed by a later entrant? Although some similar firms preceded Pinterest into the "visual collection" space, such as Polyvore and StyleCaster, Pinterest can be considered a first mover and as such has some significant advantages. However, other competitors have sprung up, such as Juxtapost (which allows private boards), Manteresting (aimed at the male demographic), Wanelo, and Fancy. Fancy has a revenue model based on linking its users to transactions, taking a 10% cut of purchases in the process, and has backing from co-founders of both Twitter and Facebook. The Fancy could become a formidable rival to Pinterest.

ClickZ.com, April 11, 2012; "Many Magazines Racing to Capitalize on Pinterest," *Advertising Age*, April 2, 2012; Interest in Pinterest Skyrockets," by Zak Stambor, InternetRetailer.com, March 23, 2012; "Is Pinterest the Next Napster?" by Therese Poletti, *Wall Street Journal*, March 14, 2012; "A Site That Aims to Unleash the Scrapbook Maker in All of Us," by Jenna Wortham, *New York Times*, March 11, 2012; "What Marketers Can Learn from Whole Foods' Organic Approach to Pinterest," by Lauren Drell, Mashable.com, February 23, 2012; "Pinterest Releases Optional Code to Prevent Unwanted Image Sharing," by Andrew Webster, Theverge.com, February 20, 2012; "A Scrapbook on the Web Catches Fire," by David Pogue, *New York Times*, February 15, 2012.

In 1994, e-commerce as we now know it did not exist. In 2013, less than 20 years later, around 155 million American consumers are expected to spend about \$419 billion, and businesses more than \$4.8 trillion, purchasing goods and services online or via a mobile device. A similar story has occurred throughout the world. And in this short period of time, e-commerce has been reinvented not just once, but twice.

The early years of e-commerce, during the late 1990s, were a period of business vision, inspiration, and experimentation. It soon became apparent, however, that establishing a successful business model based on those visions would not be easy. There followed a period of retrenchment and reevaluation, which led to the stock market crash of 2000–2001, with the value of e-commerce, telecommunications, and other technology stocks plummeting. After the bubble burst, many people were quick to write off e-commerce. But they were wrong. The surviving firms refined and honed their business models, ultimately leading to models that actually produced profits. Between 2002–2008, retail e-commerce grew at more than 25% per year.

Today, we are in the middle of yet another transition: a new and vibrant social, mobile, and local model of e-commerce growing alongside the more traditional e-commerce retail sales model exemplified by Amazon. Social network sites such as Facebook, Twitter, YouTube, and Pinterest, which enable users to distribute their own content (such as videos, music, photos, personal information, blogs, and software applications), have rocketed to prominence. Spurred by the explosive growth in smartphones such as iPhones and Androids, tablet computers, and ultra-lightweight laptops, a new e-commerce platform has emerged called “social e-commerce” that is closely intertwined with social networks, mobile computing, and heretofore private social relationships. Never before in the history of media have such large audiences been aggregated and made so accessible. Businesses are grappling with how best to approach this audience from an advertising and marketing perspective. Governments, private groups, and industry players are trying to understand how to protect privacy on this new e-commerce platform. Social networks and user-generated content sites are also examples of technology that is highly disruptive of traditional media firms. The movement of eyeballs towards these sites means fewer viewers of cable and broadcast television and Hollywood movies, and fewer readers of printed newspapers and magazines, and so those industries are also facing a transition. It's probably safe to predict that this will not be the last transition for e-commerce, either.

1.1 E-COMMERCE: THE REVOLUTION IS JUST BEGINNING

Table 1.1 describes the major trends in e-commerce in 2013–2014. Social networks have become a new e-commerce platform rivaling traditional e-commerce platforms by providing search, advertising, and payment services to vendors and customers. Who needs Google when you can have a swarm of friends recommend music, clothes, cars, and videos on a social network site where you spend most of your time online? The mobile platform based on smartphones and tablet computers has also finally arrived with a bang, making true mobile e-commerce a reality.

TABLE 1.1 MAJOR TRENDS IN E-COMMERCE 2013–2014**BUSINESS**

- Retail e-commerce in the United States continues double-digit growth (over 15%), with global growth rates even higher in Europe and emerging markets such as China, India, and Brazil.
- A new “social e-commerce” platform, based on social networks and supported by advertising, emerges, growing to an estimated \$5 billion in 2013 in the United States, and \$8 billion worldwide.
- Mobile retail e-commerce explodes, and is estimated to reach almost \$40 billion in the United States in 2013.
- A new app-based online economy grows alongside traditional Internet e-commerce, generating an estimated \$25 billion in revenue worldwide in 2013.
- Local e-commerce, the third dimension of the social, mobile, local e-commerce wave, also is growing in the United States, to an estimated \$4.4 billion in 2013.
- Facebook continues to grow, with more than 1.1 billion active users worldwide.
- Twitter continues to grow, with more than 200 million active users worldwide.
- Search engine marketing continues to challenge traditional marketing and advertising media.
- Social and mobile advertising platforms show strong growth and begin to challenge search engine marketing.
- The number of people of all ages online in the United States continues to increase, to an estimated 243 million, although the rate of growth is slowing.
- The global population using the Internet continues to expand, to over 2.5 billion, with around 33% of the world’s population now online.
- Online businesses continue to strengthen profitability by refining their business models and leveraging the capabilities of the Internet.
- The breadth of e-commerce offerings grows, especially in entertainment, retail apparel, luxury goods, appliances, and home furnishings.
- Small businesses and entrepreneurs continue to flood into the e-commerce marketplace, often riding on the infrastructures created by industry giants such as Apple, Facebook, Amazon, Google, and eBay.
- Brand extension through the Internet continues to grow as large firms such as Walmart and Target pursue integrated, multi-channel bricks-and-clicks strategies.
- B2B e-commerce in the United States continues to strengthen and grow beyond the \$4.7 trillion mark.

TECHNOLOGY

- A mobile computing and communications platform based on smartphones and tablet computers (the “new client”) becomes a reality and begins to rival the PC platform.
- More than 1.5 million apps in Apple’s and Google’s app stores create a new platform for online transactions, marketing, and advertising.
- Computing and networking component prices continue to fall dramatically.
- As firms track the trillions of online interactions that occur each day, a flood of data, typically referred to as “Big Data,” is being produced.

TABLE 1.1 MAJOR TRENDS IN E-COMMERCE 2013–2014 (CONT.)

- In order to make sense out of Big Data, firms turn to sophisticated software called business analytics (or Web analytics) that can identify purchase patterns as well as consumer interests and intentions in milliseconds.
- Cloud computing completes the transformation of the mobile platform by storing consumer content and software on Internet servers and making it available to any consumer-connected device from the desktop to a smartphone.

SOCIETY

- Consumer- and user-generated content, and syndication in the form of social networks, tweets, blogs, and wikis, continue to grow and provide an entirely new self-publishing forum that engages millions of consumers.
- The amount of data the average American consumes (estimated to be more than 34 gigabytes per day) continues to increase.
- Social networks encourage self-revelation, while threatening privacy.
- Participation by adults in social networks on the Internet increases; Facebook becomes ever more popular in all demographic categories.
- E-books finally gain wide acceptance and today account for about half of all book sales.
- Conflicts over copyright management and control continue, but there is substantial agreement among Internet distributors and copyright owners that they need one another.
- Explosive growth continues in online and mobile viewing of video and television programs.
- Taxation of Internet sales becomes more widespread and accepted by large online merchants.
- Surveillance of Internet communications by both repressive regimes and Western democracies grows.
- Concerns over commercial and governmental privacy invasion increase as firms provide government agencies with access to private personal information.
- Internet security continues to decline as major sites are hacked and lose control over customer information.
- Spam remains a significant problem despite legislation and promised technology fixes.
- Invasion of personal privacy expands as marketers extend their capabilities to track users.

More and more people and businesses are using the Internet to conduct commerce; smaller, local firms are learning how to take advantage of the Internet as Web services and Web site tools become very inexpensive. New e-commerce brands emerge while traditional retail brands such as Walmart and Target further extend their multi-channel, bricks-and-clicks strategies and retain their dominant retail positions by strengthening their Internet operations. At the societal level, other trends are apparent. The Internet has created a platform for millions of people to create and share content, establish new social bonds, and strengthen existing ones through social networks, blogging, and photo- and video-posting sites. These

same social networks have created significant privacy issues. The major digital copyright owners have increased their pursuit of online file-swapping services with mixed success, while reaching broad agreements with the big technology players like Apple, Amazon, and Google to protect intellectual property rights. States have successfully moved toward taxation of Internet sales, while Internet gaming sites have been severely curtailed through criminal prosecutions in the United States. Sovereign nations have expanded their surveillance of, and control over, Internet communications and content as a part of their anti-terrorist activities and their traditional interest in snooping on citizens. Privacy seems to have lost some of its meaning in an age when millions create public online personal profiles.

THE FIRST 30 SECONDS

It is important to realize that the rapid growth and change that has occurred in the first 19 years of e-commerce represents just the beginning—what could be called the first 30 seconds of the e-commerce revolution. Technology continues to evolve at exponential rates. This underlying ferment presents entrepreneurs with new opportunities to both create new businesses and new business models in traditional industries, and also to destroy old businesses. Business change becomes disruptive, rapid, and even destructive, while offering entrepreneurs new opportunities and resources for investment.

Improvements in underlying information technologies and continuing entrepreneurial innovation in business and marketing promise as much change in the next decade as was seen in the last decade. The twenty-first century will be the age of a digitally enabled social and commercial life, the outlines of which we can barely perceive at this time. Analysts estimate that by 2017, consumers will be spending about \$637 billion and businesses about \$6.6 trillion in online transactions. By 2020, some industry analysts believe e-commerce may account for 20% of all retail sales (eMarketer, Inc., 2013a). It appears likely that e-commerce will eventually impact nearly all commerce, and that most commerce will be e-commerce by the year 2050.

Can e-commerce continue to grow indefinitely? It's possible that at some point, e-commerce growth may slow simply as a result of overload: people may just not have the time to watch yet another online video, open another e-mail, or read another blog, tweet, or Facebook update. However, currently, there is no foreseeable limit to the continued rapid development of Internet and e-commerce technology, or limits on the inventiveness of entrepreneurs to develop new uses for the technology. Therefore, for now at least, it is likely that the disruptive process will continue.

Business fortunes are made—and lost—in periods of extraordinary change such as this. The next five years hold out extraordinary opportunities—as well as risks—for new and traditional businesses to exploit digital technology for market advantage. For society as a whole, the next few decades offer the possibility of extraordinary gains in social wealth as the digital revolution works its way through larger and larger segments of the world's economy, offering the possibility of high rates of productivity and income growth in an inflation-free environment.

As a business or technology student, this book will help you perceive and understand the opportunities and risks that lie ahead. By the time you finish, you