

Springer Texts in Business and Economics

Efraim Turban

David King

Jae Kyu Lee

Ting-Peng Liang

Deborrah C. Turban

# Electronic Commerce

A Managerial and  
Social Networks Perspective

*Eighth Edition, Revised Edition*

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# Electronic Commerce

A Managerial and Social Networks  
Perspective

Eighth Edition, Revised Edition

Efraim Turban  
University of Hawaii  
Honolulu, HI, USA

David King  
JDA Software  
Scottsdale, AZ, USA

Jae Kyu Lee  
Graduate School of Management  
Korea Advanced Institute of Science  
and Technology (KAIST)  
Seoul, Republic of South Korea

Ting-Peng Liang  
National Chengchi University (Taipei,  
Taiwan) and National Sun Yat-Sen  
University (Kaohsiung, Taiwan)

Deborah C. Turban  
Turban Company Inc.  
Kihei, HI, USA

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# Springer Texts in Business and Economics

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## Preface

There has been a severe recession in the world economy in recent years, yet electronic commerce, the topic of this book, has grown rapidly, with companies like Facebook, Google, Pinterest, Alibaba Group and Amazon.com setting new levels of performance every year.

Electronic commerce (EC) is a business model in which transactions take place over electronic networks, mostly the Internet. It includes the process of electronically buying and selling goods, services, and information. Certain EC applications, such as buying and selling stocks and airline tickets online, are reaching maturity, some even exceeding non-Internet trade volumes. However, EC is not just about buying and selling; it also is about electronically communicating, collaborating, and discovering information. It is about e-learning, customer service, e-government, social networks, and much more. EC is having an impact on a significant portion of the world, affecting businesses, professions, trade, and of course, people.

The most important developments in EC since 2012 are the phenomenal growth of social networks, especially Facebook, Google+, and Twitter, and the trend toward conducting EC via mobile devices. Other major developments are the global expansion of EC, especially in China, where you can find the world's largest EC company. In addition, some emerging EC business models are changing industries (e.g., travel, banking, fashion, and transportation).

In the 8th edition, we bring forth the latest trends in e-commerce, including social businesses, social networking, social collaboration, innovations, and mobility.

Note: Portions of this book were previously published by: Pearson Education, Inc. under the title: *Electronic Commerce 2012: A Managerial and Social Networks Perspective*.

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### What's New in This Edition?

The following are the major changes in this edition:

- **New chapters**

Chapter 7 in EC 2012 has been replaced by two chapters. The new Chapter 7 concentrates on social media marketing, social shopping, and social CRM. Chapter 8 focuses on enterprise social networks, crowdsourcing, and other applications of social media.

- **New topics**

Many new topics were added in all chapters, while obsolete topics were deleted. The major new topics are divided here into the following categories:

1. **Topics in basic e-commerce and m-commerce**

- Cyberwars
- Digital coupons
- Gamification
- Global payment systems
- IBM's Smarter Commerce
- Mobile apps
- Mobile banking
- Mobile shopping/sales
- Mobile videos and advertising
- New shopping aid tools (that shoppers must have)
- New wearable computing applications including smart glasses, cities, and cars

2. **EC technology**

- Augmented reality
- Crowdsourcing
- Micro payments devices
- Big data in EC and its analysis
- E-payments, including Bitcoin
- Develop your own applications (DYOA)
- IBM's Pure Data Systems for analytics
- Internet of Things (IoT)
- Machine-to-machine (M2M) communications
- New devices for e-learning
- 3D printing and EC
- Wearable devices

3. **Managerial topics**

- The issues surrounding Bring Your Own Device (BYOD)
- Collaborative strategic planning
- Crowdfunding
- Innovation and performance improvement
- Internet sales tax
- New aspects of online competition
- Sharing economy (P2P economy)
- Small retailers going global

4. **Social media and commerce topics**

- Collaboration 2.0 (social collaboration)
- New methods of social networking data collection and analysis
- Gamification in social networks
- Innovation and creativity in social commerce
- P2P lending and other P2P activities
- Sentiment analysis
- Shopping for virtual goods

- Social customers
- Social graph
- Social media frameworks, characteristics, and tools
- Social media search engines (social search)
- Social TV and social radio
- Transformation of traditional companies into social businesses

#### 5. New cases

The following are some of the new cases:

Starbucks, Pinterest, Cemex of Mexico, P&G, Sony USA, Madagascar's Port, Red Hat, Axon of New Zealand, Yodobuchi (Japan), eGovernment in Germany, Korea's multipurpose smart cards, iRobot, Telstra (Australia), Etsy, Del Monte, Polyvore, and I am Hungry (a failure case).

#### 6. New Features

In addition to the regular features of the book (discussed later) we added:

- A large number of links to resources, examples, and videos
- Many examples of mobile applications
- Short video cases (as exercises)

#### 7. Wikipedia and other wiki-based resources

Given the copyright issues and some uneven quality issues, we eliminated citations from Wikipedia and similar wiki-based sources. Furthermore, these sources are evolving and changing. Yet, we strongly recommend that instructors encourage students to look at these sources. Note that Wikipedia provides information about the completeness and the quality of many of its entries. Therefore, instructors should review the entries before recommending them to students.

#### • Online tutorials

We provide five technology-related online tutorials (instead of 12 in EC 2012).

The following tutorials are not related to any specific chapter. They cover the essentials of EC technologies and provide a guide to relevant resources.

T1 – eCRM

T2 – EC technology: EDI, Extranet, RFID, and cloud computing

T3 – Business intelligence and analytics, data, text, and Web mining

T4 – Competition in cyberspace

T5 – E-collaboration

The tutorials are available at [affordable-ecommerce-textbook.com/turban](http://affordable-ecommerce-textbook.com/turban)

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## The Book's Learning Objectives (Learning Outcomes)

Upon completion of this book, the reader will be able to:

1. Define all types of e-commerce systems and describe their major business and revenue models.
2. Describe all the major mechanisms that are used in e-commerce.
3. Describe all methods and models of selling products and services online.

4. Understand all online business-to-business activities, including selling, procurement, auctions, and collaboration.
5. Describe EC activities other than selling online, such as e-government, e-learning/training, and e-collaboration.
6. Describe the importance of mobile commerce, its content, and implementation.
7. Describe social networks, social customers, virtual worlds, and social software as facilitators of e-commerce.
8. Describe the landscape of social commerce applications, including social shopping and advertising, social CRM, social entertainment, and crowdsourcing.
9. Describe social enterprise systems.
10. Understand online consumer behavior.
11. Describe marketing and advertising in the Web environment.
12. Describe security issues and their solutions in e-commerce.
13. Describe the use of e-payments, including mobile payments, in e-commerce.
14. Understand order fulfillment in e-commerce and its relationship to supply chain management.
15. Understand e-commerce strategy and describe its process and steps, including justification, planning, implementation, and assessment.
16. Describe the global aspects of e-commerce.
17. Explain the issues of using e-commerce by small- and medium-sized companies.
18. Understand the ethical, legal, social, and business environments within which e-commerce operates.
19. Describe the options of acquiring or building EC systems.

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## Features of This Book

Several features are unique to this book.

### Most Comprehensive EC Textbook

This is the most comprehensive EC textbook available. It covers more topics than any other text and it provides numerous examples and case studies as well as links to resources and references.

### Managerial Orientation

E-commerce can be approached from two major perspectives: technological and managerial. This text uses the second approach. Most of the presentations are about EC applications and their implementation. However, we do recognize the importance of the technology; therefore, we present the essentials of security in Chapter 10 and the essentials of infrastructure and systems development in Chapter 16. We also provide some detailed technology material in



the five online tutorials on the book's website ([affordable-ecommerce-textbook.com/turban](http://affordable-ecommerce-textbook.com/turban)). Managerial issues are also provided at the end of each chapter.

### **Experienced Co-authors and Contributors**

In contrast to other EC books written by one or two authors who claim to be polymaths, we have a diversified team of authors who are experts in a variety of fields, including a senior vice president of an e-commerce-related company. All contributions were copyedited to assure quality and uniformity.

### **Real-World Orientation**

Extensive, vivid examples from large corporations, small businesses from different industries and services, governments, and nonprofit agencies from all over the world make concepts come alive. These examples, which were collected by both academicians and practitioners, show the students the capabilities of EC, its cost and justification, and the innovative ways corporations are using EC in their operations.

### **Solid Theoretical Background and Research Suggestions**

Throughout the book, we present the theoretical foundations necessary for understanding EC, ranging from consumer behavior to the economic theory of competition. Furthermore, we provide website resources, numerous exercises, and extensive references to supplement the theoretical presentations. At the end of each chapter, we provide a list of online resources with links to their websites.

### **Most Up-to-Date and Current Topics**

This book presents the most current topics relating to EC, as evidenced by the many citations from 2013 to 2014. Finally, we introduce some of the most promising newcomers to e-commerce such as Pinterest, Instagram, Volusion, and Shopify.

### **Integrated Systems**

In contrast to other EC books that highlight isolated Internet-based systems, we emphasize integrated systems that support the entire life cycle of e-commerce. Social network-based systems are highlighted, as are the latest developments in global EC, mobile commerce, and in Web-based Apps.

## **Global Perspective**

The importance of global competition, partnerships, and trade is increasing rapidly. EC facilitates exporting and importing, the management of multinational companies, and electronic trading around the globe. International examples are provided throughout the book. The world's largest e-commerce company, Alibaba Group, is featured in Chapter 4. Our authors and contributors are from the USA, Macau (China), Korea, Germany, Taiwan, Brazil, Australia, and the Philippines. Examples and cases presented are from over 20 countries.

## **Small- and Middle-Sized Companies**

Throughout the book, we provide discussions and examples of small- and middle-sized companies in addition to the large ones.

## **The Public Sector**

In numerous places, we cover the topic of e-commerce in governments and other public and not-for-profit organizations.

## **Interdisciplinary Approach**

E-commerce is interdisciplinary in nature, and we illustrate this throughout the book. Major EC-related disciplines include accounting, finance, information systems, marketing, management, operations management, and human resources management. In addition, some non-business disciplines are touched upon, especially public administration, computer science, sociology, engineering, psychology, political science, and law. Economics also plays a major role in the understanding of EC.

## **EC Failures and Lessons Learned**

In addition to EC success stories, we also present EC failures and, wherever possible, analyze the causes of those failures with lessons learned (e.g., in the opening case to Chapter 16).

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## **Online Support**

More than 50 online files are available to supplement text material on a chapter-by-chapter basis. These are available at **[affordable-ecommerce-textbook.com/turban](http://affordable-ecommerce-textbook.com/turban)**.

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## **User-Friendliness**

While covering all major EC topics, this book is clear, simple, and well organized. It provides all the basic definitions of terms as well as logical and conceptual support. Furthermore, the book is easy to understand and is full of real-world examples that keep the reader's interest. Relevant review questions are provided at the end of each section so the reader can pause to digest the new material.

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## **Links, Links, Links**

In this book, the reader will find several hundred links to useful resources supplementing all topics and providing up-to-date information. Note: With so many links, some may change over time.

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## **Other Outstanding Features**

1. Five to ten topics for individual discussions, seven to twelve class discussion and debate issues are available in each chapter.
2. A class assignment that involves the opening case is available in each chapter.
3. A class assignment that requires watching one or more short videos (3–10 minutes) about a certain technology or a mini case, followed by questions or some other student engagement are included.
4. Videos related to specific topics are suggested in the text, some related to cases.
5. Over 75 real-world examples on specific topics and subtopics are used.
6. Learning objectives for the entire book are provided in this preface.

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## **Organization of the Book**

The book is divided into 16 chapters grouped into 5 parts.

### **Part I – Introduction to E-Commerce and E-Marketplaces**

In Part I, we provide an overview of today's business environment as well as the fundamentals of EC and some of its terminology (Chapter 1). A discussion of electronic markets and their impacts is provided in Chapter 2, where special attention is given to EC mechanisms ranging from traditional shopping carts to social networks and social software tools. We also introduce augmented reality, crowdsourcing and virtual worlds as platforms for EC in this chapter.

## **Part II – E-Commerce Applications**

In Part II, we describe EC applications in three chapters. Chapter 3 addresses e-tailing and electronic service industries (e.g., e-travel, e-banking) as they relate to individual consumers. In Chapter 4, we examine the major B2B models, including online auctions, online trading, e-procurement, and online marketplaces. In Chapter 5, we present several non-selling applications, such as e-government, e-learning, e-books, collaborative commerce, and person-to-person EC.

## **Part III – Emerging EC Platforms**

Chapter 6 explores the developing applications in the world of wireless EC (m-commerce, l-commerce, and pervasive computing). In addition, we cover the Internet-of-Things, smart systems and wearables. In Chapter 7, we explore the world of social media marketing and social CRM. Chapter 8 covers enterprise social networks, crowdsourcing, and other social media applications.

## **Part IV – EC Support Services**

There are four chapters in this part. Chapter 9 is dedicated to online consumer behavior, market research and advertising. Chapter 10 begins with a discussion of the need to protect EC systems. It also describes various types of attacks on e-commerce systems and their users, including fraud, and how to minimize these risks through appropriate security programs. The chapter also deals with the various aspects of cyberwar. Chapter 11 describes a major EC support service – electronic payments including mobile payments. Chapter 12 concentrates on order fulfillment, supply chain improvement, and the role of RFID and CPFR.

## **Part V – E-Commerce Strategy and Implementation**

Chapter 13 discusses the process of EC strategy and strategic issues in implementing EC. The chapter also presents global EC and EC for small businesses. Chapter 14 deals with implementation issues, concentrating on justification and cost–benefit analysis, system acquisitions and developments, and the impacts of EC on organizations. Chapter 15 deals with legal, ethical, and societal issues concentrating on regulatory issues, privacy, and green IT. Chapter 16 is unique; it describes how to build an e-business from scratch, as well as how to add e-commerce projects to conventional businesses. It also takes the reader through all the major steps of online store building and provides guidelines for success.

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## Learning Aids

The text offers the student a number of learning aids:

- **Chapter Outlines.** A listing of the main headings (“Content”) at the beginning of each chapter provides a quick overview of the major topics covered.
- **Learning Objectives.** Learning objectives at the beginning of each chapter help students focus their efforts and alert them to the important concepts to be discussed. Additionally, note the newly added learning objectives for the entire book.
- **Opening Cases.** Each chapter opens with a real-world example that illustrates the importance of EC to modern corporations. These cases were carefully chosen to call attention to some of the major topics to be covered in the chapters. Following each opening case is a short section titled “Lessons learned from the case,” that relates the important issues in the case to the forthcoming content of the chapter.
- **EC Application Cases.** In-chapter cases highlight real-world problems encountered by organizations as they develop and implement EC. Questions follow each case to help direct the student’s attention to the implications of the case material.
- **Real World Examples.** Dozens of examples illustrate how EC concepts and tools are applied. These are usually linked to detailed descriptions.
- **Figures and Tables.** Numerous eye-catching figures and tables extend and supplement the text presentation.
- **Review Questions.** Each section in each chapter ends with a series of review questions about that particular section. These questions are intended to help students summarize the concepts introduced and digest the essentials of each section before moving on to another topic.
- **Glossary and Key Terms.** Each key term is defined in the text when it first appears. In addition, an alphabetical list of key terms appears at the end of each chapter.
- **Managerial Issues.** At the end of every chapter, we explore some of the special concerns managers face as they prepare to do business in cyberspace. These issues are framed as questions to maximize the readers’ active participation.
- **Chapter Summary.** The chapter summary is linked one-to-one with the learning objectives introduced at the beginning of each chapter.
- **End-of-Chapter Exercises.** Different types of questions measure the students’ comprehension and their ability to apply the learned knowledge. Questions for Discussion by individual students are intended to challenge them to express their thinking about relevant topics. Topics for Class Discussion and Debates promote dialogs and develop critical-thinking skills. Internet Exercises are challenging assignments that require students to surf the Internet and apply what they have learned. Over 250 hands-on exercises send students to interesting websites to conduct research, learn about applications, download demos, or research state-of-the-art technology.

The Team Assignments and Projects are thought-provoking group projects designed to foster teamwork.

- **Closing Cases.** Each chapter ends with a comprehensive case, which is presented somewhat more in depth than the in-chapter EC Application Cases. Questions follow each case relating the case to the topics covered in the chapter.
- **List of Online Resources.** At the end of each chapter, we provide a list of the chapter's online files with a brief description of their content. In addition, we provide a list of Web addresses linked to relevant resources that can be used to supplement the chapter.

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## Supplementary Materials

The following support materials are also available.

- The **Instructor's Manual**, written by Jon. C. Outland, includes answers to all review and discussion questions, exercises, and case questions.
- **Test bank.** A broad set of multiple-choice, true-false, and essay questions for all chapters. Written by Jon C. Outland.
- The **PowerPoint Lecture Notes**, by Judy Lang, highlight the important areas and are related to the text learning objectives.

## Companion Website: ([affordable-ecommerce-textbook.com/turban](http://affordable-ecommerce-textbook.com/turban))

The book is supported by a companion website that includes:

- Five online tutorials.
- Bonus EC Application Cases and other features, which can be found in each chapter's online files.

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## Content Contributors

The following individuals contributed material for this edition.

- Linda Lai updated Chapter 3 and created Chapter 16.
- Fabio Cipriani contributed his eCRM and social CRM slides to Chapters 1 and 7.
- San Murugesan contributed to Chapter 8 and to the Online Tutorials.
- Judy Lang updated material in several chapters and conducted supporting research.
- Ivan C. Seballos II contributed the new illustrations and helped update several chapters.
- Jörg Blankenbach and Christian Hickel contributed to the closing case of Chapter 5: "From Local SDI to E-Government."
- Judy Strauss contributed an example in Chapter 13.

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## Reviews

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