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Electronic Commerce 2018

A Managerial and Social Networks
Perspective

Ninth Edition

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Preface

Electronic commerce, the topic of this book, has grown rapidly, with companies like Facebook, Google, Pinterest, LinkedIn, Uber, 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 online buying and selling stocks and airline tickets, are reaching maturity, some even exceeding non-Internet trade volume. However, EC is not just about buying and selling; it also is about electronically innovating, communicating, collaborating, and discovering information. It is about e-learning, e-customer service, e-government, social networking, problem-solving, and much more. EC is having an impact on a significant portion of the world, affecting businesses, professions, trade, and, of course, people. It is undoubtedly improving our quality of life.

A most important development in EC since 2014 is the phenomenal growth of social network services, especially Facebook, Google+, and Twitter. Also impressive is the trend toward conducting EC via mobile devices. Another major development is the global expansion of EC, especially in China, where you can find the world's largest EC company. In addition, attention is given to artificial intelligence and its applications and to smart commerce as well as to the use of analytics and big data to enhance EC. Finally, some emerging EC business models are transforming industries (e.g., travel, banking, fashion, and transportation).

In the ninth edition (2017–2018), we bring forth the latest trends in e-commerce, including smart commerce, social commerce, social collaboration, shared economy, innovations, and mobility.

What's New in This Edition?

The following are the major changes in this edition:

New Chapters

1. Smart (intelligent) commerce (Chap. 7) is emerging as an important development.
2. EC Strategy, Globalization, SMEs, and Implementation (Chap. 14) replaces Chaps. 13 and 14 in the eighth edition.

- **Chapters with major changes:**
  Chapter 5 includes two new sections about sharing economy and e-health. Also, completely upgraded was the P2P section. The topic of collaborative commerce was transferred to Chap. 4.
  Chapter 6 was streamlined for m-commerce activities and applications. Several sections were transferred to new Chap. 7. Much attention is given to mobile apps.

Chapter 10 (old Chap. 9) is concentrating on marketing and advertising in EC instead of online behavior. Chap. 12 (EC payment) was completely restructured with major attention given to digital currencies.

Chapter 13 (EC order fulfillment) was reorganized and updated to include robotics, 3D printing, and drones.

New Topics

Many new topics were added in all chapters, while obsolete topics were deleted.

Here is a small sample of new topics: the changing retailing landscape, virtual reality applications, robot advisors, chatbots, virtual personal assistants, fitness trackers, Nest (of Google), augmented reality application, fake content, Internet of things (IoT) applications, Pokemon GO craze, drop-shipping, ransomware, 3D printing for mass customization, robots in EC warehouses, drones and robots for deliveries, and new advertisement methods.

New Cases

We replaced more than 20 cases (e.g., new cases: Airbnb, Uber, Costco global payments, Bitcoin, money transfer via smartphones in Africa, Instagram, and Pokemon GO).

To emphasize the importance of security in EC, ransomware and DDoS attack cases are added.

New Coauthor

Dr. Jon Outland is bringing considerable expertise in the area of e-marketing.

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, drivers, and benefits.
2. Describe all the major mechanisms that are used in executing e-commerce.
3. Describe all methods and models of selling products and services online from business to individual customers.
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/e-training, e-health, and sharing economy.
6. Describe the importance of mobile commerce and its content and implementation.
7. Describe the major applications of artificial intelligence in EC.
8. Describe social networks, social customers, and social software as facilitators of social commerce.
9. Describe the landscape of social commerce applications, including social shopping and advertising, social CRM, social entertainment, and crowdsourcing.
10. Describe social enterprise systems.
11. Describe the connected e-commerce and Internet of things and its smart applications.
12. Understand online consumer behavior.

13. Describe marketing and advertising in the Web environment.
14. Describe security issues and their solutions in e-commerce, including EC fraud protection.
15. Describe the use of e-payments, including mobile payments, and digital currency in e-commerce.
16. Understand order fulfillment in e-commerce and its relationship to supply chain management.
17. Understand e-commerce strategy and describe its process and steps, including justification, planning, implementation, and assessment.
18. Describe the global aspects of e-commerce.
19. Explain the issues of using e-commerce by small- and medium-sized companies.
20. Understand the ethical, legal, social, and business environments within which e-commerce operates.

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 hundreds of 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 Chap. 12 and the essentials of infrastructure and systems development in Chaps. 2 and 14. We also provide some detailed technology material in the five online tutorials on the book's website (**affordable-ecommerce-textbook.com**). Managerial issues are also provided at the end of each chapter.

Experienced Coauthors and Contributors

In contrast to other EC books written by one or two authors who claim to be polymaths, we have a diversified global team of authors who are experts in a variety of fields, including an expert on e-marketing and a senior consultant 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 many website resources, numerous exercises, and extensive references and links to supplement the theoretical resources.

Most Up-to-Date and Current Topics

This book presents the most current topics relating to EC, as evidenced by the many citations from 2015, 2016, and 2017. Finally, we introduce some of the most promising newcomer companies to e-commerce such as Instagram, Line, Waze, Volusion, Uber, Airbnb, and Shopify.

Social Media and Commerce

In addition to the two full chapters on this topic, we present EC social media and commerce topics in all chapters.

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 also highlighted, as are the latest developments in global EC, mobile commerce, and mobile 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 and payments around the globe. International examples are provided throughout the book. The world's largest e-commerce company, the Alibaba Group, is featured in Chap. 4. Our authors and contributors are from the United States, Macau (China), Korea, Taiwan, Brazil, and the Philippines. Examples and cases presented are from over 20 countries. Cross-border EC is discussed in several chapters, including money transfers.

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. We added the use of AI-based systems in these 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 nonbusiness 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 Chap. 16).

Online Tutorials

We provide five technology-related online tutorials (instead of 12 in EC2012).

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**.

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.

Links, Links, Links, and References

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. Also, you will find numerous references (e.g., about 200 in the new Chap. 7).

Other Outstanding Features

1. Five to ten topics for individual discussions and seven to twelve class discussion and debate issues are available in each chapter.
2. A class assignment that involves the opening case is available at the end of each chapter.

3. A class assignment that requires watching one or more short videos (3 to 10 min) about a certain technology or a mini case, followed by questions or some other student engagement, is included.
4. Videos related to specific topics are suggested in the text, some related to cases.
5. Over 100 real-world examples on specific topics and subtopics are used.
6. Learning objectives for the entire book are provided in this preface.

Organization of the Book

The book is divided into 15 chapters grouped into five parts.

Part 1: Introduction to e-Commerce and e-Marketplaces

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

Part 2: E-Commerce Applications

In Part 2, 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 Chap. 4, we examine the major B2B models, including online auctions, online trading, e-procurement, online marketplaces, and collaborative commerce. In Chap. 5, we present several innovative and emerging applications, such as e-government, e-learning, sharing economy, and P2P. A new section is dedicated to shared economy applications.

Part 3: Emerging EC Platforms

Chapter 6 explores the developing applications in the world of wireless EC (m-commerce, l-commerce, and pervasive computing). Chapter 7 is new. It introduces the topic of artificial intelligence chatbots, virtual personal assistants, and Internet of things in e-commerce. In Chap. 8, we explore the world of social media marketing and social CRM. Chapter 9 covers enterprise social networks, crowdsourcing, and some social media applications.

Part 4: EC Support Services

There are four chapters in this part. Chapter 10 is dedicated to online consumer behavior, market research, e-marketing methods, and e-advertising. Chapter 11 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 protection programs. The chapter also deals with the various aspects of cyberwars. Chapter 12 describes major EC payment issues and methods including mobile payments and digital currencies. Chapter 13 concentrates on order fulfillment, supply chain improvement, the role of 3D printing in mass customization, robots in EC warehousing and fulfillment, and the role of drones in delivery.

Part 5: E-Commerce Strategy and Implementation

Chapter 14 discusses the process of EC strategy and strategic issues in implementing EC including justification and cost–benefit analysis and systems acquisitions and developments. The chapter also presents global EC and EC for small businesses. Chapter 15 deals with legal, ethical, and societal issues concentrating on regulatory issues, privacy, and green IT.

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.
- **Chapter 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. Finally, questions for the case are provided at the end of each chapter.
- **EC Application Cases.** In-chapter cases highlight real-world problems encountered by organizations as companies develop and implement EC. Questions follow each case to help direct the student's attention to the implications of the case material. Also, the cases deal with organizational problems and their solutions.
- **Real-World Examples.** Dozens of examples illustrate how EC concepts and tools are applied. These are usually linked to detailed descriptions and sources.
- **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 glossary of key terms appears at the end of the book, with a page reference to the location where the term is discussed.
- **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. Discussion Questions 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.

Supplementary Materials

The following support materials are also available:

- The **Instructor's Manual**, written by Jon Outland, includes answers to all review and discussion questions, exercises, and case questions.
- **Test bank** which was prepared by Jon Outland is available to support this text.
- The **PowerPoint Lecture Notes** highlight the important areas and are related to the text learning objectives. These are initially prepared by Judy Whiteside and updated to this edition by Jon Outland.

Companion Website: affordable-ecommerce-textbook.com

The book is supported by a companion website that includes:

- Five online tutorials

Content Contributors

The following individuals contributed material for this edition:

- Linda Lai provides material to Chaps. 8 and 14.
- Fabio Cipriani contributed his eCRM and social CRM slides to Chaps. 1 and 8.
- Judy Whiteside updated material in several chapters and conducted supporting research.
- Ivan C. Seballos II contributed the new illustrations and helped in updating several chapters.

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Reviews

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