

**PURCHASING**  
*And*  
**SUPPLY CHAIN**  
**MANAGEMENT**

*2nd Edition*

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**MONCZKA ■ TRENT ■ HANDFIELD**

# PURCHASING AND SUPPLY CHAIN MANAGEMENT

Second Edition

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To Shirley, Kathleen, Gregory, and Thomas  
RMM

To Jan, Jack, and Ellen  
RJT

To Sandi, Simone, and Luc  
RBH

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## PREFACE

The second edition of *Purchasing and Supply Chain Management* is the culmination of discussions with purchasing and supply chain managers across many industries from around the world. In this edition, we have combined our experience and research to create a managerial perspective of the core tasks and challenges required to effectively manage the purchasing function within the context of an integrated supply chain. Although prior books have dealt with many components of obtaining goods and services, we have created an integrated text that helps managers develop purchasing and supply chain strategies that contribute to corporate and business objectives. This new edition includes a number of innovative subjects that have been developed as a result of recent research projects undertaken by the authors. Some of the subjects that are newly introduced or expanded upon in this edition include:

- Cross-functional teaming
- Outsourcing and total cost analysis
- Supplier integration into new product development
- Automating purchasing through procurement cards and electronic systems such as Ariba and Commerce One
- Supplier development
- Strategic cost management and total cost of ownership
- B2B electronic commerce
- Enterprise Resource Planning
- Third party logistics
- Price analysis tools and techniques
- Negotiation simulations
- Contracting and Internet law
- Creating the lead supply chain
- Expanded and comprehensive cases

We are proud of this new text, and believe that it reflects many new themes that are only beginning to emerge in the public domain.

## ***Course Description***

*Purchasing and Supply Chain Management* is intended for college and university courses that are variously entitled purchasing, materials management, supply chain management, sourcing management, and other similar titles. The text is also well suited for training seminars for buyers, and portions of it have been used in executive education forums. Chapters have been used in both undergraduate and M.B.A. classes in purchasing, e-commerce, operations management, and logistics. Some instructors may also elect to use sections of the book for a class in operations management or logistics. The text is appropriate for either an elective or a required course that fulfills the American Assembly of Collegiate Schools of Business (AACSB) requirements for coverage of materials management issues. Most of the cases included in the book are based on actual companies or examples and have all been used and modified through classroom use by the authors.

## ***Course Objectives***

Depending on the placement of a course in the curriculum or the individual instructor's philosophy, this book can be used to satisfy a variety of objectives:

1. Students should be made aware of the demands placed on purchasing and supply chain managers by business stakeholders.
2. As prospective managers, students need to understand the impact of purchasing and supply chain management on the competitive success and profitability of modern organizations.
3. Students should appreciate the ethical, contractual, and legal issues faced by purchasing and supply chain professionals.
4. Students must understand the increasingly strategic nature of purchasing, especially the fact that purchasing is much more than simply buying goods and services.
5. Students entering or currently in the workforce must understand the influence of purchasing on other major functional activities, including product design, information system design, e-commerce, manufacturing planning and control, inventory management, human resource development, financial planning, forecasting, sales, quality management, as well as many other areas.

## ***Special to This Edition***

Many of the insights and topics presented throughout this book are based on examples developed through discussions with top purchasing executives and from various research initiatives, including research published by the *Center for Advanced Purchasing* studies and a project on supplier integration funded by the National Science Foundation. In addition, the revised text adopts a new chapter format that includes an opening vignette, a set of sourcing snapshots, and a concluding good practice case example that illustrates and integrates each chapter's topics. These new case studies and examples provide up-to-date illustrations of the concepts presented throughout each chapter.

The concept of teaming is emphasized throughout this book. Many of the case exercises require a team effort on the part of students. We recommend that the instructor have students work in teams for such projects to prepare them for the team environment found in most organizations.

## ***Structure of the Book***

This book is subdivided into six sections and 21 chapters that provide a through coverage of purchasing and supply chain management.

### **Section 1: Introduction**

Chapter 1 introduces the reader to purchasing and supply chain management. This chapter defines procurement and sourcing, introduces the notion of the supply chain, and summarizes the evolution of purchasing and supply chain management as an organizational activity.

### **Section 2: Operational Purchasing**

The chapters in Section 2 provide an in-depth understanding of the fundamentals surrounding the operational activity called purchasing. These chapters focus primarily on the fundamentals of purchasing as a functional activity. Without a solid understanding of purchasing basics, appreciating the important role that purchasing can play becomes difficult.

Chapter 2 provides an overview of the purchasing process by presenting the objectives of world-class purchasing organizations, the responsibilities of professional purchasers, the purchasing cycle, and various types of purchasing documents and types of purchases. Chapter 3 examines the organization and administration of purchasing. This includes a discussion of purchasing in the organizational hierarchy, how the purchasing function is organized, and the placement of purchasing authority. The chapter also describes the team approach as part of the organizational structure. Chapter 4 describes various categories and types of purchasing policies and procedures. Most firms have a set of policies outlining the directives of executive management. These directives guide behavior and decision-making and place boundaries on the behavior of personnel. Chapter 5 examines purchasing as a boundary-spanning function. Much of what purchasing involves requires interacting and working with other functional areas and suppliers. This chapter examines the intra-firm linkages between purchasing and other groups, including suppliers.

### **Section 3: Strategic Sourcing**

A major premise underlying this book is that purchasing is as important an activity as manufacturing, marketing, or engineering in the pursuit of a firm's strategic objectives. Progressive firms have little doubt about purchasing's impact on total quality, cost, delivery, technology, and responsiveness to the needs of external customers. Section 3 addresses what firms must do to achieve a competitive advantage from their procurement and sourcing processes. Realizing these advantages requires shifting our view of purchasing from a tactical or clerically-oriented activity to one focusing on strategic supply management. Strategic supply management involves developing the strategies,



approaches, and methods for realizing a competitive advantage and improvement from the procurement and sourcing process, particularly through direct involvement and interaction with suppliers.

Chapter 6 develops an understanding of how firms set purchasing strategies. This process should include a vision and plan of what a firm must do in its purchasing/sourcing efforts to support achieving corporate goals and objectives. Clearly, the strategic planning process should be the starting point for any discussion of strategic supply management. Chapter 7 describes an increasingly important topic today, insourcing/outourcing. The insourcing/outourcing process defines what activities a firm will perform internally and what activities it will outsource to suppliers. Once a firm decides to outsource a service, component, subassembly, or product, it must then support the outsourcing through its procurement and sourcing activities.

Chapter 8 focuses on one of the most important processes performed by firms today—that is, supplier evaluation, selection, and measurement. Selecting the right suppliers helps ensure that buyers receive the right inputs to satisfy their quality, cost, delivery, and technology requirements. Selecting the right suppliers also creates the foundation for working closely with suppliers, when required, to further improve performance. Chapter 9 describes how progressive firms manage and improve supplier quality once it selects its suppliers. Improving supplier quality may also create advantages that are not available to competing firms. Chapter 10 describes what firms must do to manage and develop world-class supply-based performance. Finally, Chapter 11 focuses on worldwide sourcing, which is becoming an important part of strategic supply management as firms search worldwide for the best resources.

#### **Section 4: Strategic Cost Management**

Purchasing professionals rely on an assortment of tools, techniques, and approaches for managing the procurement and supply chain process. Chapter 12 presents various tools and techniques that purchasers use when problem solving and pursuing performance improvements. The use of these tools and techniques can help purchasers achieve specific outcomes such as reducing cost/price, improving quality, reducing time, or improving delivery performance from suppliers.

Chapter 13 focuses on cost/price analysis. Progressive firms focus on cost control and reduction with suppliers as a way to improve (i.e., reduce) purchase price over time. Understanding cost fundamentals and appreciating how and when to use advanced costing techniques is critical for purchasers. This chapter details various types of costs, presents cost analysis techniques, and discusses the factors that affect a supplier's price. The chapter also discusses total cost analysis, cost-based pricing, and other innovative techniques designed to provide accurate and timely cost data.

Chapter 14 deals with purchase negotiation. Effective purchasers know how to plan for and negotiate contracts that create value within a buyer-seller relationship. Increasingly, purchase contracts emphasize more than simply purchase price. Buyers and sellers may negotiate cost reductions, delivery requirements, quality levels, payment terms, or anything else important to the parties. Purchase negotiation will become increasingly important as firms focus on non-price issues and longer-term, complex purchase agreements.

Chapter 15 addresses the fundamentals of contracting. The formal contracting process creates the framework for conducting business between two or more firms. As such, an understanding of contracting is essential when attempting to manage costs within a buyer-seller relationship. Chapter 16 addresses the major legal considerations in purchasing, including the legal authority of the purchasing manager. The chapter also discusses sources of U.S. law, warranties, purchase order contracts, breaches of contract, and patent and intellectual property rights. Because contracting is a part of the legal process, this chapter naturally follows the contracting chapter.

### **Section 5: Supply Chain Management**

Section Five describes the major activities that relate to or directly support supply chain management. Some of these activities involve specific disciplines, such as inventory management or transportation; other activities relate to the development of supply chain support systems. These systems include performance measurement systems and computerized information technology systems. The activities presented in this section may or may not be a formal part of the purchasing organization. These activities and systems, however, are key elements of purchasing and supply chain management. Without them, purchasing probably cannot effectively pursue its goals and objectives. Therefore, purchasing students must be familiar with a range of supply chain activities.

Chapter 17 focuses on a topic of increasing interest—the management of a firm’s inventory investment. The money that a firm commits to inventory usually involves a significant commitment of financial resources. This chapter discusses the function of inventory within a firm, factors leading to inventory waste, creating a lean supply chain, approaches for managing a firm’s inventory investment, and future trends related to managing inventory. At some firms, purchasing is responsible for the day-to-day management of inventory.

Another area of interest involves the purchase of transportation services. We have witnessed major changes in transportation over the last 15 years, many of which have affected purchasing. Since Congress deregulated the transportation industry in the early 1980s, the role of the buyer has changed dramatically. More than ever, purchasing is involving itself in the evaluation, selection, and management of transportation carriers. Even if a buyer does not get involved directly with transportation, having a working knowledge of this dynamic area is critical. Chapter 18 highlights purchasing’s role in transportation buying, presents a decision-making framework for developing transportation strategy, discusses ways to control and influence inbound transportation, and evaluates trends affecting the purchase of transportation services.

Information technology systems are changing business. Purchasing, too, can benefit from the development of current information technology systems. Chapter 19 examines the role of supply chain information systems and electronic commerce. The chapter also addresses the electronic linkage between firms through Electronic Data Interchange (EDI). Finally, this chapter discusses some advanced and future purchasing systems’ applications. The availability of information technology systems greatly enhances purchasing’s ability to operate at the highest levels of efficiency and effectiveness.

Chapter 20 focuses on performance measurement and evaluation. Increasingly, firms must develop measurement systems that reveal how well a firm is performing,

including the performance of its purchasing and supply chain management efforts. Measurement systems support procurement and sourcing decision-making by providing accurate and timely performance data. This chapter examines why firms measure performance, defines various purchasing performance measurement categories, and discusses how to develop a purchasing performance measurement system.

### **Section 6: Future Directions**

Chapter 21 focuses on what purchasing and supply chain management will look like in the 21st century. These trends, which are adapted directly from recent surveys of key executive managers from a variety of global organizations, can help students identify how the field of purchasing and sourcing management is changing, and what skills they will need to develop in view of these changes.

### ***Case Studies and Instructor's Resources***

*Purchasing and Supply Chain Management* contains 40 new and revised cases featured within the book and found at the product website, <http://monczka.swcollege.com>. These cases have been classroom tested and used within the industry. An instructor's manual and test bank are available on CD-ROM (ISBN: 0-324-02316-2) to help instructors identify how to best use and interpret these cases. Of particular interest are the negotiation and supplier selection cases, which allow students to experience the purchasing decision-making process in real time.

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