

**Strategic
Logistics
Management**
Second Edition

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STRATEGIC LOGISTICS MANAGEMENT

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Preface

The world economy has undergone a number of major changes since the first edition of this book, then called *Strategic Physical Distribution Management*, was published in 1982. Many companies have significantly expanded their international operations, computer technology has affected the management of both marketing and logistics functions, Congress has deregulated the transportation sector to a significant degree, and management has recognized the importance of integrating functional areas in order to obtain a competitive advantage.

The second edition of *Strategic Logistics Management* has been significantly expanded to reflect these changes, and to include state-of-the-art logistics information and technology. We retained the basic tenets of the previous edition but added new material to make the book more managerial and integrative. *Strategic Logistics Management* may be the only text that views the management of logistics from a marketing perspective. It integrates the areas of logistics, marketing, finance/accounting, and manufacturing.

The events of the past few years have led many to the realization that logistics has a significant impact on our standard of living. Logistics and logistics-related activities directly account for approximately 14 to 22 percent of U.S. gross national product. Logistics activities provide approximately 15 million jobs in the United States. Investments in logistics facilities, excluding public sources, have been estimated at approximately half a trillion dollars. Certainly, logistics is big business; its consumption of land, labor, and capital, and its impact on the standard of living are enormous.

Curiously, it has been only recently—since 1960—that the business community has taken a real interest in logistics. Marketing has performed magnificently to generate customer demand for a multitude of products, services, and ideas, but it has failed to focus adequately on the supply side of the marketing equation. Traditionally, we have been more successful at generating demand in the marketplace than we have been in satisfying that demand once it is created. Business firms now recognize that successful implementation of the marketing concept requires that the logistics activity be well managed. Management's new emphasis on profitability rather than sales volume will increase the importance of logistics in the future.

Strategic Logistics Management approaches the topic from a managerial perspective. Each chapter introduces basic logistics concepts in a format that is useful for management decision making. Of course, the basics—terms, concepts, and principles—are covered, but they are examined in light of how they interrelate and interface with other functions of the firm. In each chapter we have included examples of corporate application of these concepts to illustrate how logistics activity can be managed to properly implement the marketing concept.

This book includes a good balance of theory and practical application. All the traditional logistics functions have been included. However, there are several important topics that are unique to this text or are approached in a different way. For example, the financial control of logistics is discussed in a separate chapter, as well as being interwoven throughout all chapters. We have purposely taken this approach because of the impact of logistics on the firm's profitability. Because logistics ultimately affects marketing's ability to generate and satisfy demand—and thus create customer satisfaction—the customer service activity is emphasized early in the book. Customer service can be considered the output of the logistics function. For this reason, customer service provides a focal point for the entire book, and customer service implications are considered in each of the 18 chapters.

A number of important topics not covered in many other logistics texts are covered in this book: order processing and management information systems; materials management; financial control of logistics performance; logistics organizations; international logistics; decision support systems; channels of distribution; and the strategic logistics plan. Our goal in covering these topics in addition to the traditional activities is to provide readers with a grasp of the total picture of the logistics process.

There are a number of worthwhile improvements in the second edition. We have included many more references and examples from general management literature, such as *Harvard Business Review*, *The Journal of Business Strategy*, *Managerial Planning*, and *Business Horizons*. This edition covers the academic and trade literature in the area of logistics extensively, and includes the most up-to-date information and examples. We have retained those elements that are “timeless” and those that made the first edition successful.

There are several new features in this edition. We have added Suggested Readings at the end of each chapter. Margin notes have been greatly expanded, and charts, figures, and graphs have been updated and revised where necessary. We believe that this edition is more readable for both the instructor and student. New and/or expanded topics include transportation deregulation, decision support systems, channels of distribution, computer technology, globalization of markets, warehouse location, strategic planning, information systems, and customer service. This edition includes six cases. Three of the cases are new to this edition; the

other three have been updated and/or modified. In addition, four cases have been provided with the instructor's manual. Our aim has been to present instructors and students with the best textbook on the market. We believe that we have succeeded.

The book is divided into three major sections. The first section, Chapters 1–3, provides an introduction to the logistics process by examining logistics' role in the economy and the firm and introducing the concept of integrated logistics management. The second section, Chapters 4–13, presents the functional areas of logistics from a customer service perspective, emphasizing the financial implications throughout. The topics of customer service, transportation, warehousing, inventory management, order processing and information systems, materials management, and purchasing are discussed in detail, always with a view toward how they can be effectively managed. The third section, Chapters 14–18, emphasizes the strategic aspects of logistics management from both domestic and international perspectives. Chapter topics include decision support systems, financial control of logistics performance, logistics organizations, international logistics, and the strategic logistics plan.

The pragmatic, applied nature of the book, its managerial orientation, and its how-to appendixes make it a must-have reference book for present and future logistics professionals. The end-of-the-chapter questions and the case material help readers apply the material presented in each chapter. The questions, problems, and cases are structured to challenge readers' managerial skills. They are integrative in nature and examine issues that are important to today's logistics executive.

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James R. Stock
Douglas M. Lambert

Contents

1	Logistics' Role in the Economy and the Firm	2
	Logistics' Role in the Economy. Logistics' Role in the Firm: <i>Definition of Logistics Management. Logistics Is Marketing Oriented. Logistics Adds Time and Place Utility. Logistics Allows Efficient Movement to the Customer. Logistics Is a Proprietary Asset. Activities Included in Logistics Management.</i> Development of Logistics Management: <i>Historical Development. Factors Underlying the Development of Interest in Logistics Management. Operationalizing a Logistics Management System.</i> Future Challenges: <i>Strategic Planning. Logistics as an Offensive Marketing Weapon. Distribution Accounting. The Need for Broader-Based Management Skills. Trends in Transportation Regulation. International Logistics. Consumerism.</i>	
2	The Integrated Logistics Management Concept	38
	Why Should Logistics Activities Be Integrated? Logistics and the Marketing Function: <i>Price. Product. Promotion. Place.</i> The Total Cost Concept: <i>Customer Service Levels. Transportation Costs. Warehousing Costs. Order Processing and Information Costs. Lot Quantity Costs. Inventory Carrying Costs.</i> Logistics and Corporate Profit Performance: <i>The Strategic Profit Model.</i> Using the Strategic Profit Model: <i>An Example.</i> The Financial Impact of Logistics Decisions. Two Examples of Integrated Logistics Management. Conducting a Marketing and Logistics Audit. Developing a Logistics Strategy. Areas in Which Logistics Performance Can Be Improved: <i>Customer Service. Transportation. Warehousing. Inventory Management. Order Processing and Information Systems. Forecasting. Production Planning and Purchasing.</i>	
3	Channels of Distribution	70
	What Is a Channel of Distribution? Why Do Channels of Distribution Develop? <i>The Evolution of Marketing Channels. The Discrepancy of Assortment and Sorting. Routinization of Transactions. Searching Through Marketing Channels.</i> Channel Structure: <i>Postponement and Speculation. Functional Spin-Off within the Channel of Distribution. Reasons for Uneco-</i>	

nomie Channels. Flows in the Channel of Distribution. Channel Design: The Manufacturer's Perspective. The Wholesaler's Perspective. The Retailer's Perspective. Channel Design Considerations: Market Coverage Objectives. Product Characteristics. Customer Service Objectives. Profitability. Channel Performance Measurement. Implementing Cost Trade-Offs in a Channel of Distribution.

4	Customer Service	112
	<p>What Is Customer Service? <i>Definitions of Customer Service. Elements of Customer Service.</i> Relationship of Customer Service to Successful Marketing. Methods of Establishing a Customer Service Strategy: <i>Consumer Reactions to Stockouts. Cost/Revenue Trade-Offs. ABC Analysis. The Customer Service Audit.</i> Developing and Reporting Customer Service Standards. Impediments to an Effective Customer Service Strategy. Improving Customer Service Performance.</p> <p>Appendix A: Customer Service Questionnaire</p> <p>Appendix B: Customer Service Audit</p>	
5	Transportation	170
	<p><i>Time and Place Utility. Transportation/Logistics/Marketing Interface. Factors Influencing Transportation Costs. Transportation Service Characteristics.</i> The Transportation System: <i>Alternative Transport Modes. Intermodal Combinations. Role of Nonoperating Third Parties. Other Transport Forms.</i> Transportation Regulation: <i>Forms of Regulation. Regulatory History. Legal Forms of Transportation. Transportation Pricing.</i> Regulatory Reforms: <i>Carrier Perspectives. Shipper Perspectives.</i></p> <p>Appendix: Some Major Federal Transportation Regulatory Agencies</p>	
6	Decision Strategies in Transportation	224
	<p>Traffic and Transportation Management: <i>Carrier Perspectives. Shipper Perspectives.</i> Transportation Productivity. Computer Technology and Traffic Management. The Transportation Audit.</p>	
7	Warehousing	270
	<p><i>Nature and Importance of Warehousing. Types of Warehousing. A Comparison of Public and Private Warehousing: Advantages of Public Warehousing. Advantages of Private Warehousing. Disadvantages of Public Warehousing. Disadvantages of Private Warehousing.</i> Warehousing Operations: <i>Functions of Warehousing. Standard (Nonautomated) Warehouse Handling Systems. Automated Warehouse Handling Systems.</i></p>	
8	Decision Strategies in Warehousing	302
	<p>Public versus Private Warehousing. Facility Development: <i>Size and Number of Warehouses. Location Analysis. Warehouse Layout and Design.</i> Packaging. Computer Technology and Warehouse Management. Warehouse Productivity. Warehouse Accounting and Control.</p> <p>Appendix: Benchmarks for Site Selection</p>	

9	Financial Impact of Inventory	352
	Financial Aspects of Inventory Strategy: <i>Inventory and Corporate Profitability. Inventory and Least Total Cost Logistics. Inventory Carrying Costs: Calculating Inventory Carrying Costs. The Impact of Inventory Turnover On Inventory Carrying Costs.</i>	
	Appendix: Inventory Carrying Costs—Six Case Studies	
10	Inventory Management	394
	Basic Inventory Concepts: <i>Why Hold Inventory? Types of Inventory. Basic Inventory Management: Inventory Management Under Conditions of Certainty. Inventory Management Under Uncertainty. Calculating Safety Stock Requirements. Inventories and Customer Service. Production Scheduling. Symptoms of Poor Inventory Management. Improving Inventory Management: ABC Analysis. Forecasting. Inventory Models. Order Processing Systems. Impact of an Inventory Reduction on Corporate Profit Performance.</i>	
11	Materials Management	438
	Scope of Materials Management Activities: <i>Purchasing and Procurement. Production Control. Inbound Traffic and Transportation. Warehousing and Storage. Control of Management Information Systems. Inventory Planning and Control. Salvage and Scrap Disposal. Administration and Control of Materials Management: Kanban/Just-in-Time Systems. Materials Requirements Planning (MRP). Manufacturing Resource Planning (MRPII). Manufacturing Resource Productivity (MRPIII). Distribution Requirements Planning (DRP)/Distribution Resource Planning (DRPII). The Logistics/Manufacturing Interface. Focused Factories.</i>	
12	Purchasing	470
	Purchasing Activities: <i>Supplier Selection and Evaluation. Quality Control. Forward Buying. Just-in-Time Purchasing: Vendor Selection. Purchase Agreements. "Loose" Engineering Specifications. Benefits of Value Analysis. Engineering/Quality Coordination. Control of Inbound Transportation. Benefits of JIT Purchasing. Purchasing Research and Planning. Purchasing Cost Management: Cost Reduction. Price Change Management. Volume Contracts. Systems Contracts and Stockless Purchasing. Measurement and Evaluation of Purchasing Performance: Performance Measures.</i>	
13	Order Processing and Information Systems	498
	Customer Order Cycle: <i>How Do Customer Orders Enter the Firm's Order Processing Function? The Path of a Customer's Order. The Communications Function. Advanced Order Processing Systems. Inside Sales/Telemarketing. Integrating Order Processing and the Company's Logistics Management Information System. Basic Need for Information. Designing the Information System. A Data Base For Decision Making. Financial Considerations.</i>	

14	Decision Support Systems	536
	Environmental Scanning. Forecasting. Selected Computer Applications in Logistics: <i>Modeling. Electronic Data Interchange. Transportation. Warehousing and Material Handling.</i>	
15	Financial Control of Logistics Performance	566
	The Importance of Accurate Cost Data: <i>Total Cost Analysis. Controlling Logistics Activities. Case Studies.</i> Solving the Problem of Insufficient Cost Data: <i>Standard Costs and Flexible Budgets. Budgetary Practices. Productivity Standards. Logistics Costs and the Corporate Management Information System. The Role of the Order Processing System.</i> Cost Justification of Logistics System Changes.	
	Appendix A: An Application of Standard Costs in Logistics	
	Appendix B: Developing Standard Costs and Flexible Budgets for Warehousing	
16	Organizing for Effective Logistics	606
	Importance of an Effective Logistics Organization. Types of Logistics Organizational Structures. Decision-Making Strategies in Organizing for Logistics: <i>Components of an Optimal Logistics Organization. An Approach to Developing an Optimal Logistics Organization. Measuring the Effectiveness of the Logistics Organization.</i>	
17	International Logistics	640
	The International Marketplace: <i>Uncontrollable Elements. Controllable Elements—Strategic. Controllable Elements—Managerial.</i> International Distribution Channel Strategies: <i>Exporting. Licensing. Joint Ventures. Ownership.</i> Management of the Export Shipment: <i>Export Facilitators. Documentation. Terms of Trade. Free Trade Zones.</i> Organizing for International Logistics. Financial Aspects of International Logistics. Managing International Logistics.	
18	The Strategic Logistics Plan	688
	The Importance of Planning. The Corporate Planning Process: <i>Evaluation of the Consumer and Identification of Potential Target Markets. Evaluation and Selection of Target Markets. Formulation of Channel Objectives and Strategy. Identification and Evaluation of Channel Structure Alternatives. Selection of the Channel Structure. Formulation of the Strategic Logistics Plan. Evaluation and Selection of Individual Logistics Channel Members. Performance Evaluation and Channel Modification.</i> Developing a Strategic Logistics Plan: <i>The Logistics Audit. The Logistics Plan. An Industry Example.</i>	
	Appendix A: Customer Service/Order Administration Audit	
	Appendix B: Transportation (Inbound and Outbound) Audit	
	Appendix C: Warehouse Operations Audit	
	Appendix D: Inventory Management and Forecasting Audit	
	Appendix E: Production Planning/Scheduling Audit	

Appendix F: Marketing/Sales Audit	
Appendix G: Financial Control/Accounting Audit	
Appendix H: Transportation Planning—An Overview	
Cases	737
Case 1 The Chap Stick Company: The Warehouse Consolidation Decision	738
Case 2 Giles Laboratories	761
Case 3 Hickory Hill Smoked Foods Company.....	768
Case 4 Carswell Cabinet Company.....	773
Case 5 Riverview Distributing Company, Incorporated (B).....	784
Case 6 Ferle Foods, Inc. (1986)	790
Author Index	809
Company Index	815
Subject Index	819

**STRATEGIC
LOGISTICS
MANAGEMENT**

Chapter 1

Logistics' Role in the Economy

and the Firm

Introduction

Logistics' Role in the Economy

Logistics' Role in the Firm

Definition of Logistics Management

Logistics Is Marketing Oriented

Logistics Adds Time and Place Utility

Logistics Allows Efficient Movement to the Customer

Logistics Is a Proprietary Asset

Activities Included in Logistics Management

Development of Logistics Management

Historical Development

Factors Underlying the Development of Interest in Logistics Management

Operationalizing a Logistics Management System

Future Challenges

Strategic Planning

Logistics as an Offensive Marketing Weapon

Distribution Accounting

The Need for Broader-Based Management Skills

Trends in Transportation Regulation

International Logistics

Consumerism

Summary

Suggested Readings

Questions and Problems

Objectives of This Chapter

- To identify where logistics activities interface with the economic system at the macro (society) and micro (firm) levels
- To identify the relationship between logistics and marketing
- To explore the historical development of the logistics function
- To examine the strategic function of logistics management in the modern corporation

INTRODUCTION

Few areas of study have as significant an impact on a society's standard of living as logistics. Almost every sphere of human activity is affected, directly or indirectly, by the logistics process.

How often have you gone to a retail store to buy an advertised product and not found what you wanted on the shelf?

Have you ever placed an order through the mail, over the telephone, or in person, and received the wrong merchandise?

Have you ever shipped a package to a customer in the same city or across the country and had the item arrive damaged, or perhaps not arrive at all?

Have suppliers in your just-in-time system ever let you down, causing you to curtail or shut down your manufacturing operations?

When was the last time you were promised delivery of an item within a few days and it took a few weeks?

We often don't think of the role logistics plays in our lives until a problem occurs. Fortunately, we usually find the items we want in the store, receive the correct order, undamaged, and at the time it was promised.

As consumers, businesspeople, educators, government workers (or whatever the vocation), it is important that we understand the logistics process. This chapter shows you where logistics activities interface with the economic system at the macro (society) and micro (firm) levels. You will see the relationship between logistics and marketing. And the historical development of the logistics function is presented to help you understand its strategic role in the modern corporation.

LOGISTICS' ROLE IN THE ECONOMY

The rising affluence of consumers has led to increased national and international markets for goods and services. Thousands of new products have been introduced in this century and are sold and distributed to customers

in every corner of the world. Business firms have increased in size and complexity to meet the challenges of expanded markets and the proliferation of new products. Multiple-plant operations have replaced single-plant production. The distribution of products from point-of-origin to point-of-consumption has become an enormously important component of the GNP of industrialized nations.

In the United States, for example, the contribution of manufacturing has declined in recent years to a point where it accounts for approximately one quarter of the GNP.¹ In contrast, logistics has increased in importance to a point where it now contributes between 14 and 22 percent of GNP.² U.S. industry in 1982 spent an estimated \$240 billion on freight transportation,³ more than \$55 billion on warehousing and storage, and more than \$100 billion to administer, communicate, and manage the logistics process—a total of over \$400 billion.⁴ Logistics and related activities provided almost 15 million jobs—about 14 percent of the total U.S. labor force.⁵ Investment in transportation and distribution facilities, not including public sources, is estimated to be in the hundreds of billions of dollars. Considering its consumption of land, labor, and capital, and its impact on the standard of living, logistics is clearly big business.

As a significant component of GNP, logistics affects the rate of inflation, interest rates, productivity, energy costs and availability, and consumerism. One study reported that the average U.S. company could improve its logistics productivity by 20 percent, and some firms identified opportunities for improvement of 35 percent or more.⁶ Improvements in our nation's productivity have positive effects on the prices we pay for goods and services, the balance of national payments, the value of the dollar, our ability to compete more effectively in international markets, industry profits (the higher productivity implies lower costs of operation to produce and distribute an equivalent amount of product), our ability to ward off foreign competition, the availability of investment capital, and economic growth, leading to a higher level of employment.

¹James E. Morehouse, "Improving Productivity in Logistics," *Handling & Shipping Management Presidential Issue, 1984-1985* 25, no. 10 (September 1984), p. 9.

²Various sources estimated logistics' contribution to GNP differently. Although there is disagreement as to the exact percentage, all sources agree that the level of contribution is significant. See Robert V. Delaney, "Distribution Productivity: Old Myths and New Realities," speech presented to the Western New York Roundtable of the National Council of Physical Distribution Management, Rochester, N.Y., 1984.

³Steve Tinghitella, "What Transportation Deregulation Means to Shippers and Carriers," *Dun's Business Month* 123, no. 1 (January 1984), p. 95.

⁴Robert V. Delaney, "Distribution Productivity."

⁵John J. Coyle and Edward J. Bardi, *The Management of Business Logistics*, 3rd ed. (St. Paul, Minn.: West Publishing, 1984), p. 40.

⁶Wendell M. Stewart and James E. Morehouse, "Improving Productivity in Physical Distribution—A \$40 Billion Goldmine," in *Proceedings of the Sixteenth Annual Conference of the National Council of Physical Distribution Management*, 1978, pp. 2 and 5.

Logistics Is Big
Business

Logistics and
the Nation's
Productivity