LOGISTICAL MANAGEMENT



The Integrated Supply Chain Process

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LOGISTI ANAGEMEN I

THE INTEGRATED SUPPLY CHAIN PROCESS

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DAVID J. CLOSS is Professor of Marketing and Logistics at Michigan State University. He received his Ph.D. in marketing and logistics from Michigan State. Dr. Closs is the author or coauthor of many publications in journals and proceedings, Systems Editor of the *Journal of Business Logistics*, and coauthor of *Simulated Product Sales Forecasting*. He has taught logistics management to executives in North America, western and central Europe, and Australia. Dr. Closs has been involved in a number of industry-supported research projects focusing on sales forecasting, information technology applications, and best practices in logistics.

PREFACE

Over the last four decades, the discipline of business logistics has advanced from the warehouse and transportation dock to the boardroom of leading global enterprises. We have had the opportunity to be actively involved in this evolution through research, education, and advising. This first edition of *Logistical Management: The Integrated Supply Chain Process* reviews the development and fundamentals of the discipline. It also presents our vision of the future of business logistics and its role in enterprise competitiveness.

The history of the *Logistical Management* manuscript began in 1958. As some readers are aware, early contributions were presented in two editions of *Physical Distribution Management*. The first, a collaboration with two other authors published in 1961, represented the initial attempt to integrate physical distribution activities into a single book. In 1968, the second edition of *Physical Distribution Management*, again a collaboration, was substantially rewritten as a new book because of developments in the field during the intervening seven years. An early version of *Logistical Management*, published in 1974, contained material from the two previous works. However, after 1974, the ever-expanding subject content once again required a new and broader approach to logistics. The view of total logistics was further developed and refined in another edition of *Logistical Management*, published in 1978. A 1986 edition, with new coauthors, offered a refinement of selected materials and extended the breadth and scope of logistical responsibilities.

To recognize the significance of change in both the discipline and the text, this 1996 edition is given an extended title and designated a first edition. Now under the authorship of Bowersox and Closs, and published by McGraw-Hill, *Logistical Management* once again expands the material and perspective to reflect the increasing role of logistics in global competitive strategy.

Business logistics includes all the activities to move product and information to, from, and between members of a supply chain. The supply chain provides the framework for businesses and their suppliers who join to bring goods, services, and information efficiently to ultimate consumers. Logistical Management: The Integrated Supply Chain Process presents the mission, business processes, and strategies needed to achieve integrated supply chain management. We hope the text achieves three fundamental objectives: (1) presenting a comprehensive description of existing logistical practices within the private and public sectors of society; (2) describing ways and means to apply logistics principles to achieve

competitive advantage; and (3) providing a conceptual approach for integrating logistics as a core competency in enterprise strategy.

It would be impossible to list all the individuals who have made significant contributions to the contents of the book. Special thanks are due to James B. Henry, Dean of the Eli Broad College of Business and the Eli Broad Graduate School of Management at Michigan State University, and to Robert W. Nason, Chairperson of the Department of Marketing and Logistics at Michigan State University, for maintaining a collegial environment that fosters creativity and application of integrated logistics concepts. We also express our gratitude to Professor Emeritus Donald A. Taylor of Michigan State University, who has been a guiding force throughout our careers. In addition, for their specific aid with the manuscript, our appreciation goes to Mark L. Bennion, Bowling Green State University; M. Bixby Cooper and O. Keith Helferich, Michigan State University; Patricia J. Daugherty, University of Georgia; Martin Dresner, University of Maryland, College Park; John Grabner, Ohio State University; James Kenderdine, University of Oklahoma; Bernard J. LaLonde, Ohio State University; Bill Moser, Ball State University; Jay U. Sterling, University of Alabama; and Katherine Straughn, Auburn University; all of whom provided detailed reviews of the manuscript and offered numerous suggestions for improving the presentation.

As active members of the Council of Logistics Management, formerly the National Council of Physical Distribution Management, we have been the fortunate recipients of contributions by many council members to the development of this manuscript. In particular, we wish to acknowledge the continued assistance of George Gecowets and his staff, who maintain an open door to the academic community.

Over the past twenty-nine years, business executives who have attended the annual Michigan State University Logistics Management Executive Development Seminar have been exposed to the basic concepts developed in the text and have given freely of their time and experience. Special appreciation goes to the United Parcel Service Foundation for a grant assisting in the development of this manuscript and for a generous funding of the World Class Logistics Research initiative, which has added substantially to the relevancy of the text. We also acknowledge long-standing support to Michigan State logistics, through the funding of an endowed chair, provided by John H. McConnell, founder and chairperson of Worthington Industries.

The number of individuals involved in teaching logistics around the world expands daily. To this group in general, and in particular to our colleagues at Michigan State University, whose advice and assistance made it possible to complete this text, we express our sincere appreciation.

Teachers receive continuous inspiration from students over the years and, in many ways, the final day of judgment in a professional career comes in the seminar or classroom. We have been fortunate to have the counsel of many outstanding young scholars who currently are making their marks on the academic and business worlds. In particular, we appreciate the input of students who have used this text in manuscript form and made suggestions for improvement. We also acknowledge the contributions of current and former doctoral students, particularly Drs. David

J. Frayer, Robb Frankel, and Judith W. Schmitz, and of Steven R. Clinton, who participated extensively in case development and editorial support. Doctoral student Thomas J. Goldsby provided valuable assistance throughout manuscript preparation, managed the complex process of obtaining publication permissions, and guided development of the teaching support manual.

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With so much able assistance, it is difficult to offer excuses for any shortcomings that might appear. The faults are solely our responsibility.

Donald J. Bowersox

David J. Closs

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