

Preface

We continue to live in dynamic and exciting times. The recent 20 years have seen many changes that have affected nearly every aspect of business—including operations management. We have enhanced this second edition of our book to reflect key shifts in operations management, including transitions:

- ***From a focus on the internal system to a focus on the supply chain*** In today's highly competitive business environment, organizations must leverage the capabilities of their suppliers and customers. Operations managers must look beyond the “four walls” of the firm and take an integrated supply chain perspective of operations.
- ***From a local focus to a global focus*** As Thomas L. Friedman pointed out,¹ the world is indeed flat. Business solutions generated in Argentina are used to meet needs in the United States, and parts built by suppliers located in China are used to assemble cars in Canada. Commercial needs have overcome, to a large part, national borders, presenting new opportunities and challenges for operations managers.
- ***From an emphasis on tools and techniques to an emphasis on systems, people, and processes*** To be successful, operations managers must think more broadly than just the application of analytical tools and techniques. They must take a systems view to address important managerial issues such as designing processes, working with people, managing information flows, and building interorganizational relationships.
- ***From myopic pursuit of profit to a holistic pursuit of sustainability.*** Pressures on businesses have risen to the point that they can no longer ignore or give only lip-service to social and environmental issues. Operations managers have to balance the profit motive with the need to protect and even strengthen both people and the planet.

Managing Operations Across the Supply Chain provides a global, supply chain perspective of operations management for students in introductory courses in operations management and in supply chain management courses that do not require an operations management prerequisite. While the book is primarily written for undergraduates, it also can be used effectively in MBA courses. There are

several features that help to differentiate this book in its view of operations management:

- ***Broader Treatment of Operations Management*** While many operations management textbooks have revised or added a chapter to address supply chain issues, we developed our book from the ground up to effectively integrate operations management and the supply chain. The primary focus of the book is operations management, but we provide a “supply chain” perspective. Operations management cuts across a firm's boundaries, bringing together its internal activities with the operations of customers, suppliers, and other partners around the world. We clarify the functional roles of operations, supply management, and logistics while examining the integrative processes that make up the supply chain. One unique aspect of the book is that we examine both the upstream (supply-side) and downstream (demand-side) aspects of the supply chain, including a discussion of marketing and customer relationships.
- ***Balanced Treatment*** The book balances the quantitative and qualitative coverage needed to equip operations and supply chain managers for the challenges and opportunities they face. It describes and applies analytical tools that operations managers use to support decision making. However, we also address the important managerial issues such as systems, people, and processes that are critical in a supply chain context.
- ***Use of Integrative Frameworks*** The various elements of operations management are introduced and developed using an operations strategy framework that brings together three critical elements: (1) the critical customer, (2) the value proposition, and (3) capabilities. Furthermore, the students are introduced to operations management in a structured way that begins with the “big” picture of operations strategy, proceeds to the foundations of operations management, integrating relationships, planning for integrated supply chain operations, and then ending with a discussion of how to manage the system looking to the future.
- ***Use of Three Integrating Themes*** Three key themes are highlighted throughout the book: global issues, relationships, and sustainability. Because most

¹Thomas L. Friedman, *The World Is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Straus, and Giroux, 2006).

organizations have supply chains that reach beyond a single country, we examine global issues associated with operations and supply chain management. Organizations must collaborate with customers and suppliers to accomplish many operations activities. Thus, the book showcases how to build, maintain, and benefit from cross-functional and interorganizational relationships. To reduce costs and be competitive, organizations today must adapt sustainable business practices. We expect sustainability to increasingly become a key metric for operations and supply chain management performance. Accordingly, we have dedicated an entire chapter to sustainability, while also incorporating it throughout the book.

- **Real, Integrated Examples** The book brings operations and supply chain management to life through opening vignettes, Get Real highlights, and rich examples throughout the book. Companies such as Disney/Pixar[®], HP, Boeing, IKEA, American Apparel, Starbucks, and Procter & Gamble, to name a few, are used to illustrate how to address real operations and supply chain challenges.

Managing Operations Across the Supply Chain offers a new, global, supply chain perspective of operations management—a treatment that embraces the foundations of operations management but includes new frameworks, concepts, and tools to address the demands of today and changing needs of the future. The book is organized into five major sections:

- **Part 1 Supply Chain: A Perspective for Operations Management** provides an overview of operations management as a field, and describes the strategic role operations has in business from the perspective of supply chain management.
- **Part 2 Foundations of Operations Management** discusses foundational process concepts and principles that govern all operational activities. This section examines concepts such as product/process innovation, quality, lean, and inventory fundamentals.
- **Part 3 Integrating Relationships Across the Supply Chain** deals with the primary functional relationships between internal operations management activities and other operational functions both inside and outside the firm. This section describes customer relationship management, supply management, and logistics management.
- **Part 4 Planning for Integrated Operations Across the Supply Chain** discusses planning approaches and technologies used at different levels of operations decision making. Key topics such as demand planning, forecasting, sales and operations planning, inventory management, and materials requirements planning are examined.
- **Part 5 Managing Change in Supply Chain Operations** discusses how operations managers use projects, change programs, and technologies to shape a sustainable future for operations and supply chain management.

Acknowledgments

We would like to express our appreciation to the people who have provided assistance in the development of this textbook. We express our sincere thanks to the following individuals for their thoughtful reviews and suggestions:

Rasoul Afifi, Northeastern Illinois University
Nazim Ahmed, Ball State University
John Aloysius, University of Arkansas
Gopesh Anand, University of Illinois
Ravi Behara, Florida Atlantic University
Michael Bendixen, Nova Southeastern
Ednilson Bernardes, Georgia Southern
Greg Bier, University of Missouri, Columbia
William Borders, Troy University, Ecampus
Sanjeev Bordoloi, University of Saint Thomas
Kimball Bullington, Middle Tennessee State University
Cenk Caliskan, Utah Valley University, Orem
Cem Canel, University of North Carolina, Wilmington
Thomas Choi, Arizona State University
Bruce Christensen, Weber State University
Petros Christofi, Duquesne University
Chen-Hua Chung, University of Kentucky
Robert Clark, Stony Brook University
Lori Cook, DePaul University
Dinesh Dave, Appalachian State University
Eddie Davila, Arizona State University
Scott Dellana, East Carolina University
Renato DeMatta, University of Iowa, Iowa City
Barbara Downey, University of Missouri
Kamvar Farahbod, California State University,
Santa Barbara
Richard Franza, Kennesaw State University
Thomas Gattiker, Boise State University
David Gilliss, San Jose State University
Mike Godfrey, University of Wisconsin, Oshkosh
Mark Hanna, Loyola College (Maryland)
Michael D. Harper, University of Colorado, Denver
Steven Harrod, University of Dayton
Vishwanath Hegde, California State University, East Bay
Rhonda Hensley, North Carolina State University
Craig Hill, Georgia State University
Lisa Houts, California State University, Fresno
Ziaul Huq, University of Nebraska, Omaha
Tony Inman, Louisiana Tech University
Mark Ippolito, Indiana University

Doug Isanhart, University of Central Arkansas
Raj Jagannathan, University of Iowa
Vaidy Jayaraman, University of Miami
Rahul Kale, University of North Florida
Vijay Kannan, Utah State University
Matthew Keblis, University of Wyoming
Jim Keyes, University of Wisconsin, Stout
Alan S. Khade, California State University, Stanislaus
Michelle Lane, Bowling Green State University
Anita Lee-Post, University of Kentucky, Lexington
David Lewis, University of Massachusetts, Lowell
Dennis McCahon, Northeastern University
Laura M. Meade, Texas Christian University
Richard Morris, Georgia State University
Gisele Olney, University of Nebraska, Omaha
Joseph Ormsby, Stephen F. Austin State University
Ron Parker, Metropolitan State University
Fariborz Y. Partovi, Drexel University
Pat Penfield, Syracuse University
Felisa Preciado, Pennsylvania State University
Carrie Queenan, University of Notre Dame
K. V. Ramaswamy, Texas Southern University
Cesar Rego, University of Mississippi
Pedro Reyes, Baylor University
Germaine Saad, Georgia Southern University
Shane Schvaneveldt, Weber State University
Ruth Seiple, University of Cincinnati
Sridhar Seshadri, University of Texas, Austin
Avanti Sethi, University of Texas, Dallas
Lori Seward, University of Colorado
Kenneth A. Shaw, Oregon State University
John Sloan, Oregon State University
Marilyn Smith, Winthrop University
Jeremy Stafford, University of Northern Alabama
Drew Stapleton, University of Wisconsin, La Crosse
Larry Taub, University of North Carolina, Greensboro
Cecilia Temponi, Texas State University, San Marcos
Oya Turkel, Cleveland State University
Gustavo Vulcano, New York University
James Walters, Ball State University
Kevin Watson, Iowa State University
Elliott Weiss, University of Virginia
Cliff Welborn, Middle Tennessee State University
Theresa Wells, University of Wisconsin, Eau Claire
Larry White, Eastern Illinois University

Susan Williams, Northern Arizona University
Martha Wilson, California State University, Sacramento
Mustafa Yilmaz, Northeastern University
George Yorke, Texas Southern University

Other contributors included accuracy checker Laura M. Meade, Texas Christian University.

We want to thank the outstanding McGraw-Hill/Irwin production and marketing team who made this book possible—including Heather Kazakoff, marketing manager; Douglas Reiner, managing director; Harvey Yep, project manager; Michael McCormick, production supervisor; Brian Nacik, lead media project manager; Matthew

Baldwin, designer; and Jeremy Cheshareck, photo research coordinator.

A special thanks to our outstanding editorial team. We greatly appreciate the support, encouragement, and patience shown by Wanda Zeman, our development editor. Thanks for keeping us on track! Our brand manager, Thomas Hayward, provided excellent guidance and leadership throughout the process. We truly appreciate it!

*Morgan Swink
Steven A. Melynk
M. Bixby Cooper
Janet L. Hartley*