PURCHASING SUPPLY anagement



PURCHASING AND SUPPLY MANAGEMENT

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Harold E. Fearon is the National Association of Purchasing Management Professor Emeritus and former Chairman, Purchasing, Transportation and Operations Department, Arizona State University. Hal was the Founder of the Center for Advanced Purchasing Studies (CAPS), and its Director for the first nine years. He is now a member of the CAPS Board of Trustees. He is a graduate of Indiana University (B.S. with distinction, and M.B.A.) and Michigan State University (Ph.D. in Business Administration). He is founding editor, and continues to serve as editor emeritus, of The Journal of Supply Chain Management, the scholarly quarterly in the purchasing/materials management area, and has published more than 450 articles in business and academic journals. Hal is also co-editor-in-chief of the fifth edition of The Purchasing Handbook, published by McGraw-Hill. Hal has authored and co-authored several texts, including Purchasing Research in American Industry, published by the American Management Association; five editions of Fundamentals of Production / Operations Management, published by West Publishing Company; and five editions of Purchasing and Supply Management, published by Richard D. Irwin (most recently by McGraw-Hill). Hal has been active as a lecturer and consultant both in North America and internationally. He received the "President's Award" from the National Association of Purchasing Management in 1991, and the J. Shipman Gold Medal

Award, NAPM's highest honor, in 1992. In 2000 he was presented the Hans Ovelgönne "Purchasing Research" award by the International Federation of Purchasing and Materials Management in recognition of his worldwide contributions to the profession.

Anna E. Flynn, vice president and Institute for Supply Management (formerly NAPM) associate professor, provides subject matter and instructional design expertise to the educational product development team at the ISM and teaches supply management seminars. Anna was senior lecturer and director of the undergraduate program in Supply Chain Management (SCM) at Arizona State University from January 1993-May 2000. She developed corporate relationships with recruiters, acted as the academic and career advisor to undergraduates, and taught Purchasing and Supply Management and Research and Negotiation. The SCM Program consistently received the highest ratings from students in the College of Business for teaching, as well as academic and career advising, areas for which Anna was directly responsible. For three consecutive years Anna was one of 11 out of 2,000 faculty awarded a Faculty Appreciation Award. Recipients were singled out by graduating seniors as having had the greatest impact on their lives during their time at ASU. Anna is co-author of the NAPM Supply Management Knowledge Series Volume IV, The Supply Management Leadership Process (2000); co-author of Value-Driven Purchasing: Managing the Key Steps in the Acquisition Process (1995), and has worked on two earlier editions of Purchasing and Supply Management. She earned a bachelor's degree in international studies from the University of Notre Dame, an M.B.A. from Arizona State University, and a Ph.D. in learning and instructional technology from Arizona State University.

P. Fraser Johnson is a graduate of the Honors Business Administration Program at the Richard Ivey School of Business at the University of Western Ontario. Following graduation, Fraser worked in the automotive parts industry where he held a number of senior management positions in both finance and operations. He returned to the Richard Ivey School of Business in 1991 where he earned an M.B.A. and a Ph.D., specializing in Operations Management. After receiving his doctorate. Fraser joined the Faculty of Commerce at the University of British Columbia, where he taught supply chain management, logistics, transportation, and operations. He returned to the Richard Ivey School of Business in 1998, where he is currently an assistant professor, teaching operations management, purchasing and supply management, and logistics. Fraser is an active researcher in the area of purchasing and supply management. He is the author of several articles that have been published in a wide variety of magazines and journals, and has also authored a number of teaching cases. In recognition of his ongoing research, Fraser was awarded the National Association of Purchasing Management Senior Research Fellowship in June 1999. Fraser has taught and consulted in both Canada and the United States. He has delivered a number of management seminars and has actively worked with the Purchasing Management Association of Canada in developing material for the PMAC Accreditation Program.

P R E F A C

This twelfth edition of this text continues the prime objective of providing the readers with an up-to-date strategic and practical perspective on purchasing and supply management. Great changes have occurred in the supply field since 1933, when Professor Howard T. Lewis authored the first edition under the title *Industrial Purchasing*. At that time no computers existed, and phrases like "supply chain management," "total customer satisfaction," and "total cost of ownership" were unknown. However, the idea that sound procurement was essential to corporate success was already in its infancy.

Since the eleventh edition, the growth of the Internet and web-based supply solutions have provided new challenges for supply executives, while older issues like market shortages and overages, price escalation, and global competition continue. A new chapter on e-commerce and almost 30 new cases have been added to this edition to properly reflect the major challenges faced today by supply practitioners and academics alike. Each chapter reports the latest research findings, as supply chain management has become a hot topic in both the business world and academic circles.

A major change in this edition is the entry of two new co-authors. Anna E. Flynn previously assisted in the last two editions. Her teaching at Arizona State University resulted in many awards, and her research into participative learning effectiveness was particularly appropriate for this casebased text. P. Fraser Johnson, our second addition, brought a strong logistics background coupled with a superb teaching record. The contributions of these two professionals are evident throughout this text; their joining of the team will provide a sound base for future editions.

Many others also have assisted in the contents and the production of this edition. Reviewers who suggested significant potential improvements included: Dan Kraska, Timothy Butler, Philip Evers, and Rajeey Sawhney.

Case contributors in alphabetical order included: Saud Abbasi, Kersi Antia, Mark Applebaum, Nick Bontis, Kathryn Brohman, Clifford J. E. Campbell, Daniel Campbell, Debbie Compeau, Joerg Dietz, Joanne Gansink, Peter A. Goldthorpe, Mobina Hassan, Margot Huddart, Jennifer S. Jones, Basil Kalymon, Robert Kemp, Marshall King, Ari Kobetz, David Koltermann, Kristina Krupka, Winston Kwok, Larry Menor, Chantell Nicholls, Detlev Nitsch, Catherine Paul-Chowdhury, Barbara Pierce, Shawna Porter, Franz Scherz, Zong Tang, Tim Tattersall, Michelle Theobalds, Sarah Tremblay, Mike Wade, Asad Wali, Mary Margaret Weber, Virginia Webster, David Zeng, and Blair R. Zilkey. Professor John Haywood-Farmer was a major contributor to Chapter 5.

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The assistance of the Purchasing Management Association of Canada and the Institute for Supply Management (formerly the National Association of Purchasing Management) in developing appropriate case material and supporting the continuous improvement of supply education is also very much appreciated.

The McGraw-Hill editorial staff has done a great job of supporting the educational principles of this book, while balancing economic and artistic considerations.

Michiel R. Leenders Harold E. Fearon Anna E. Flynn P. Fraser Johnson B R I E F C O N T E N T S

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