

Preface

Most organizations can reduce their costs associated with the flow of materials substantially. Inventory control techniques are very important components in this development process. A thorough understanding of relevant inventory models is more or less a prerequisite for successful implementation. I hope that this book will be a useful tool in acquiring such an understanding.

The book is primarily intended as a course textbook. It assumes that the reader has a good basic knowledge of mathematics and probability theory, and is therefore most suitable for industrial engineering and management science/operations research students. The book can be used both in undergraduate and more advanced graduate courses.

About 15 years ago I wrote a Swedish book on inventory control. This book has been used in courses in production and inventory control at several Swedish engineering schools and has also been appreciated by many practitioners in the field. Positive reactions from many readers made me contemplate writing a new book in English on the same subject. Encouraging support of this idea from the Springer Editors Fred Hillier and Gary Folven finally convinced me to go ahead with that project.

The resulting first edition of this book was published in 2000 and contained quite a lot of new material that was not included in its Swedish predecessor. It has since then been used in quite a few university courses in different parts of the world, and I have received many positive reactions. Still some readers have felt that the book was too compact and some have asked for additional topics. Some of those who have used the book as a textbook have also requested more problems to be solved by the students. The Springer Editors Fred Hillier and Gary Folven then persuaded me to publish a Second Edition of my book. This new version was quite different from the previous one. My main goal was to make the new book more suitable as a textbook. The explanations of different results were more detailed, and a considerable number of exercises were added. I also included several new topics. These additional topics include: alternative forecasting techniques, more material on different stochastic demand processes and how they can be fitted to empirical data, generalized treatment of single-echelon periodic review systems, capacity constrained lot sizing,

short sections on lateral transshipments and on remanufacturing, coordination and contracts.

The present revision, which resulted in this Third Edition can be seen as a continuation of the previous revision. The main focus is still to provide more detailed explanations and in that way make the book easier to read.

When working with different versions of the book I have been much influenced by other textbooks and various scientific articles. I would like to thank the authors of these books and papers for indirectly contributing to my book.

There are also a number of individuals that I would like to thank. Before I started to work on the second revision, Springer helped me to arrange a review process, where a number of international scholars were asked to suggest suitable changes in the book. These scholars were: Shoshana Anily, Tel Aviv University, Saif Benjaafar, University of Minnesota, Eric Johnson, Dartmouth College, George Liberopoulos, University of Thessaly, Suresh Sethi, University of Texas-Dallas, Jay Swaminathan, University of North Carolina, Ruud Teunter, Lancaster University, Geert-Jan Van Houtum, Eindhoven University of Technology, Luk Van Wassenhove, INSEAD, and Yunzeng Wang, Case Western Reserve University. Some of them had used the first edition of the book in their classes. The review process resulted in most valuable suggestions for improvements, and I want to thank all of you very much.

Several colleagues of mine at Lund University have helped me a lot. I would especially like to mention Johan Marklund for much and extremely valuable help with both the First and the Second Edition, and Kaj Rosling for his important suggestions concerning the First Edition. Furthermore, Jonas Andersson, Peter Berling, Christian Howard, Lina Johansson, Fredrik Olsson, Olle Stenius, Patrik Tydesjö, and Stefan Vidgren have reviewed the manuscript at different stages and offered valuable suggestions which have improved this book considerably. Thank you so much.

Finally, I would also like to thank the Springer people: Fred Hillier, Gary Folven, Carolyn Ford, Matthew Amboy, Christine Crigler, and Manoj Mishra for their support, and Sharon Bowker for polishing my English.



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