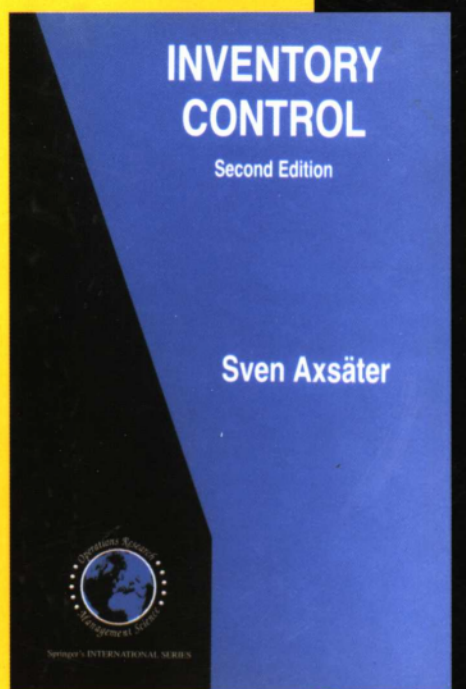


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Sven Axsäter

库存控制（第2版）

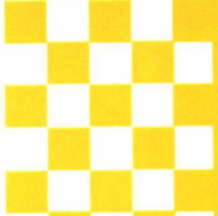
INVENTORY CONTROL
(Second Edition)



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本书以库存管理与控制的基本理论及其应用为主,介绍与库存相关的若干基本模型与方法。内容涵盖了需求预测、单级系统的确定性库存模型和随机性库存模型、多级阶梯系统结构和相关库存模型与订购策略等。在内容组织上,本书详细介绍了库存理论的经典模型,同时也引入了现代库存研究的新成果。本书主要章节均附有丰富的习题,有利于帮助学生课后对相关内容的进一步理解和消化。

读者对象为工业工程、物流管理、企业管理等专业的高年级本科生和研究生,以及相关领域的科研人员和企业实际工作者。

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北 京

Sven Axsäter
Lund University
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Forward

This textbook series is published at a very opportunity time when the discipline of industrial engineering is experiencing a phenomenal growth in China academia and with its increased interests in the utilization of the concepts, methods and tools of industrial engineering in the workplace. Effective utilization of these industrial engineering approaches in the workplace should result in increased productivity, quality of work, satisfaction and profitability to the cooperation.

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Gavriel Salvendy

Department of Industrial Engineering, Tsinghua University

School of Industrial Engineering, Purdue University

April, 2002

前 言

本教材系列的出版正值中国学术界工业工程学科经历巨大发展，实际工作中对工业工程的概念、方法和工具的使用兴趣日渐浓厚之时。在实际工作中有效地应用工业工程的手段将无疑会提高生产率、工作质量、合作的满意度和效果。

该系列中的书籍对工业工程的本科生、研究生和工业界中需要解决工程系统设计、运作和管理诸方面问题的人士最为适用。

加弗瑞尔·沙尔文迪

清华大学工业工程系

普渡大学工业工程学院（美国）

2002年4月

Preface

Modern information technology has created new possibilities for more sophisticated and efficient control of supply chains. 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 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 fifteen years ago I wrote a Swedish book on inventory control. This book is still 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 six years ago.

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 finally convinced me to publish a Second Edition of my book. This new edition is quite different from the previous one. The text has been expanded by more than 50 percent. My main goal has been to make the new book more suitable as a textbook. There are eleven chapters compared to six in the previous version. The explanations of different results are more detailed, and a considerable number of exercises have been added. I have also included several new topics. The additions 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.

When working with 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 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 editions, and Kaj Rosling (now at Växjö University) for his important suggestions concerning the first edition. Furthermore, Jonas Andersson, Peter Berling, Fredrik Olsson, 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, and Carolyn Ford for their support, and Sharon Bowker for polishing my English.

Sven Axsäter

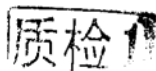
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