Buchbesprechungen

Eliashberg, J., Lilien, G.L.(Ed.): Marketing. Amsterdam: North Holland 1993. 920 pp., US \$ 165,00

In view of many strategic marketing challenges not yet open to quantitative analysis to a sufficient extent, one could believe that the importance of the OR/MS approach to marketing should be very limited. This handbook, edited by J. Eliashberg and G. L. Lilien, contributes to a correction of this misconception. Although "classical" OR/MS topics are in the foreground, problems of strategic marketing are treated as well in this book. Its contents in detail:

The first part of the handbook provides a comprehensive overview of the historical and future perspectives of mathematical marketing models (J. Eliashberg and G. L. Lilien). The second part ("Models of Market Phenomena") deals with models of consumer behavior (J. H. Roberts and G. L. Lilien), group choice and negotiation (K. P. Corfman and S. Gupta) and game-theoretical models of competitive marketing strategies (K. S. Moorthy). Part three ("Tools and Methods for Market Analysis") covers non-spatial tree models for the assessment of competitive market structure (W. S. DeSarbo, A. K. Manrai and L. A. Manrai), market-share models (V. Mahajan, E. Muller and F. M. Bass), econometric and time-series market response models (D. M. Hanssens and L. J. Parsons). Part four addresses the elements of the marketing mix and deals especially with product-positioning via conjoint analysis (P. E. Green and A. M. Krieger), pricing models (V. R. Rao), sales promotion models (R. C. Blattberg and S. A. Neslin), salesforce compensation (A. T. Coughlan) and salesforce operations (M. B. Vandenbosh and C. B. Weinberg). "Interaction, Strategy and Synergy" is the title of part five, the last and most exciting part of the handbook. The contributions in this section present marketing-mix models (H. Gatignon), marketing decision models (A. Rangaswamy), marketing strategy models (Y. Wind and G. L. Lilien) as well as models of marketing/production joint decision making (J. Eliashberg and R. Steinberg).

In their book covering around 900 pages, the editors have brought together an outstanding set of marketing scholars and have presented an impressive proof for the achievement potential of the OR/MS approach applied to marketing problems. Within the variety of interesting chapters, the interdisciplinary oriented contributions deserve particular emphasis, because they demonstrate the broad scientific perspective of the contemporary OR/MS marketing approach. This is documented by two examples: The integration of marketing and psychometric research for building market models (pp. 193–257) and the management of the interface between marketing and production (pp. 827–880).

Only a few critical remarks seem to be necessary. First, the process of broadening the OR/MS perspective in marketing must be extended. For example, the solution of one major problem of today's marketing management, the comprehensive implementation of the marketing concept within the organization, requires an even much broader approach than it is presented in the book. Second, the handbook does not include a special contribution that evaluates systematically the empirical and practical validity of the OR/MS models in marketing. Because more impact on practice is needed (Eliashberg and Lilien, p. 19), the practical benefit of OR/MS modelling for marketing managers must be demonstrated to a higher degree. Third, unfortunately the book does not always represent the claimed state of the art in each contribution (see Eliashberg and Lilien, p. 4). For example, the presentation of the PIMS project within the frame of marketing strategy models (pp. 802–804) neglects important causal modelling approaches to modern PIMS research.

In spite of these few shortcomings, Eliashberg and Lilien have edited a very impressive and informative handbook that represents without any doubt an important enrichment to the marketing literature.

W. Fritz, Braunschweig

Horst, R., Tuy, H.: Global Optimization: Deterministic Approaches. Berlin, Heidelberg, New York: Springer 1993. 2. Aufl., 698 S., DM 220,-

Within 698 pages, this book provides an excellent presentation of the diverse solution approaches to multiextremal global optimization problems. The goal of the monograph, which has been formulated by the authors as to "systematically clarify and unify these different approaches in order to provide insight into the underlying concepts and their properties", is clearly met. General methods as well as methods, that exploit particular problem structures frequently encountered in practice, are comprehensively described, pointing out their application to a variety of problems of general interest.

The book is divided into three main parts, each of them being well structured and comprising a number of subchapters.

In Part A the authors give an introduction to important classes of global optimization problems, followed by the description of diverse basic solution techniques such as outer approximation, cutting approaches as well as branch and bound methods. Part B is devoted to concave minimization problems and respective diverse solution techniques. Particularly, additional attention is spent on the consideration of specially structured problems. Part C focuses on general nonlinear problems and corresponding solution approaches.

Each chapter starts with a summary of its contents together with suitable references. Since the notation used throughout the book is clearly defined, each chapter is selfconsistent and may be consulted separately. It reads well without requiring extensive mathematical or technical prerequisites.

The fact, that the second edition of this expensive and comprehensive book (220,- DM) appeared only three years after the first edition came out, underlines, that the book is well worth its price and appreciated by its potential readers.

For the second edition the list of references had been enlarged by two more pages. Most of the additional citations are due to one or the other author. Taking into account the large number of references (about 600), it is a little bit surprising, that, except for two of the authors' papers, not one contribution to volume No. 25 of the Annals of OR is cited; this whole volume is exclusively dedicated to computational methods on global optimization.

Beyond that, both editions do not differ significantly, apart from some errors and misprints within the first edition, that have been corrected now.

A third edition should include the presentation of purely combinatorial approaches such as deterministic methods of local search, e.g. tabu search.

Summing it up, this book can be at one hand recommended to anyone that is concerned with global optimization problems in the context of applications encountered in operations research, engineering, and decision sciences. On the other hand it has to be considered as a standard reference for anyone interested in optimization techniques.

B. Schildt, Darmstadt