



Book Selection

Edited by J Crocker

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Research in Strategic Management and Information Technology: Volume 2

N Venkatraman and JC Henderson (Eds)

JAI Press Inc/Ablex Publishing Corp., 1999. xii + 143 pp. \$78.50. ISBN: 0 7623 0008 6

This book is rather like a hard-bound special issue of a journal, consisting of five papers: (1) Organizational Forms; Firm Boundaries and Interim Relationships; (2) The Influence of Governance and Exchange Dependencies; (3) A Resource-based Theory of Network Structures; (4) Research on Strategic Information Technology: A Resource-based Perspective; and (5) Quasi-integration and Strategic Alliances in the Global CRS Industry.

As a second volume in an intended series, the book declares its aims to address leveraging information technology for designing inter-organisational relationships. It follows the view that organisations must move to a concept of ‘virtual integration’ in assembling capabilities through relationships. ‘The company of the future will be a box of contracts’, as someone once observed.

The dominant theme of this book is the logic of governance, with the firm as a web of relationships. IT, it argues, provides opportunities to change the scope of the firm through effective control and influence. The notion of Transaction Cost Economics [TCE]—which goes back to Coase (1937)—is the major theoretical anchor.

In the first paper, Sundaram and Venkatraman, presents a framework that seeks to provide insight into various organisational forms, and the Short and Sampler contribution that follows develops two typologies for exchange governance. Choudhury and Xia conceptualise capability in a networked organisation, reasonably, as its capacity to deploy resources to execute its competitive strategy. The Zaheer and Dirks contribution is more comfortably a paper on strategic information technology [SIT] than management economics. It reviews 40 journal papers containing empirical SIT studies and proposes a framework for ongoing

research, again following the resource-based view adopted elsewhere. Ellen Christiaanse in the concluding paper, on alliances in computerised reservation systems, much as it is interesting enough seems rather make-weight in this context.

Overall this book is of interest principally if your field is organisational networks and governance. Only one section is of more material interest to IT strategists.

Bournemouth University

B Hollocks

Reference

1 Coase RH (1937). The nature of the firm. *Economica* 4: 386–405.

Marketing Engineering: Computer-Assisted Marketing Analysis and Planning

GL Lilien and A Rangaswamy

Addison-Wesley, 1998. xvii + 350 pp. £67.80. ISBN: 0 321 00194 X

Lilien and Rangaswamy offer the reader and user of the Marketing Engineering pack an informative, systematic approach to making managerial decisions in marketing. It aims to educate future managers and professionals in marketing to follow structured processes, using marketing data and specialised analytic tools. Nevertheless, it can be also helpful to current managers who are programmed to rely on intuition and experience. In explaining the concept of marketing engineering, the authors make a distinction between mental models—based on intuition, experience and rules of thumb—and decision models that analyse data as a basis for recommending a course of action. Marketing engineering applies decision models whereas conceptual marketing solely relies on mental models. Notwithstanding managers’ experience and wisdom, mental models can be quite inaccurate and lead to expensive errors. This is where

marketing engineering enters to improve the managers' decision processing. The authors suggest that prospective managers should be educated to work with decision models during their studies. Marketing engineering is also the gateway to implementing a new strategic stream in marketing—pricing guided by the customer-based value of products.¹

The authors' motto throughout the pack is 'learn and practice'. The pack comprises an instructive text book, a tutorial and software which includes 26 different marketing and decision models. The pack encompasses many areas, among them segmentation, positioning, preference and choice models, advertising, expert decision making (applying Analytic Hierarchy Process), distribution, pricing and promotion. Many of the models are essentially response models, for example, sales response models to advertising and price, or individual-level response models to price and product characteristics. Hence, the authors open with a presentation of the fundamentals of response models. There is enough material to keep an interested learner busy for a whole year. To make learning effective, only a few models should be chosen for a course that lasts 10–14 weeks. The magnitude of information in this pack can easily overwhelm any student if delivered in a too short time.

The accompanying text provides the theory behind the models. However, it combines theory with practical guidance and real-world examples. Explanations are clear and fluid. The practical guidance involves ample numerical and graphical examples which make the material in the book both concrete and comprehensible. This is an important virtue, making it worth using as a course textbook on its own.

Yet, since learning is incomplete without implementation, it is advisable to use the exercises in the second volume of the pack or exercises developed by the lecturer. Detailed examples of applications are given in the tutorial book, along with instructions on how to perform some of the analysis done in real-world research. The tutorial shows the user step by step how to use a module and complete analysis of sampled data for an exercise. Most of the modules in the software are MS-Excel applications but other applications are stand-alone programmes. The authors include in the software some proprietary models that belong to research companies and therefore the modules are learning versions with limited capabilities. In principle, all modules are made to be applied with relatively small data sets. They are generally friendly and not difficult to use. Flexibility and ease-of-use are better in Excel applications rather than the imported modules, mainly because an Excel user needs only to be familiar with using worksheets. Furthermore, he may proceed and extend the application, based on his knowledge and experience with the worksheet software.

The book is ambitious and some topics are more successfully explained and illustrated than others. For example, a fuller discussion of market share models would have been valuable. Many of the topics assume that empirical sales response models can be derived which are reliable but there

is only very limited discussion as to how such econometric models should be developed and tested. While this material is available elsewhere, from an instructor's point of view it would be desirable to make the book self-contained.

The engineering approach to marketing might give the reader the impression that marketing can be worked out as an exact science. But marketing evolves very much around creativity and innovative initiatives. A different approach to marketing engineering would emphasise the art of marketing. However, these approaches can work together—use quantitative, analytic tools for evaluating a market situation and developing recommendations as to what should be done, with effective implementation reliant on managerial creativity. Lilien and Rangaswamy suggest that conceptual marketing and marketing engineering are complementary rather than substitute alternatives. One might call this perspective 'soft marketing engineering'. When used as the basis of a course in market modelling there are few if any competitors. A flexible and sensible learner will find Marketing Engineering most rewarding.

The Management School, R Fildes and R Ventura
Lancaster University

Reference

- 1 Matanovich T, Lillien GL and Rangaswamy A (1999). Engineering the price-value relationship. *Market Mgmt* 8: 48–53.

Theory of Linear and Integer Programming

A Schrijver

John Wiley & Sons Ltd., 1999. xi+471 pp. £29.95.
ISBN: 0 471 98232 6 Pbk.

Although Wiley give the publication date for this book as 1998, it was in fact originally published in 1986. The only difference is that the 1986 edition was in hardback and rather expensive, whereas the 1998 edition is in paperback and very reasonably priced at £32.50. Apart from that, no other changes have been made.

A review of the 1986 edition, written by David K. Smith, appeared on page 561 of JORS, Vol. 38, No 6 (1987). Nevertheless, it was felt desirable to review it again with the benefit of 13 years of hindsight.

The stated intention of the author was to give an introduction to, and survey of, the main theoretical developments in the field of linear and integer programming from antiquity to the time of writing. As the title suggests, the emphasis is on theory, rather than applications or implementations, and therefore most of the book follows the familiar 'Theorem... Proof...' format. Therefore, the book is not appropriate for undergraduate students. Indeed, the 'blurb' on the back cover states: 'The book is intended for graduate students and researchers in operations research, mathematics and computer science. It will also be of interest to mathematical

historians'. This seems to me to be a fair assessment of the target audience.

There are a couple of introductory chapters, and then the main body of the text is divided into four sections. The first consists of only one chapter and is concerned with linear algebra. The second consists of three chapters and is concerned with lattices and diophantine equations. The third and fourth sections are much more substantial: nine chapters on polyhedra, linear inequalities and linear programming, and nine chapters on integer linear programming. At the end of each section, there are copious historical notes and references to enable the reader to explore the topics in more depth if desired.

In my opinion, this is an excellent, well-written and readable text. Anybody brave enough to read it from cover to cover will obtain a thorough grounding in the field and, for those who are less ambitious, it makes an excellent reference book. Moreover, researchers will find it a useful source for research topics, as Schrijver records several important open questions and conjectures throughout the book.

The only real drawback to the book is the aforementioned fact that nothing has been changed since the 1986 edition. This means that there are some important omissions. For example, the reader will find no mention of primal-dual interior-point methods for linear programming, nor of branch-and-cut and lift-and-project methods for (mixed-) integer programming. Therefore one might want to supplement this book with some more recent works, see for example References 1 to 3.

Despite this objection, I would encourage graduate students and researchers working in the field to buy this book, now that Wiley has made it more affordable.

Lancaster University

AN Letchford

References

- 1 Cook WJ, Cunningham WH, Pulleyblank WR and Schrijver A (1997). *Combinatorial Optimization*. Wiley: New York.
- 2 Padberg MW (1995). *Linear Optimization and Extensions*. Springer-Verlag: Berlin.
- 3 Wolsey LA (1998). *Integer Programming*. Wiley: New York.

Safety Management: The Challenge of Change

A Hale and M Baram (Eds)

Elsevier Science Ltd., 1998. x + 274 pp. £61.50.

ISBN: 0 08 043075 9

This is an edited publication containing 15 papers from an international interdisciplinary study group on 'New technologies and Work' (NeTWork). The study group is tasked with scrutinising problems posed by the introduction, spread and control of new technologies in the work place. An annual conference is held to disseminate the latest findings of the group, this publication is from the 1996 conference.

The publication is primarily based around the proceedings of the 1996 conference although the editors have themed the papers presented and also provided an introductory and concluding chapter which draw the various papers together into a coherent whole.

The book is divided into three sections:

1. Understanding and modelling the safe management system;
2. Change, learning and safety improvement; and
3. Responding to outside change.

Section one, deals with how safety management systems were developed in countries like Norway and within organisations such as Shell. The theme of this section is to provide insights into how a balance can be achieved between a top-down demonstration of commitment and leadership and bottom-up generation of procedures, solutions and rules of safety management systems.

Section two discusses how change and learning can be used to continuously develop and improve safety management. Several papers look at nuclear operations and allow comparisons to be drawn as to how cultures in France, Germany and the USA deal with change in this environment.

Finally section three looks at how external factors impact on change. Papers here discuss the privatisation of British Rail and the impact it had on the safety of the rail network. Another paper deals with the loss of public confidence in the German nuclear industry and how the organisation developed a complex learning and change process to combat this.

This book contains well written and structured accounts of how safety management within various countries and organisations have adapted to the challenge of change. Essentially the nature of the discussions provides insights into complex problems rather than practical guidance for their solution. For this reason the book will have quite a limited appeal.

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