

OPERATIONS STRATEGY

Principles and Practice

SECOND EDITION

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PREFACE

This book explains the principles of operations strategy and describes how companies can apply these principles in practice to increase value. Designing and implementing a successful operations strategy require judgment, experience, creativity, and luck, all of which cannot be taught. What *can* be taught, however, are the concepts, principles, and tools to help you in that process—and therein lies the purpose of this book.

“Principles and practice” is my guiding motto throughout this book. Going beyond telling war-stories, my goal is thus to describe the practice of operations strategy while revealing its driving principles in a structured manner. I am writing under the assumption that *we*—which in this book means you, the reader and I, the writer—seek to build sound intuition for designing, assessing, and improving operations strategies. I believe that sound intuition results from a journey of logical analysis that culminates in a theory. Good theory gives you intuition into the familiar, and beyond.

Each chapter opens with a description of how a real company practices some aspect of operations strategy and then reviews the concepts behind that practice. Tools are provided to analyze the concepts, distill their principles, and suggest guidelines for implementation and improvement. When appropriate, state-of-the-art research findings are integrated in the discussion. Each chapter closes with a mini-case that asks you to explore how you would apply the principles and tools in practice. The last part of the book contains a set of “full-blown” cases to integrate the chapters and emphasize the relevance of our topic to practice.

To increase accessibility, most analysis is described in words and is exhibited with minimal notation and mathematics. For example, equations are stated only if they capture a relationship better than words alone can. To increase usefulness and illustrate implementation, a particular example of each analysis is worked out in a spreadsheet (all spreadsheets can be downloaded from www.vanmieghem.us). More advanced analysis or spreadsheet implementations are relegated to appendices for those who are interested.

Though we are interested in designing *good* operations strategies, strategy evaluation is as much art as it is science. We will adopt a dual perspective that combines qualitative analysis with a financial evaluation of the value created by the operations strategy. Throughout this book, value will thus be our yardstick and our guide to assess and improve operations strategy. Merging the strategic and financial perspective should be natural to the intended reader:

I have written this book with a specific focus on MBA and engineering management students, and on their instructors. I hope that the structured approach

of using analysis to build intuition and reveal improvement levers within a coherent framework facilitates learning and instruction. While the book naturally follows a core course in operations and supply chain management and adopts basic financial evaluation, all concepts are explained “from scratch” to make the book accessible to every business or engineering management student. The book should also be of interest to consultants and practitioners as a reference for concepts, principles, and tools.

According to Francis Bacon, “writing makes an exact man.” While a valiant goal, operations strategy is not an exact science. Nor is there an agreed-upon paradigm for its study, let alone agreement on what exactly “is part” of operations strategy. Given these constraints, this book reflects my best effort to structure concepts and principles in a unified framework for operations strategy. Like any good operation, however, this really is a process of continuous improvement. It never ends, as better ways always exist. If you have any suggestions for improvement, I welcome hearing about them.

Jan Van Mieghem (Jan@VanMieghem.us)
July 13, 2007

CHANGES IN THE SECOND EDITION

This second edition contains changes along various dimensions. First, Professor Allon has joined this ongoing book project as second author. In 2010, Gad started teaching the MBA elective course, *Operations Strategy*, that Jan began designing and teaching in 1998. Second, while the first edition followed a “leading strategy,” in the sense that it contained material that hadn’t been taught yet, this second edition reflects how our MBA elective course has evolved over the last 7 years. It thus contains “class-room tested content.” These two changes led to a new chapter 2; majorly revised chapters 1, 3, 4, 5, 6, and 7 and appendix A; and minor revisions of the remaining chapters.

While we believe significant progress has been made, this book project remains a process of continuous improvement. It never ends, as better ways always exist. If you have any suggestions for improvement, we welcome hearing about them.

Jan Van Mieghem and Gad Allon
July 11, 2014

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This book results from the MBA elective course, *Operations Strategy*, that I began designing and teaching in 1998. It reflects the experience and knowledge of the colleagues, teachers, and managers that I have worked with. I have also benefited greatly from the experience, suggestions, and questions of the many MBA and executive students that I have interacted with; while I was teaching, I was learning even more.

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Strategy and operations are inextricably connected: strategy is a plan to reach an objective and operations is the means of getting there. Operations management involves the planning and coordination of work. Strategically, this involves the long-term planning and structuring of work. Operations management and strategy. (Brief defining or introductory sentence). The word operations stems from the Latin verb operari and noun opus, which mean (to) work. Strategy and effectively managing business operations are key to success. We can help you to develop your company strategy and plans for the future, identify your priorities, assess the impact of changes on employees and business systems, as well as reduce corporate costs and taxes. Potential issues. You need your strategy and business plan to comply with changing economic conditions, regulations and goals. You need to restructure your operations to enhance effectiveness. Deriving an operations strategy from a business strategy will not be a straightforward planning activity. During the translation from business to operations strategy, all the ambiguities and conflicts that are buried within most businesses strategies will be exposed and will need to be resolved. Business strategies are painted in broad brushstrokes. They point the business in a general direction, but cannot spell out every detail; that is what functional strategies are for.

This book covers all areas of Operations Strategy including formulation methods for operations strategy and improvement approaches.Â Description. This book covers all areas of Operations Strategy including formulation methods for operations strategy and improvement approaches and the organisational structure around which operation strategies are implemented. Preface. This book covers the area of Operations Strategy. The firmâ€™s expertise in operations strategy was further enhanced by the acquisition of Management Engineers in 2013, adding deep operations capabilities, and implementation-driven approach, and experience across the manufacturing, chemicals and industrials sectors. Today, as part of the PwC network, we turn vision into reality.