



CONTENTS

Preface	vii
I Operations Strategy: Concept and Competencies	1
1 Operations Strategy: Concept and Framework	3
1.1 What is Operations Strategy?	3
1.2 The Resource View of Operations	8
1.3 The Process View of Operations	10
1.4 The Competency View of Operations	15
1.5 A Framework for Operations Strategy	17
1.6 Applying the Framework: Zara	20
1.7 Three Tools to Tailor Operations	22
1.8 Guidelines for Operations Strategy	27
1.9 Summary of Learning Objectives	27
Discussion Questions	29
Further Reading and References	30
Mini-Case 1: The Swiss Watch Industry	32
2 Competition, Competencies, and Operations	35
2.1 The Concept of Operational Trade-off	35
2.2 Shaping Operational Trade-offs: Examples	38
2.3 Properties of Operational Trade-offs	43
2.4 Operational Efficiency and the Frontier	48
2.5 Operational Efficiency and Productivity	50
2.6 How to improve Operational Efficiency? Focus!	53
2.7 Analyzing a Competitive Threat	58
2.8 Guidelines for Operations-based Competitive Advantage	61
2.9 Summary of Learning Objectives	63
Discussion Questions	65
Challenge Questions	65
Further Reading and References	66
Mini-Case 2: FedEx v. UPS	68

II	The Resource View: Tailoring Real Assets	69
3	Capacity Sizing and Investment	71
3.1	Capacity Strategy and Key Trade-offs	71
3.2	Challenges for Capacity Strategy	75
3.3	The Necessity and Practice of Forecasting	78
3.4	Economies of Scale in Capacity Investment	82
3.5	Capacity Valuation and Volatility	84
3.6	Optimal Capacity Sizing	89
3.7	The Capacity-Inventory-Waiting Triangle	93
3.8	Guidelines for Capacity Sizing	100
3.9	Summary of Learning Objectives	102
	Discussion Questions	104
	Challenge Questions	104
	Further Reading and References	105
	Mini-Case 3: Gujarat Apollo Industries Ltd	107
	Appendix 3A: Calculating NPV for Operations Strategy	108
	Appendix 3B: Capacity-Inventory-Waiting Trade-offs	114
4	Capacity Timing and Expansion	117
4.1	Five Capacity Timing Strategies	117
4.2	Different Ways to Expand Capacity	122
4.3	A Capacity Timing Model	124
4.4	Key Drivers of Capacity Timing	126
4.5	Strategic Timing: The Option Value of Waiting	131
4.6	Tactical Timing: Aggregate Planning	135
4.7	Service Considerations for Capacity Adjustments	140
4.8	Guidelines for Capacity Timing and Adjustment	142
4.9	Summary of Learning Objectives	144
	Discussion Questions	145
	Challenge Questions	145
	Further Reading and References	146
	Mini-Case 4: Timing of IT expansions	147
	Appendix 4: Linear Planning Optimization in Excel	149
5	Capacity Types, Flexibility and Consolidation	153
5.1	Different Types of Resources and Capacity	153
5.2	Benefits of Flexibility	156
5.3	Obstacles to Achieving Flexibility	159
5.4	Product Design Strategies for Flexibility	160
5.5	Process Design Strategies for Flexibility	165
5.6	Mass Customization	167
5.7	Valuing Flexibility and Consolidation	170
5.8	Optimizing Flexibility for a Multi-Product Firm	176
5.9	Tailored Flexibility	180
5.10	Guidelines for Capacity Flexibility	184
5.11	Summary of Learning Objectives	185
	Discussion Questions	186
	Analytical Questions	187
	Further Reading and References	187

Mini-Case 5: Strategic Network Flexibility using FlexCap	189
Appendix 5: Optimization using Simulation in Excel	192
6 Capacity Location, Global Networks and Offshoring	197
6.1 Globalization and Operations	197
6.2 Strategic Framework for Location Decisions	203
6.3 Four Types of Location Analyses	208
6.4 Network Choices: Centralize or Distribute?	212
6.5 Network Choices: Localize or Standardize?	214
6.6 Network Choices: Integrate or Separate?	216
6.7 Global Network Valuation: Flexibility and Currency Risk	218
6.8 Offshoring	221
6.9 Guidelines	226
6.10 Summary of Learning Objectives	227
Discussion Questions	228
Further Reading and References	228
Mini-Case 6: Mexico or China? Managing a Global Network	230
III The Process View: Tailoring Activity Networks	233
7 Strategic Sourcing, Supply Management, and Outsourcing	235
7.1 Strategic Sourcing: Concept and Framework	235
7.2 The Spectrum of Sourcing Relationships	240
7.3 A Framework for the Outsourcing Decision	246
7.4 Total Cost of Ownership	250
7.5 Structured Sourcing Contracts	254
7.6 Multi-sourcing and Tailored Sourcing	260
7.7 Technology, Sourcing, and Value Chain Disintegration	262
7.8 Guidelines for Successful Sourcing	266
7.9 Summary of Learning Objectives	268
Discussion Questions	269
Further Reading and References	270
Mini-Case 7: Bose 301SE: Sourcing and Contracting	272
8 Demand and Revenue Management	273
8.1 Demand and Revenue Management: Concepts	273
8.2 Obstacles to Revenue Management	279
8.3 Customer Segmentation and Product Design	280
8.4 Time Segmentation and Dynamic Pricing	287
8.5 Capacity Reservation and Overbooking	292
8.6 Capacity Segmentation and Allocation	300
8.7 Summary of Learning Objectives	305
Discussion Questions	308
Challenge Questions	308
Further Reading and References	308
Appendix 8: Price Optimization of Linear Demand	310

9	Risk Management and Operational Hedging	313
9.1	Risk Management: Concept and Process	313
9.2	Identification of Operational Hazards	318
9.3	Risk Assessment and Valuation	321
9.4	Tactical Risk Decisions	327
9.5	Strategic Risk Mitigation	330
9.6	Four Operational Hedging Strategies	332
9.7	Financial Hedging of Operational Risk	335
9.8	Tailored Operational Hedging	339
9.9	Guidelines for Operational Risk Management	344
9.10	Summary of Learning Objectives	345
	Discussion Questions	347
	Analytical Questions	347
	Further Reading and References	347
	Mini-Case 9: Dell Computer	349
10	Improvement and Innovation	351
10.1	Improvement as a Process	351
10.2	Learning and Improvement	357
10.3	The Learning Curve	360
10.4	Innovation and Unforeseeable Uncertainty	366
10.5	Managing Unk Unks and Complexity in Innovation	370
10.6	Innovation, Improvement, and Encroachment	373
10.7	Innovation, Improvement, and Competition	375
10.8	Guidelines for Improvement and Innovation	379
10.9	Summary of Learning Objectives	380
	Discussion Questions	382
	Further Reading and References	382
	Mini-Case 10: Quantum-Seagate: Competing on Innovation	384
IV	Integrating Case Studies	389
11	Harley-Davidson Motor Company	391
	History (1903-1992) and Company Information	391
	The 1992 Capacity Decision	397
	More Growth in Demand	399
	Strategic Choices	401
	Discussion Questions	403
12	Seagate Technology	405
	Discussion Questions	413
13	Peapod	415
	Grocery Industry Overview	415
	Peapod	418
	Webvan	423
	What's Next? Tesco's Entry	424
	Discussion Questions	425
	Appendix 13: Peapod's Operating Data	428

V Appendices	429
A Make-to-Stock Operations (EOQ Review)	431
B Safety Capacity and Inventory (Newsvendor Review)	435
C Make-to-Order and Service Operations (Queuing Review)	439
D Simple Forecasting Techniques	443
Glossary	445
Notation	455
Name Index	457
Subject Index	461