Contents

Foreword xiii
Preface xv
Authors' acknowledgements xvii
Publisher's acknowledgements xix
How to use this book xxi
Plan of the book xxiii

Part One  COMPETING THROUGH LOGISTICS

1  Logistics and the supply chain 3
   Introduction 3
   1.1  Logistics and the supply chain 4
        1.1.1  Definitions and concepts 6
        1.1.2  Supply chain: structure and tiering 8
   1.2  Material flow and information flow 12
        1.2.1  Material flow 12
        1.2.2  Information flow 15
   1.3  Competing through logistics 16
        1.3.1  Hard objectives 17
        1.3.2  Supportive capabilities 19
        1.3.3  Soft objectives 25
        1.3.4  Order winners and qualifiers 26
   1.4  Logistics strategy 27
        1.4.1  Defining 'strategy' 28
        1.4.2  Aligning strategies 29
        1.4.3  Differentiating strategies 30
        1.4.4  Trade-offs in logistics 31
   Summary 32
   Discussion questions 33
   References 33
   Suggested further reading 34

2  Putting the end-customer first 35
   Introduction 35
   2.1  The marketing perspective 36
        2.1.1  Rising customer expectations 37
        2.1.2  The information revolution 37
   2.2  Segmentation 38
   2.3  Demand profiling 46
   2.4  Quality of service 50
        2.4.1  Customer loyalty 51
        2.4.2  Value disciplines 53
### 3 Value and logistics costs

**Introduction**

**3.1 Where does value come from?**
- **3.1.1 Return on investment (ROI)**
- **3.1.2 Financial ratios and ROI drivers**

**3.2 How can logistics costs be represented?**
- **3.2.1 Fixed/variable**
- **3.2.2 Direct/indirect**
- **3.2.3 Engineered/discretionary**

**3.3 Activity-based costing (ABC)**
- **3.3.1 ABC example**
- **3.3.2 Cost–time profile (CTP)**
- **3.3.3 Cost-to-serve (CTS)**

**3.4 A balanced measurement portfolio**
- **3.4.1 Balanced measures**
- **3.4.2 Supply chain management and the balanced scorecard**
- **3.4.3 Supply chain financial model**

**3.5 Supply chain operations reference model (SCOR)**

**Summary**

**Discussion questions**

**References**

**Suggested further reading**

---

**4 Managing logistics internationally**

**Introduction**

**4.1 Drivers and logistics implications of internationalisation**
- **4.1.1 Logistical implications of internationalisation**
- **4.1.2 Time-to-market**
- **4.1.3 Global consolidation**
- **4.1.4 Risk in international logistics**

**4.2 The tendency towards internationalisation**
- **4.2.1 Focused factories: from geographical to product segmentation**
- **4.2.2 Centralised inventories**
5 Managing the lead-time frontier

Introduction 153

5.1 The role of time in competitive advantage 154
  5.1.1 Time-based competition: definition and concepts 154
  5.1.2 Variety and complexity 155
  5.1.3 Time-based initiatives 156
  5.1.4 Time-based opportunities to add value 157
  5.1.5 Time-based opportunities to reduce cost 159
  5.1.6 Limitations to time-based approaches 161

5.2 P:D ratios and differences 162
  5.2.1 Using time as a performance measure 162
  5.2.2 Using time to measure supply pipeline performance 163
  5.2.3 Consequences when P-time is greater than D-time 165

5.3 Time-based process mapping 168
  5.3.1 Stage 1: Create a task force 169
  5.3.2 Stage 2: Select the process to map 169
  5.3.3 Stage 3: Collect data 170
  5.3.4 Stage 4: Flow chart the process 170
  5.3.5 Stage 5: Distinguish between value-adding and non-value-adding time 170
  5.3.6 Stage 6: Construct the time-based process map 171
  5.3.7 Stage 7: Solution generation 171

5.4 Managing timeliness in the logistics pipeline 176
  5.4.1 Strategies to cope when P-time is greater than D-time 177
  5.4.2 Practices to cope when P-time is greater than D-time 178

5.5 A method for implementing time-based practices 179
  5.5.1 Step 1: Understand your need to change 179
  5.5.2 Step 2: Understand your processes 180
  5.5.3 Step 3: Identify unnecessary process steps and large amounts of wasted time 181
5.5.4 Step 4: Understand the causes of waste 181
5.5.5 Step 5: Change the process 181
5.5.6 Step 6: Review changes 181
5.5.7 Results 182
5.6 When, where and how? 183
Summary 183
Discussion questions 184
References 184
Suggested further reading 184

6 Supply chain planning and control 185
Introduction 185
6.1 The supply chain ‘game plan’ 187
   6.1.1 Planning and control within manufacturing 187
   6.1.2 Managing inventory in the supply chain 193
   6.1.3 Planning and control in retailing 198
   6.1.4 Inter-firm planning and control 201
6.2 Overcoming poor coordination in retail supply chains 203
   6.2.1 Efficient consumer response (ECR) 204
   6.2.2 Collaborative planning, forecasting and replenishment (CPFR) 210
   6.2.3 Vendor-managed inventory (VMI) 214
   6.2.4 Quick response (QR) 217
Summary 218
Discussion questions 219
References 219
Suggested further reading 220

7 Just-in-time and the agile supply chain 221
Introduction 221
7.1 Just-in-time and lean thinking 223
   7.1.1 The just-in-time system 224
   7.1.2 The seven wastes 228
   7.1.3 JIT and material requirements planning 229
   7.1.4 Lean thinking 232
   7.1.5 Application of lean thinking to business processes 234
   7.1.6 Role of lean practices 235
7.2 The concept of agility 236
   7.2.1 Classifying operating environments 241
   7.2.2 Preconditions for successful agile practice 242
   7.2.3 Developing measures that put the end-customer first to improve market sensitivity 246
   7.2.4 Shared goals to improve virtual integration 247
   7.2.5 Boundary spanning S&OP process to improve process integration 248
Summary 249
Discussion questions 250
References 251
Suggested further reading 252
Part Three WORKING TOGETHER

8 Integrating the supply chain

Introduction
8.1 Integration in the supply chain
  8.1.1 Internal integration: function to function
  8.1.2 Inter-company integration: a manual approach
  8.1.3 Electronic integration
8.2 Choosing the right supply relationships
8.3 Partnerships in the supply chain
  8.3.1 Economic justification for partnerships
  8.3.2 Advantages of partnerships
  8.3.3 Disadvantages of partnerships
8.4 Supply base rationalisation
  8.4.1 Supplier management
  8.4.2 Lead suppliers
8.5 Supplier networks
  8.5.1 Supplier associations
  8.5.2 Japanese keiretsu
  8.5.3 Italian districts
  8.5.4 Chinese industrial areas
8.6 Supplier development
  8.6.1 Integrated processes
  8.6.2 Synchronous production
8.7 Implementing strategic partnerships
8.8 Managing supply chain relationships
  8.8.1 Creating closer relationships
  8.8.2 Factors in forming supply chain relationships
Discussion questions
References
Suggested further reading

9 Sourcing and supply management

Introduction
9.1 What does procurement do?
  9.1.1 Drivers of procurement value
9.2 Rationalising the supply base
9.3 Segmenting the supply base
  9.3.1 Preferred suppliers
  9.3.2 Strategic relationships
  9.3.3 Establishing policies per supplier segment
  9.3.4 Vendor rating
  9.3.5 Executive ownership of supply relationships
  9.3.6 Migrating towards customer of choice status
9.4 Procurement technology
9.5 Markers of boardroom value
9.6 What does top procurement talent look like?
Part Four  CHANGING THE FUTURE

10 Logistics future challenges and opportunities  333

Introduction  333
10.1 Changing economics?  334
10.2 Internal alignment  336
10.3 Selecting collaborative opportunities upstream and downstream  340
10.4 Managing with cost-to-serve to support growth and profitability  343
10.5 The supply chain manager of the future  345
10.6 Changing chains  347
Summary  349
Discussion questions  350
References  350
Suggested further reading  350

Index  351

Supporting resources
Visit www.pearsoned.co.uk/harrison to find valuable online resources

For instructors
- Complete, downloadable Instructor’s Manual, containing teaching notes, notes on case studies and teaching tips, objectives and discussion points for each chapter
- Downloadable PowerPoint slides of all figures from the book

For more information please contact your local Pearson Education sales representative or visit www.pearsoned.co.uk/harrison