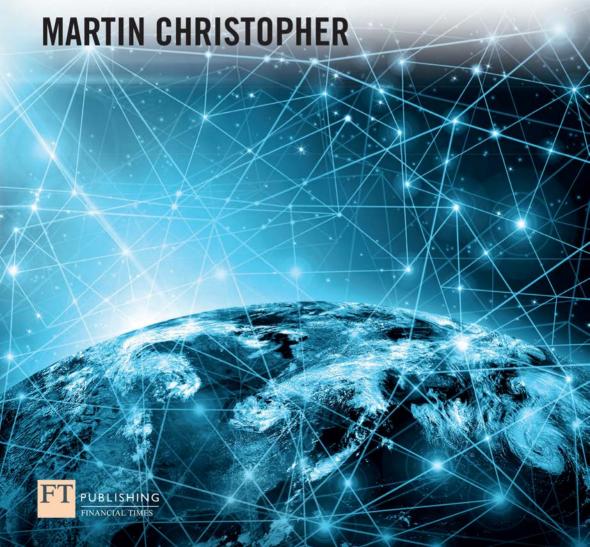
SIXTH EDITION

# LOGISTICS & SUPPLY CHAIN MANAGEMENT



# Praise for Logistics and Supply Chain Management

'Major world events in recent years – ranging from the Covid-19 pandemic, blockage of the Suez Canal and war in Ukraine – have highlighted the critical role played by logistics and supply chain management in the global economy and have brought these subjects to the forefront of public interest. This important book by one of the leading thinkers in the field is essential reading, not just for practitioners and students of these subjects, but for everyone with a keen interest in how logistics activities and supply chain designs shape our everyday lives. The clear text and logical flow of chapters, augmented by a range of interesting and diverse case examples, take the reader on a journey of discovery into how today's supply chains should be structured and managed.'

### Professor John Mangan, Chair in Marine Transport and Logistics, School of Engineering, Newcastle University, UK

'It should not have needed a global pandemic and a war in Europe to raise the importance of building and managing resilient supply chains. The techniques to achieve this are not new; achieving value has always been the goal, and the latest edition of this excellent book lays these out in a clear and compelling manner. It is updated to embrace digitisation, and to address the sustainability imperative, and is set in today's context of volatility and disruption. Procurement and supply chain professionals can learn from this book as part of their continuing professional development.'

### Malcolm Harrison, CEO, Chartered Institute of Procurement and Supply

'Since the first edition was published thirty years ago, this book has become one of the leading texts on logistics and supply chain management, providing guidance both to students and practitioners. The author provides valuable insights into how performance in these vital business processes can be improved and sustained.'

### Yossi Sheffi, Eliza Gray II Professor of Engineering Systems, MIT, USA

'Martin Christopher's latest book captures the entire evolution of logistics and supply chain thinking and associated concepts through to current times, including digitisation, new business models, sustainability, and perspectives on what we can expect to see in the years ahead. It is comprehensive and beautifully illustrated with examples and short case studies. A must-read for students and managers alike.'

### Dr John Gattorna, global supply chain 'thought leader' and author

'Excellence in supply chain management is imperative in today's commercial environment. It is the heartbeat of the enterprise, significantly influencing its success / failure and, when orchestrated correctly, will assure the right balance of growth, cash and cost.

The utopia of supply chain excellence requires transparency, real time visibility, collaboration and digital integration end to end to empower relationships with customers and suppliers, thus facilitating optimal fulfilment and perfect order achievement. In this valuable guide the author addresses how end-to-end processes, systems, tools and competencies must be designed and managed to achieve success in the marketplace.'

Stuart Whiting, Senior Vice President, Logistics and Planning, Global Supply Chain, Schneider Electric

# Logistics and Supply Chain Management

# **Table of Contents**

Front Cover

Half Title

Title Page

Copyright Page

Contents

About the author

**Preface** 

Publisher's acknowledgements

1 Logistics, the supply chain and competitive strategy

Supply chain management is a wider concept than logistics

Competitive advantage

The supply chain becomes the value chain

The mission of logistics management

The supply chain and competitive performance

The changing competitive environment

### 2 Delivering customer value

The marketing and logistics interface

Delivering customer value

What is customer service?

The impact of out-of-stock



Customer service and customer retention

Market-driven supply chains

Defining customer service objectives

Setting customer service priorities

Setting service standards

### 3 Going to market

Distribution channels are value delivery systems

One size doesn't fit all

Innovation in the distribution channel

The omni-channel revolution

The personalised supply chain

### 4 The financial impact of logistics

Logistics and the bottom line

Logistics and the balance sheet

Logistics and shareholder value

Logistics cost analysis

The concept of total cost analysis

Understanding the cost-to-serve

Customer profitability analysis

Direct product profitability

Cost drivers and activity-based costing

### 5 Matching supply and demand

The lead-time gap

Improving visibility of demand

The decoupling point

The supply chain fulcrum

Forecast for capacity, execute against demand



Demand management and planning
Collaborative planning, forecasting and replenishment

### 6 Creating the responsive supply chain

Using the volume/variability matrix

Product 'push' versus demand 'pull'

The Japanese philosophy

The agile supply chain

The foundations of agility

A routemap to responsiveness

### 7 Strategic lead-time management

Time-based competition

The concept of lead-time

Logistics pipeline management

Reducing logistics lead-time

### 8 The synchronous supply chain

The extended enterprise and the virtual supply chain

The role of information in the virtual supply chain

Laying the foundations for synchronisation

'Quick response' logistics

Production strategies for QR

Logistics systems dynamics

### 9 Developing and managing the supply network

The transition from purchasing to strategic sourcing

Segmenting the supply base

Category management

Agile procurement in an uncertain world



### 10 Complexity and the supply chain

The sources of supply chain complexity

The cost of complexity

Product design and supply chain complexity

Mastering complexity

### 11 Managing the global pipeline

The globalisation of supply chains

Gaining visibility in the global pipeline

Financing global supply chains

Organising for global logistics

Thinking global, acting local

Globalisation: the next phase

### 12 The digital supply chain

Supply chain 4.0

Big data and analytics

Artificial intelligence and machine learning

The Internet of Things

Robotics and automation

Blockchains and smart contracts

Control towers and digital twins

The road to digital transformation

### 13 Service logistics

What is a service?

Buying performance

The service dominant logic

The trend to 'servitisation'



Implications of servitisation for logistics

The critical role of capacity

Service supply chain processes

Managing the service supply chain

### 14 Managing risk in the supply chain

Why are supply chains more vulnerable?

Understanding the supply chain risk profile

Managing supply chain risk

Achieving supply chain resilience

### 15 The era of network competition

The new organisational paradigm

Collaboration and trust in the supply chain

Reducing costs through collaborative working

'Co-opetition' - co-operating with competitors

Managing the supply chain as a network

Supply chain orchestration

From 3PL to 4PL

The last word

### 16 Overcoming the barriers to supply chain integration

Creating the logistics vision

The problems with conventional organisations

Developing the logistics organisation

Logistics as a vehicle for change

Benchmarking

### 17 Creating a sustainable supply chain

The triple bottom line



Greenhouse gases and the supply chain

Reducing the transport-intensity of supply chains

Beyond the carbon footprint

Reduce, re-use, re-cycle

The impact of congestion

### 18 The supply chain of the future

Emerging mega-trends

Shifting centres of gravity

Supply chain governance and compliance

The need for adaptability

Seeking structural flexibility

The road ahead

Waste in the supply chain

The New Industrial Revolution

Seven major business transformations

The implications for tomorrow's logistics managers

Index

Back cover