

Textbook  
Series

# Supply Chain Management


Clark Hiddleston

# Supply Chain Management

Clark Hiddleston

Supply Chain Management  
Clark Hiddleston  
ISBN: 978-1-64172-993-2 (Paperback)

© 2023 Larsen & Keller

 Larsen & Keller

Published by Larsen and Keller Education,  
5 Penn Plaza,  
19th Floor,  
New York, NY 10001, USA

### Cataloging-in-Publication Data

Supply chain management / Clark Hiddleston.  
p. cm.

Includes bibliographical references and index.

ISBN 978-1-64172-993-2

1. Business logistics. 2. Industrial management. 3. Logistics. I. Hiddleston, Clark.

HD38.5 .S87 2023

658.7--dc23

This book contains information obtained from authentic and highly regarded sources. All chapters are published with permission under the Creative Commons Attribution Share Alike License or equivalent. A wide variety of references are listed. Permissions and sources are indicated; for detailed attributions, please refer to the permissions page. Reasonable efforts have been made to publish reliable data and information, but the authors, editors and publisher cannot assume any responsibility for the validity of all materials or the consequences of their use.

Trademark Notice: All trademarks used herein are the property of their respective owners. The use of any trademark in this text does not vest in the author or publisher any trademark ownership rights in such trademarks, nor does the use of such trademarks imply any affiliation with or endorsement of this book by such owners.

The publisher's policy is to use permanent paper from mills that operate a sustainable forestry policy. Furthermore, the publisher ensures that the text paper and cover boards used have met acceptable environmental accreditation standards.

Printed in the United States of America.

For more information regarding Larsen and Keller Education and its products, please visit the publisher's website [www.larsen-keller.com](http://www.larsen-keller.com)

# Table of Contents

Preface

IX

<b>Chapter 1</b>	<b>What is Supply Chain Management ?</b>	<b>1</b>
	▪ Supply Chain	7
	▪ Finished Goods Supply Chain	13
	▪ Models of Supply Chains	15
	▪ Supply Chain Operations Reference Model	18
	▪ Supply Chain Strategies	19
	▪ Innovations in Supply Chain Management	32
	▪ Global Supply Chain Management	36
	▪ Goods	40
	▪ Raw Materials	43
	▪ Role of Visibility in Supply Chain Management	44
	▪ Management Accounting in Supply Chains	48
	▪ Work-in-progress Inventory	52
	▪ Value Chain	54
	▪ Information Technology and SCM	57
<b>Chapter 2</b>	<b>Components of Supply Chain Management</b>	<b>59</b>
	▪ Supply Chain Planning	59
	▪ Strategic Sourcing	61
	▪ Procurement	64
	▪ Logistic Operations	72
	▪ Returns Management	76
	▪ Information Sharing	79
	▪ Transportation	81
<b>Chapter 3</b>	<b>Important Aspects of Supply Chain Management</b>	<b>85</b>
	▪ Push-pull Strategy	85
	▪ Supply Chain Optimization	89

▪ Supply Chain Collaboration	90
▪ Supply Chain Diversification	92
▪ Order Processing	93
▪ Supply Chain Sustainability	98
▪ Supply Chain Network	100
▪ Military Supply Chain Management	105
▪ Green Supply Chain Management	106
▪ Supply Chain Engineering	113
▪ Global Supply Chain Finance	117
▪ Material Requirements Planning	123
▪ Supply Chain Security	130
▪ Vertical Integration	132
▪ Horizontal Integration	138
▪ Net Chain Analysis	139
▪ Supply Chain Verification	141
▪ Supply Chain Risk Management	144

<b>Chapter 4</b>	<b>Logistics</b>	<b>150</b>
▪	Logistics Operations in Supply Chain Network	152
▪	International Logistics	153
▪	Contract Logistics	154
▪	Green Logistics	158
▪	Third-party Logistics	160
▪	Reverse Logistics	166
▪	Dispatch Logistics	169
▪	Business Logistics	175
▪	Logistics Automation	185
▪	Logistics Management	188

<b>Chapter 5</b>	<b>Warehousing and Inventory Management</b>	<b>194</b>
▪	Warehouse in Supply Chain Management	194
▪	Warehousing	199
▪	Automated Storage and Retrieval System	203

▪ Warehouse Management System	209
▪ Inventory	211
▪ Vendor Managed Inventory	222
▪ Inventory Management	223

**Permissions**

**Index**

# Index

## A

- Acquisition Process, 66
- Activity-based Costing, 51
- Agile Supply Chain Model, 17, 28
- Asset-utilization Rate, 22-23

## C

- Capital Goods, 41-42, 65
- Case Picking, 96, 210
- Collaboration Arrangement, 34
- Continuous-flow Model, 16-17
- Cooperative Sourcing, 64
- Cost Analysis, 51, 68
- Cost Minimization, 112
- Cost Of Inventory, 86
- Cost Of Sales, 52, 103
- Cost Structure, 31, 81
- Cross Docking, 35
- Custom-configured Model, 17
- Customer Loyalty, 25, 54
- Customer Satisfaction, 3-4, 22, 51, 73-74, 77-78, 83, 107, 115

## D

- Demand Planning, 1, 3, 57, 59, 120, 151
- Demand Variation, 21, 28

## E

- E-commerce, 3, 8, 32, 57, 75-77, 135, 162, 166, 169, 210
- Electronic Data Interchange, 12, 32, 166, 178-179
- Equity Partnership Model, 64

## F

- Finished Goods, 13-14, 52-53, 57, 74-75, 81, 85, 104, 142, 155-156, 176, 182, 188-194, 209, 214, 218, 221, 224-226

## G

- Generic Supply Chain, 8, 20, 22, 24
- Global Sourcing, 39-40

Green Public Procurement, 71

Green Supply Chain Management, 85, 106, 108-109, 113, 166

## I

- Inbound Logistics, 36, 39, 54-55, 73, 76, 189-190
- Industrial Customers, 29, 31
- Industry Framework, 15, 21-22, 25
- Information Flow, 16
- Information Sharing, 59, 79-80, 91
- Intermediate Goods, 42-43, 132
- International Logistics, 38, 150, 153
- Inventory Control, 66, 123-124
- Inventory Planning, 59, 74, 116

## L

- Logistics Cost, 33, 153
- Logistics Performance Index, 38
- Logistics Systems, 7, 158, 177-178, 181

## M

- Management Accounting, 48-51, 216
- Managerial Focus, 15, 21-22
- Market Mediation Costs, 16, 21-22, 25
- Market Research, 62-63, 66
- Material Requirements Planning, 3, 123
- Materials Handling, 75-76, 149, 183-184, 188

## N

Non-economic Goods, 40-41

## O

- Opportunistic Approach, 24, 28
- Order Entry, 27
- Order Processing, 13, 80, 85, 93-94, 190-191, 206
- Outbound Logistics, 24, 36, 40, 55-56, 73, 152, 166, 189
- Overall Equipment Efficiency, 24

## P

Physical Distribution Management, 40, 189

Procurement, 1, 13, 36, 38-39, 55, 57, 59, 61-74, 80, 84, 89, 99, 103, 105-106, 108, 110, 142, 156-158, 161, 184, 191, 222-223  
Product Development, 22, 26, 56, 75, 138  
Product Lifecycle, 21, 44-45  
Product Lifecycle Management, 44-45  
Production Network, 18  
Push And Pull Strategy, 87-88

**R**

Regulatory Compliance, 11, 18, 78  
Returns Management, 59, 76-79, 167

**S**

Safety Stock, 34, 74, 213  
Sales And Operations Planning, 26, 59  
Sales Forecasting, 35  
Shared Services Model, 64, 67-68  
Strategic Sourcing, 2, 59, 61-63, 65, 84, 151  
Supplier Identification, 63, 68  
Supply Chain Controlling, 48

Supply Chain Diversification, 85, 92-93  
Supply Chain Operations Reference Model, 18  
Supply Chain Planning, 2, 33, 59-61, 91  
Supply Chain Roadmap, 20, 24, 31  
Supply Chain Visibility, 2-3, 44-48, 101, 151, 163  
Support Activities, 36, 55-56

**V**

Value Chain, 20, 23, 36, 48, 54-56, 89, 113, 138  
Value Proposition, 15-16, 20  
Vender Managed Inventory, 32  
Vertical Integration, 37, 132-133, 135-139  
Vested Outsourcing, 63-64

**W**

Warehouse Management Systems, 3, 75, 94, 116, 210-211  
Wave Picking, 95, 210  
Work-in-process Inventory, 182

**Z**

Zone Picking Method, 95

