

CONTENTS

Foreword ix

Acknowledgements xii

01 Introduction: The nature of logistics 1

Introduction 1

Evolution from logistics to value chains 1

Logistics' role in the supply chain: The hierarchy of cost trade-offs 7

The role of logistics in economic utility 9

The evolution of logistics' economic utility 10

Drivers that shaped the development of logistics 12

Trends shaping the future of logistics 14

Conclusion 18

References 20

02 The nature of strategy 22

Introduction 22

Obstacles to strategic thinking 23

The drivers of successful strategic thinking 25

Characteristics of strategic goals 31

Intelligence and decision-making 33

Key questions in the strategic process 38

Challenges to the strategic process in a developing country context 47

Conclusion 50

References 50

03 Logistics strategy 53

Introduction 53

How logistics supports business model implementation 54

The importance of business process integration to support logistics strategy implementation 59

Logistics strategies 61

Exogenous drivers that impact logistics' strategic responses 69

Developing country perspectives 73

Conclusion 73

References 74

04 The instrumentation of business logistics 76

Introduction 76

Essential components of logistics cost data 77

Limitations of corporate management information systems for logistics costs data 79

Methods to address scarcity of logistics costs data within organizations 81

The hierarchy of information systems 86

Value management in logistics: From shared data to strategic decision-making 89

The hierarchical nature of customer value creation methods 103

Cost data challenges in the developing world 104

Conclusion 105

References 106

05 The macrologistics imperative 109

Introduction 109

Macrologistics: An emerging discipline 110

Measurement approaches for macrologistics 114

The macroeconomic supply chain defined 116

Role-players in the macroeconomic supply chain 122

Solutions for large-scale societal challenges: Application of macrologistics principles 130

Conclusion 134

Note 136

References 136

06 The instrumentation of macrologistics 138

Introduction 138

GDP-in-motion 139

Freight-flow measurement 140

Common obstacles in the creation of national accounts for logistics in developing countries 152

Results of demand-side freight-flow models in the developing world 155

Adding logistics costs to freight-flow activities	163
Results of the logistics costs model for developing countries	165
Adding externality costs	166
Conclusion	168
Notes	169
References	170

07 Macrologistics strategy 173

Introduction	173
Macrologistics strategic decision-making process	174
Institutional challenges hampering the macrologistics decision-making process	175
Status quo analysis: Understanding current policies and service gaps relating to the freight sector	177
Analysis: Enabling macroeconomic demand management	178
Consultation: Meeting the needs of the users of the freight system	180
Macrologistics strategy: Strategic categories relating to sustainable development	188
Macrologistics strategy: Developing country case studies	190
Policy directives	196
Implementation: Infrastructure provision and management	199
Measurement and benchmarking	201
Integration with macroeconomic planning	205
Conclusion	206
Notes	206
References	206

08 Strategy implementation and change management 212

Introduction	212
Framework for strategy implementation	213
Programme and project management	216
Change management	222
Communication	229
Successful staffing	231
Structure	232
People	235
Challenges to macrologistics strategy implementation in developing countries	245
Conclusion	247

Notes 247

References 248

09 Logistics and the future: From dematerialization to degrowth 254

Introduction 254

The sustainability imperative 255

Dematerialization and the Fourth Industrial Revolution 260

Logistics 4.0 263

Dematerialization in the developing world 268

From dematerialization to degrowth 269

The fourth pillar of sustainability 272

Logistics and the future: Key short-term focus areas 275

Logistics and the future: Adapting to climate change 277

Conclusion 286

Notes 287

References 287

Index 295