The Strategy-Driven Supply Chain

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Integrating strategy, finance and supply chain for a competitive edge

Bram DeSmet

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To my beloved parents,
for their dedication to my brothers and me

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ABOUT THE AUTHOR

Dr Bram DeSmet is Adjunct Professor at the Vlerick Business School, where he is part of the competence center of supply chain and operations, and a visiting professor for the Beijing MBA Program at Peking University, where he teaches statistics and business analytics. Bram is also the CEO of Solventure, a company that helps companies to turn their supply chains into a competitive edge. Prior to that, Bram was a Partner in Strategy, Supply Chain and Operations at Möbius Research and Consulting.

Bram's research interests are in the domain of strategy, supply chain and advanced analytics. He combines academic research with practical applications. He obtained his PhD in the topic of multi-echelon inventory optimization and applied it at companies including Agfa-Gevaert and Daikin Europe. Within Solventure he is developing a new forecasting solution based on the use of leading macro-economic indicators.

With this book Bram hopes to contribute to the field of supply chain strategy, by combining the fields of strategy, supply chain and finance. Bram appreciates your thoughts and feedback. He can easily be reached via his contact page on LinkedIn.

FOREWORD

Several global megatrends are driving business disruptions, challenges and opportunities for companies. Changing demographics encompassing a move towards urbanization with a surging middle class concentrated in urban areas and ageing populations, energy and natural resources availability, sustainability and regulations, acceleration of digitalization and the recent COVID-19 pandemic – these all create challenges and opportunities for companies to create breakthroughs through new business models with the objective to add value to people, shareholders and their communities based on a new set of principles of sustainable business performance and results. We live in a new world of engagement and collaboration linked to a smart, connected economic ecosystem-driven economy where everything around us is changing exponentially. In the future, a company won't just compete against other companies. Every company is and will be part of an economic ecosystem, and success will depend on how they can create or be part of a strong and sustainable economic ecosystem that is able to compete and win in the marketplace.

Sustainability, new digital business models accelerating future growth, strong business performance and results based on a strong set of foundations of liquidity and profitability are top priorities for companies, their leadership and employees to create long-lasting shareholder value.

Customer expectations have changed over the last years and will further change in future. Customers now want to buy products or services that are more personalized and in different ways tailor-made to their needs and linked to their personal preferences and values. Sustainability, reliability and responsiveness, and agility are more important than ever before and focusing just on scale, efficiency and cost management will not deliver the desired outcome. Many companies are stuck in their old thinking, mindset and behavior but expecting to accelerate on change without a deeper understanding of what enables the change to be successful and sustainable. For many years strategic supply chain management has not been understood well enough, and supply chain professionals are battling to earn their seat at the C- Suite table as a business partner of choice. We have entered a 'perfect storm' in the life cycle of supply chain management and the recent COVID-

19 pandemic will accelerate on the fundamental shift in thinking, mindset and behavior which is required to transform companies to be ready to compete and to win in the new world of the smart, connected economic ecosystem.

Many companies have realized the importance of supply chain transformation in order to generate sustainable business performance and results. Some companies have successfully transformed their supply chain capabilities and some other companies have failed to transform them because of their missing strategic approach and appropriate planning prior to starting their transformation programmes.

Companies are trying to understand the most important and critical levers to drive successful and sustainable supply chain transformations to generate tangible and measurable business results and shareholder value as measured by the return on capital employed, which is the ultimate outcome. To uncover these levers, it will help companies to position themselves for the future while managing the current market dynamics and financial expectations of their shareholders.

Business and supply chain transformations are a means to an end, with the end being improved business performance and results leading to improved shareholder value as measured by return on capital. Great companies out-think, out-perform and out-compete the market by investing in building better supply chain capabilities than their competitors in a consistent way.

The Strategy Driven Supply Chain by Dr Bram DeSmet provides a practical framework for how to connect the value proposition, supply chain strategy and the business strategy with different customers in the marketplace. The reader will understand through Dr DeSmets's framework that any value proposition, supply chain and business strategy is a deliberate choice and route to generate customer value and shareholder value as measured by the return on capital employed. This framework provides an overview of the three elements of service, cost and cash in the supply chain triangle, analyses the different customer buying behaviours in the marketplace and thereafter connects them with the right value proposition, supply chain strategy, business strategy, performance measurement and management.

Prof Dr DeSmet explains why companies struggle to balance the triangle of service, cost and cash in their old traditional thinking, mindset and behaviour. Different value propositions lead to different strategies to generate value, but require deliberate choices, trade-offs and a new level of discipline to execute. The book refers to the well-known Treacy and Wiersema framework of three defined strategic archetypes: operational excellence, customer intimacy and product leadership. A practical solution set is provided for benchmarking and target setting, which are important elements of any chosen supply chain and business strategy. This book provides valuable information and great insights into strategic supply chain management, and covers all necessary components, including understanding the different customer buying behaviours in the marketplace, aligning them with the right value proposition, setting the right supply chain strategy and connecting them to the right performance target levels within the process and financial metrics with the overall objective to make it to the chosen business strategy to generate value for customers and shareholders. The author provides the foundation and a framework for the business C-suite and any supply chain professionals as a solution to keep up with ever-changing threats and business disruptions. In this new age of global interconnectivity, collaboration and smart connected economic ecosystem, it is necessary to provide business executives and supply chain practitioners, both professionals and students, with valuable insights and state-of-the art knowledge on the frontier of supply chain management. Is strategic supply chain management part of your business, or is strategic supply chain management your business? We have been waiting to answer this question for a very long time. I hope you enjoy reading and learning as much as I did.

Frank Vorrath
Vice President, Service Delivery Team, EMEA & APAC, Gartner Inc
(former Vice President, Global Supply Chain, Johnson Controls)
November 2020

FOREWORD

Supply chain management as an idea is still relatively new and it is only in recent years that companies have started to give it the attention that it deserves. However, because organizations have traditionally been structured and managed on a vertical and functional basis they have often been unable to embrace the essentially cross-functional and integrative focus that effective supply chain management demands. As a result, opportunities for profit improvement have been missed and customer satisfaction and hence retention has not been maximized.

Now, however, many businesses are recognizing the strategic impact of supply chain decisions. In particular, they understand that the supply chain and the way in which it is managed are directly connected to their performance in the marketplace. The ability to serve customers to ever higher levels but at less cost has become a critical source of competitive advantage in most industries. At the same time, the effect of supply chain strategy on the profit and loss account and the balance sheet is much more clearly understood.

There is growing evidence that companies who are able to adopt an integrative approach to supply chain management out-perform those of their competitors with lesser capabilities in this respect. Hence the importance of the central message of this book: the need to take a holistic approach to formulating supply chain strategy. Bram DeSmet's powerful framework – the supply chain triangle – underpins this wider view of how a business should be run. Simple though the idea may be, few companies have found a way to manage service, cost and cash as three inter-related elements, all of which are impacted by supply chain strategy and performance.

In this new book *The Strategy-Driven Supply Chain* Bram DeSmet builds on the ground-breaking ideas introduced in his first book *Supply Chain Strategy and Financial Metrics*. The linkage between success in the marketplace and the way in which the supply chain is designed and managed are highlighted and supported by detailed case examples.

This new book, like the first, will certainly have a place on my bookshelf and will definitely be one that I recommend to others who seek to improve supply chain performance.

Martin Christopher, Emeritus Professor of Marketing and Logistics,
Cranfield University
November 2020

PREFACE

When young people passionately ask me 'How can I become a supply chain expert?', I often tell the following story. You start by taking courses in supply chain. Once you have completed the supply chain courses, you'll need to start reading supply chain books. Once you have read all the supply chain books, it is time to write your own book.

Writing a book forces you to structure your mind. That is an intense but rewarding process. Rewarding, as it allows you to expose your thoughts to other people – people that have more experience, have a different background, are better in getting to the essence, are completely new to the topic. These people will start asking questions, good questions. They will make suggestions, excellent suggestions. So, they will make you smarter, a lot smarter. It will help you to deepen your insight, in the topic you were already so passionate about.

So around five years ago, I started working on my first book, *Supply Chain Strategy and Financial Metrics*. I forced my brain to bring structure to what I had learned on supply chain in the previous 15 years. When the last word was written some two years later I had no idea what to expect, or maybe I did, but I didn't want to take it for granted.

The book brought me so many good things. Intense discussions with people in writing the book. Many training courses, presentations, webinars and blogs, which triggered so many smart questions, remarks and suggestions. I used the concepts when discussing supply chain with companies, when working with clients. Many of them felt inspired, got energized and started their sometimes long and winding supply chain journey.

Receiving that much knowledge comes with an obligation. The obligation to return what you've learned. Which is exactly what I hope this second book will do. So, I forced my brain to structure what I have learned from the many interactions since the first book was published. This second book builds on the fundaments of the first, most notably the supply chain triangle, how it links to finance and what is the impact of strategy. In this book I have strengthened those fundaments and built a bigger house on them. The house of the strategy-driven supply chain. I literally can't wait to hear what you think of it, to hear your questions and your remarks.

I feel lucky that supply chain crossed my path some 20 years ago. I still feel like a novice, and, as we discuss in this book, it feels as if we're still defining what supply chain management is. But, oh boy, if this is only the start, I'm so curious for what is still to come. So, let's explore that together. Let's start with this book and your thoughts, and let's all push the boundaries of the supply chain profession together.

ACKNOWLEDGEMENTS

A first and special word of thanks goes to Frank Vorrath. Some four years ago, when Frank was still with Johnson Controls as the VP of Global Supply Chain, he was one of the first senior executives that saw the potential of this work. Ever since, Frank has been a big supporter and a great person to work with on so many interactions. In his current role at Gartner as the Vice President for Supply Chain Delivery for Emea and Apac, Frank is developing supply chain thinking amongst senior supply chain leaders at leading manufacturing and retail companies. Frank, thank you for sharing your knowledge and your passion. Your belief has made me believe we can make a difference!

I want to thank the many people that have contributed to this new book. They are the ones that are doing it in real life. I'm grateful we have been able to work on some of it together and we could share some stories in this book: Annick Van Driessen, Director Supply Chain Operations, Indaver; Dr Dirk Holbach, Chief Supply Chain Officer, Laundry & Homecare at Henkel; Ruediger Fuchs, Head of Corporate Supply Chain, Bahlsen and former Senior Director Operating Model Innovation, Lego®; André Céron, Logistics Director, Colruyt Group; Johan Heyman, VP Organizational Excellence, Barco

I also want to thank Martijn Lofvers, owner of Supply Chain Media and editor of *Supply Chain Magazine*. Martijn has been a big supporter of the supply chain triangle. Thank you Martijn for the sparring and the out-of-the-box ideas. Some of them, like linking the book to a book website, came from your brain. Thank you for moving the boundaries of supply chain as a profession. You are a lighthouse in the world of supply chain.

I want to thank Prof Martin Christopher. When I entered the field of supply chain some 20 years ago, I learned by reading your books and articles. *Logistics and Supply Chain Management* has become a classic and an icon in the meantime. It's an honour to learn from the best and have this book introduced by you as a leading author in the supply chain field!

A special thanks to André Céron, Martine Pauwels, Erik Pappaerts, Jurgen Belsack, Peter Lanoizele and Dirk Leemans from Colruyt Group. Some eight years ago we started a journey called 'the supply chain academy'.

As logistics directors from the different retail brands in the Colruyt Group, you had the vision to invest in building supply chain knowledge and capabilities. Colruyt Group has applied many of the concepts developed in the book through the training. It has changed Colruyt as a company, how the executive teams think and work. It has been a true privilege to contribute to that and see that change happening from the front row. As the retail world keeps changing at a fast pace, the job is not finished but just starting. However, I believe Colruyt Group is much better equipped to tackle the strategic supply chain challenges going forward.

I also want to thank some supporters in the Netherlands. Prof Dr Jack Van Der Veen from Nyenrode Business University, who with Michel Van Buren runs an excellent supply chain club called the Supply Chain Executive Leadership Platform. I was lucky to present to that group when working on my first book and to maintain ad hoc interactions afterwards. This club is also moving the boundaries of supply chain thinking.

Let me thank my colleagues at the Vlerick Business School, especially Prof Dr Ann Vereecke, for the sparring, and for the opportunity to teach these topics in the supply chain courses at Vlerick.

Let me thank all my colleagues at Solventure. Working with a group of talented and passionate people is a privilege. Many of you dream in triangles. We make jokes about triangles. I learn from all of you daily. Thanks for staying with me if I'm too conceptual, impatient or overly ambitious. We are all in this together!

Let me finally thank my wife Leen, my kids Matties, Julie and Emiel. I've been writing at home, but equally been absent. Dads should have fun with their kids instead of having a serious expression and be writing books. Husbands should help with practical stuff in the house instead of being conceptual. I promise I'll do the dishes for the coming two weeks!

I hope that all those that have contributed share some of my pride in being able to present this result. It is our shared result. It may have passed through my brain, but it is based on the triggers, the questions, the thoughts, the examples and the support of each one of you.

Thank you all so much.

Bram

LIST OF ABBREVIATIONS

AI	artificial intelligence
AP	accounts payable
AR	accounts receivable
ATO	assemble to order
BOM	bill of material
CA	current assets
CAPEX	capital expenditure
CCC	cash conversion cycle
CL	current liabilities
CMSO	chief marketing and sales officer
COGS	cost of goods sold
COO	chief operating officer
CSCO	chief supply chain officer
CTO	configure to order
DCs	distribution centres
D/E	debt over equity
DIOH	days of inventory on hand
dlh	direct labour hour
DPO	days of payables outstanding
DSO	days of sales outstanding
EBIT	earnings before interest and taxes
EBITDA	earnings before interest, taxes, depreciation and amortization
EOL	end of life
EOQ	economic order quantity
EPS	earnings per share
ETO	engineer to order
FA	fixed assets
FCF	free cash flow
FMCG	fast-moving consumer goods
FP&A	financial planning and analysis
FPY	first pass yield
IBP	integrated business planning
IoT	Internet of Things

IVP&E	integrated value planning and execution
KPI	key performance indicator
LP	linear programming
M&A	mergers and acquisitions
MOQ	minimum order quantity
MPS	master production schedule
MRO	maintenance, repair and overhaul
MRP	material requirements planning
MTO	make to order
MTS	make to stock
MVV	mission, vision and values
net PPE	net property, plant and equipment
NOPAT	net operating profit after tax
NPI	new product introductions
OEE	original equipment efficiency
opex	operational excellence (in the context of strategy)
OPEX	operational expense (in the context of financial planning and analysis)
OTIF	on-time, in-full
P&L	profit and loss
PESTEL	political, economic, social, technological, environmental and legal
R&D	research and development
RCCP	rough cut capacity plan
ROA	return on assets
ROCE	return on capital employed
ROE,	return on equity
S&OE	sales and operations execution
S&OP	sales and operations planning
SCOR	supply chain operations reference model
SG&A	selling, general and administrative
SKU	stock keeping unit
SWOT	strengths, weaknesses, opportunities and threats
VMI	vendor-managed inventory
WACC	weighted average cost of capital
WIP	work in progress