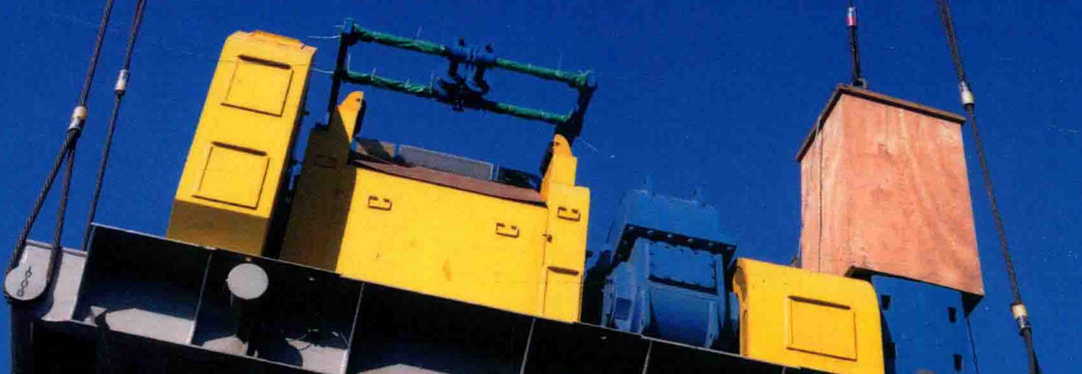
OXFORD

Supply Chain Management

A Logistics Approach



HORN

BADENHORST-WEISS | COOK

HECKROODT | HOWELL | PHUME | STRYDOM

OXFORD UNIVERSITY PRESS SOUTHERN AFRICA 100 Years

Supply Chain Management

A Logistics Approach

HORN

BADENHORST-WEISS | COOK

HECKROODT | HOWELL | PHUME | STRYDOM

OXFORD

UNIVERSITY PRESS

SOUTHERN AFRICA

OXFORD
UNIVERSITY PRESS

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide. Oxford is a registered trade mark of Oxford University Press in the UK and in certain other countries.

Published in South Africa by
Oxford University Press Southern Africa (Pty) Limited

Vasco Boulevard, Goodwood, N1 City, Cape Town, South Africa, 7460
P O Box 12119, N1 City, Cape Town, South Africa, 7463

First published 2014

Supply Chain Management

ISBN 978 0 199 0553 551

Typeset in Utopia Std 9.5pt on 12pt
Printed on 75gsm woodfree paper

Acknowledgements
Publishing manager: Alida Terblanche

Publisher: Janine Loedolff

Project manager: Nicola van Rhyn
Editor: Angela Voges
Designer: Shaun Andrews
Permissions researcher: Felicity Chetwin
Typesetter: Orchard Publishing
Index: Language Mechanics
Cover image: iStock
Printed and bound by: Castle Graphics South (Pty) Ltd.

Supply Chain Management

A Logistics Approach

CONTENTS IN BRIEF

Table of contents

PART 1

Inbound supply chain

CHAPTER 1

Introduction to the concepts 'supply chain management' and 'logistics'

After reading this chapter, you should be able to:

1. Define and explain the concepts 'supply chain management' and 'logistics'.
2. Explain the interrelationship between the two concepts.
3. Differentiate between different supply chain concepts such as profit, competitive advantage, in- and outbound, up- and downstream.
4. Outline the different components, stages or entities of a supply chain.
5. Explain the general steps in a logistics process.
6. Outline the role of logistics in generating value and utility and creating wealth.
7. Explain the different supply chain performance drivers.
8. Discuss the concept 'network design' as applicable to supply chain management.

WARS AND MARKETS ARE WON AND LOST THROUGH LOGISTICS STRENGTHS AND CAPABILITIES – OR THE LACK THEREOF

Although logistics and supply chain management are not new ideas, it is only in the recent past that business organisations have come to recognise the vital role that these two concepts play in achieving competitive advantages. Martin Christopher (2011, p. 3) argues that 'from the building of the pyramids to the relief of hunger in Africa, the principles underpinning the effective flow of materials and information to meet the requirements of customers have altered little'. He explains as follows:

Throughout the history of mankind wars have been won and lost through logistics strengths and capabilities – or the lack of them. It has been argued that the defeat of the British in the American War of Independence can largely be attributed to logistics failure. The British Army in America depended almost entirely upon Britain for supplies of food and equipment. For the first six years of the war the administration of these vital supplies was totally inadequate, affecting the course of operations and the morale of the troops. An organisation capable of supplying the army was not developed until 1781 and by then it was too late. In the Second World War logistics also played a major role, with battles being won or lost by quartermasters. (Christopher 2011, p. 3)

These same principles of logistics strengths and capabilities – or the lack thereof – apply to the modern business environment. Materials, parts and finished goods have to be procured, moved and stored (logistics) efficiently and effectively in well-co-ordinated distribution networks (supply chain management) to ensure competitiveness and maximum profit.

Source: Adapted from Christopher (2005, p. 3)

1.1 Introduction

We do not always appreciate what lies behind the procurement, production, transportation and other activities involved in ensuring that our orders for a new car, a smartphone or clothes are available at the exact time at, and place in, which we require the products. It is only when the products that we normally consume, or those in the special offers advertised on television or in newspapers, are not available when we want to buy them that we realise that something is wrong with the supply of the required products. We then get frustrated and complain about bad service delivery. Consumers do not like to hear that a product is not available, a supplier is out of stock, or a product that they have paid for will be delivered late.

This is where the concepts 'supply chain management' (SCM) and 'logistics' come in. Both concepts are part of our daily lives without us always being aware of them. For example, we want to get from our homes to the university or the local supermarket as quickly and cheaply as possible. We also want cold drinks to be available at vending machines, fuel to be available at filling stations, and our favourite cheeseburger to be available and of good quality at the food outlet at which we order it. These are all examples of logistics: the physical movement of products and services in the shortest time period and at the lowest possible cost from the point of origin to the point of consumption, where they need to be available when required by consumers. This requires a team of supply chain partners to work together as an integrated and co-ordinated unit, which is essentially what supply chain management is.

The aim of this chapter is to introduce the reader to the two important concepts – supply chain management and logistics – and a number of related concepts. Supply chain management and logistics are interrelated concepts and play a major role in making business organisations more competitive and more profitable in today's highly competitive global market. This explains why the two concepts have become growing fields of business study in recent years. However, before we define and discuss the two concepts in greater detail, it is necessary to understand some related background concepts. We start with the concepts 'profit' and 'competitive advantage'.

1.2 Profit and competitive advantage

The main reason why entrepreneurs establish, operate and manage business organisations is to earn and maximise profit. Profit is calculated as the difference between the revenue generated by a business organisation and the operating costs or expenditure that the business organisation incurs in generating the revenue. The formula is written as follows:

$$\text{profit} = \text{revenue (price} \times \text{quantity sold)} - \text{cost}$$

This formula indicates that revenue is calculated as the price of a product or service sold multiplied by the quantity of the goods and services sold. For example, the amount we spend at a retail chain store – in other words, our expenditure – is calculated as the quantity of chocolate bars, cans of cold drink, packets of chips and packets of chewing gum we buy multiplied by the price of each item. The till slip shows our expenditure – which, of course, also tells the store manager what revenue his or her retail store has generated from our spending at the retail store. In other words, our expenditure at the retail store is equal to the revenue (income) that the store receives from us as customers.

The operating costs incurred include, among others, the salaries and wages paid to employees, payments for the transport of materials and goods, security, as well as payments for electricity, water and municipal taxes. To ensure that the profit is as large as possible, a business needs to maximise its revenue and minimise its operating costs. Business organisations increase their revenue by increasing their sales and market share. They therefore need (and want) to sell more of their products to more customers. This is true for all types of business, whether they are motor vehicle manufacturers, restaurants, express courier service providers, pharmacies or supermarkets.

From all the adverts that business organisations place in newspapers and on television