

**BEST PRACTICES IN SUPPLY CHAIN MANAGEMENT AT
SELECTED RETAIL OUTLETS IN THE NELSON MANDELA
METROPOLE**

BY

RODIN INGLIS (20410621)

AND

CRAIG MNGOMEZULU (220017794)

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RETAIL OUTLETS IN THE NELSON MANDELA METROPOLE

By

Rodin Inglis (20410621)

And

Craig Mngomezulu (220017794)

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Study leader: Dr. N Oosthuizen

DECLARATION

We, Rodin Inglis (20410621) and Craig Mngomezulu (220017794), hereby declare that:

- The content of this treatise entitled “Best practices in Supply Chain Management at selected retail outlets in the Nelson Mandela Metropole” is our own work;
- All sources used or quoted, have been acknowledged and documented by means of references; and
- This treatise has not been submitted for assessment or completion of any postgraduate qualification at any other tertiary institution.

.....
Rodin Inglis (20410621)

.....
Craig Mngomezulu (220017794)

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- To God almighty for giving us strength and courage to complete our Honours year.

ABSTRACT

In the past businesses did not realise the importance of Supply Chain Management (SCM) but there is now a much greater understanding of the role that SCM play in creating a competitive advantage. Literature suggests a number of SCM practices but few that are more commonly used than others such as employing supply chain technology, cross-docking, efficient transportation, facilitation and inventory, lean manufacturing, just-in-time inventory system, establishing alliances with key suppliers and the total cost of ownership practice. The purpose of this study was to investigate what the best SCM practices in the retail industry are in order to provide guidelines to businesses as to how to effectively practice SCM.

The study followed qualitative research approach which allowed researchers to explore the field of SCM. A sample frame was listed based on the population from which researchers drew a sample using the non-probability sampling techniques of convenience, snowball and judgemental sampling. Primary data was collected using a semi-structured interview schedule on a sample of five middle management level individuals and senior buyers.

Biographical profiles of participants interviewed were presented as case studies. Based on the content analysis of the five semi-structured interviews four main themes were identified namely effective SCM practices, SCM challenges, benefits that arise from SCM practices and costs associated with improving SCM practices.

The study identified effective SCM practices in the Nelson Mandela Metropole and provided evidence on the challenges faced by SCM and benefits that arise from effective SCM practices. Recommendations were suggested on how to counter the challenges that SCM poses.

Researchers conclude that SCM is important for attaining the twin goals of efficiency and effectiveness in the retail value chain, which can result in a competitive advantage and higher profits for individual businesses.

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CHAPTER 1 INTRODUCTION TO SUPPLY CHAIN MANAGEMENT

1.1 INTRODUCTION AND BACKGROUND

Emphasis on acquiring limited resources during World War Two lead to a growth in purchasing. Monczka, Handfield, Giunipero and Patterson (2015:23) state that only nine colleges offered courses related to purchasing in 1933. Monczka *et al.* (2015:25) state that by 1945 this number had increased to 49 colleges and the membership of the National Association of Purchasing Agents increased from 3 400 in 1934 to 5 500 in 1940 to 9 400 in the autumn of 1945.

The 1980s to late 90s marked a global era where corporate competition had become increasingly intense, the product life cycle became shorter with the rapid growth of technology and the world wide web got established which made global networking extremely easy. This period saw corporate leaders pay more attention to the flow of goods, service funds and information from suppliers to the end customer which ultimately resulted in the emergence of SCM (Monczka *et al.*, 2015:25).

Most of the elements in SCM were detached and managed according to the tasks at hand (Purchasing and supply chain management, 2010). Agus and Hajinoor (2012:95) add that it was only in the 1980's when organisations began realising the benefits that could be derived if all the different organisations within an industry would collaborate and work in cohesion. Practitioners, academics and consultants have been using the term SCM to describe this emerging management paradigm, with consensus being reached that SCM is an integral part of gaining marketplace leadership within the new world of exploding technology and virtual companies (Ross, 2013:3). Zhang and Wu (2013:279) add that there is still no clear definition of what the concept means, how it applies to business, what the benefits are and how it is implemented exactly.

Mangan, Lalwani and Lalwani (2016:10) describe a supply chain as a network of organisations involved, through upward and downward linkages, in different processes and activities that produce value in the form of products and services in the hands of the ultimate customer. Mangan *et al.* (2016:10) add that this network is used to gain a competitive advantage and increase profits of a business.

A number of notions are used in the study, and because various definitions can be found in literature, central concepts are clarified in the following section before proceeding to the problem statement of the study.

The subsequent section clarifies the concepts used in this study.

1.2 CONCEPT CLARIFICATION

The following concepts will be clarified in the section below, Supply Chain Management, Just-in-Time inventory system, Cross Docking, Lean Manufacturing, Total Cost of Ownership, Retailers, Sourcing and Purchasing.

1.2.1 Supply chain management (SCM)

Christopher (2016:3) assert that SCM is the management of upstream and downstream relationships with suppliers and customers in order to deliver superior customer value at less cost to the supply chain as a whole. Stadlers (2015:7) describe SCM as the oversight of materials, information, and finances as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer. Mangan *et al.* (2016:11) add that the purpose of SCM is to create value, enhance efficiency and satisfy customers. According to Ross (2016:13) however, SCM is the relationships governing the rights and behaviours of producers and partners. Rouse and Daniel (2017) and Benton (2010:4) accentuate that SCM is the broad range of activities required to plan, control and execute a product's flow, from acquiring raw materials and production through distribution to the final customer, in the most cost-effective way possible. Sanders (2012:3) concurs by describing SCM as the network of all the entities involved in producing and delivering a finished product to the final customer which includes sourcing raw materials, manufacturing, producing, and assembling the products, storing goods in warehouses, order entry and tracking, distribution, and delivery to the final consumer. In addition, Monczka *et al.* (2015:8) add that SCM is a strategic approach to planning for and acquiring the business' current and future needs through effectively managing the supply base, utilising a process orientation in conjunction with cross-functional teams to achieve the organisational mission.

For the purpose of this study SCM is regarded as the process of how products are moved through the various stages to the final customer. This process can be altered according to the needs of the customer and the capabilities of the business. Also understood is that close management of the SCM process will allow management to identify the simplified route to deliver a product to the final customer. This will result in improved efficiencies and a potential competitive advantage.

1.2.2 Just-in-Time (JIT) inventory system

Matei (2016:92) describe the "Just in Time" inventory system as a management philosophy aimed at improving efficiency and quality in a reduced time period. Time reduction occurs when product manufacturing of similar sizes and formats are produced by flexible departments, also JIT is closely related to the management of inventory which must respond to quality and delivery in time (Matei, 2016:92).

For the purpose of this study the JIT inventory system will refer to the inventory orders that arrive just in time when it is needed whether it may be raw materials or finished goods.

1.2.3 Cross Docking

Mohtashami (2015:221) defines cross docking as the process where products are received into a warehouse and consolidated where it will be loaded out or delivered to its final destination. It is key as not all retailers have the capabilities or efficiencies to deliver different products to a customer cost effectively.

For the purpose of this study, cross docking entails distribution centers that retailers use to receive and consolidate products, then deliver it to the final destination where it is available for purchase by customers.

1.2.4 Lean Manufacturing

According to Badenhorst-Weiss, Cilliers, Dlamini and Ambe (2018:15) lean manufacturing aims at adding value to operations management where all elements of waste have been eliminated. Modi and Thakkar (2014:339) add that lean

manufacturing is the solution to improve businesses quality and increase profits for manufacturing as it is now one of the most powerful manufacturing control systems in the current trend. Lean manufacturing provides tools and strategies which can help in identification of waste, reduction or elimination of waste, environmental pollution control, manufacturing product with better quality, lowering the product cost, reducing human effort and reducing product manufacturing time (Badenhorst-Weiss *et al.*, 2018:15; Modi &Thakkar, 2014:339).

For the purpose of this study Lean Manufacturing entails efficient inventory management in order to eliminate waste and increase profits by using all resources in the best way possible.

1.2.5 Total Cost of Ownership (TCO)

Macharis, Lebeau, Van Mierlo and Lebeau (2013:2) describe the total cost of ownership as a purchasing tool that is aimed at understanding the true cost of buying a particular good or service from a particular supplier. In addition, Badenhorst-Weiss *et al.*, (2018:15) assert that TCO penetrates the supply chain and ensures that the cost of buying, using and disposing of products is improved for end customer.

For the purpose of this study TCO will entail the purchasing of the supplier's business in order to supply one self and reduce cost. TCO can also relate to establishing relationships with key suppliers

1.2.6 Retailers

Juneja (2018) describe retailing as a process where the retailer sells the goods directly to the end-user for own consumption in small quantities.

1.2.7 Sourcing

Horn, Badenhorst-Weiss, Cook, Heckroodt, Howell, Phume and Strydom (2015:17) state that sourcing refers to the process of making strategic decisions and choices about who will perform specific supply chain activities and functions such as productions, storage, transportation and information management. In addition,

Ketchen, Crook and Craighead (2014:165) indicate that strategic sourcing refers to making acquisition decisions with the intent of creating value and achieving a competitive advantage.

For the purpose of this study, researchers will refer to sourcing as strategic acquisition decisions in order to cut costs and create value.

1.2.8 Purchasing

Sanders (2012:153) describe purchasing as the process of buying goods and services. The term purchasing is often used as the title of a business function within businesses (Sanders, 2012:153). Furthermore, Knoppen and Sáenz (2015:124) insist that purchasing must be acknowledged as a key decision maker that impacts the enhancement of value creation of the business whilst minimising cost.

For the purpose of this study researchers will refer to purchasing as an attempt by businesses to acquire goods or services to accomplish goals.

The following section will deliberate on the problem statement of the study.

1.3 PROBLEM STATEMENT

Supply Chain Management, which will be the focus of this study, is important to businesses due to the positive impact it has on business performance (Peng, Quan, Zhang & Dubinsky, 2016:89). It is also important for businesses to acknowledge that SCM practices differ and practices that works for a certain business may not work for another. SCM addresses the challenges in the supply chain. Anderson (2017) assert that the five biggest challenges in the supply chain for retailers are customer service, cost control, planning and risk management, supplier-partner relationship management and the talent in the profession. Furthermore, Fernie and Sparks (2014:3) raise a concern as to whether supply chains and distribution channels can be pre-emptive and react to customer demands all the time. Chiles and Dau (2005:15) warn that when the retail link in a supply chain is vulnerable, and SCM practices are loose, it can lead to challenges such as inefficiencies and operational ineffectiveness

which decreases the ability to create value for customers and leads to reduction in business performance.

Common challenges for businesses are thus the provision of customer service and satisfying customer demand which both has a big impact on customer satisfaction. Without the customers businesses cannot be successful as they need to find ways to create value for the customer and this can be effected using SCM. Christopher (2016:23) state that supply chain managers are required to respond to market changes and ensure quality products are delivered by overseeing the process of product manufacturing. Christopher (2014:4) stresses the need for talent in the profession when indicating that appropriate management of the supply chain can establish a position of sustainable advantage over competitors in terms of customer preference. Furthermore, Badenhorst – Weiss *et al.* (2018:7-9) assert that the most important element in creating value is the purchasing function which can be done by creating the right quality products in the right amounts to be delivered at the right time and price. Badenhorst – Weiss *et al.* (2018:14) note that the supply chain philosophy is focused on creating value in the supply chain and not organisational functions like marketing and finance.

Fawcett, Magnan and McCarter (2008:36) advocate that SCM is important as it increases revenue, reduce costs across the supply chain and allows inventory to cycle through to customers faster. In addition, Fernie and Sparks (2014:3) assert that the distribution and materials management have been replaced by logistics management which is integrated with SCM. The switch to logistics management has come at a price, as factors such as building and maintaining warehouses/distribution centers, goods transportation vehicles and managing data networks can be expensive if not controlled correctly in the supply chain (Fernie & Sparks, 2014:3).

The question that remain to be answered is what are the best SCM practices to follow so as to achieve customer satisfaction and ensure profitable business practices.

The research objectives of this study will be presented next.

1.4 RESEARCH OBJECTIVES

The research objectives of this study are discussed in the following subsections.

1.4.1 Primary objective

In line with the problem statement, the primary objective of this study is to investigate which are possible best practices in SCM in the retail industry in order to provide guidelines to businesses as to how to effectively practice SCM.

1.4.2 Secondary objectives

To give effect to the primary objective of this study, the following secondary research objectives have been formulated:

- SO¹. To explore current supply chain practices in the retail industry;
- SO². To investigate how innovation and technological improvements influence the retail value chain; and
- SO³. To establish how the retail value chain improvements can influence customer satisfaction.

1.4.3 Methodological objectives

In order to achieve the above mentioned primary objective and secondary objectives, the following methodological objectives have been identified:

- MO¹. To conduct a literature review on best practices in SCM, the effect these practices have on the retail value chain and the interconnectivity of retail and its supply chain;
- MO². To select an appropriate research methodology and research methods for the study;
- MO³. To develop a research instrument and draw a sample;
- MO⁴. To collect primary data from divisional buying offices for retail outlets in the Nelson Mandela Metropole; and
- MO⁵. To provide conclusions and recommendations to all participants on the best SCM practices in the retail industry.

1.4.4 Research questions

Based on the problem statement, primary, secondary and methodological objectives of this study, the following research questions are posed:

- RO¹. What are the most commonly used SCM practices?
- RO². Do businesses integrate SCM practices?
- RO³. What are the benefits of SCM?
- RO⁴. What are the challenges that arise from ineffective SCM practices?

The following section is a brief discussion of the research design and methodology researchers will be utilised in this study.

1.5 RESEARCH DESIGN AND METHODOLOGY

This section begins with a discussion of secondary and primary research, which is followed by a discussion of research design, paradigm and methodology followed in this study. Data collection and the data analysis techniques employed in the study will be referred to. The section concludes with an indication of how trustworthiness of this study can be ensured.

According to Bryman, Bell, Hirschsohn, dos Santos, du Toit, Masenge, van Aardt and Wagner (2014:382); Anfara (2008:871), a research design is a framework for collecting and analysing of data and information in order to increase the understanding of the phenomenon being investigated. The main function of research design is to maximise the validity of the investigation by enabling the researcher to anticipate what the appropriate type of research should be, in order to effectively answer the research questions (Babbie & Mouton, 2012:73)

1.5.1 Secondary research

Secondary data is data that is already available. It is data that has already been gathered and recorded by someone else, other than the user, for an alternative reason than the current research (Struwig & Stead, 2013:82; Levchenko & Haidoura, 2016:33). Sources of secondary data include annual reports, journal articles,

newspaper articles, government publications and business reports (Struwig & Stead, 2013:82)

In order to achieve the primary objective of this study, the secondary research of this study will consist of a literature review in order to identify the objectives, role and importance and the commonly used practices in SCM. In the literature review reference also need to be made to the influence of innovation and technology on SCM as well as the benefits and challenges of SCM. The secondary research of this study will be conducted by consulting a variety of relevant textbooks and well-known journal articles. In addition, the library facilities available at the Nelson Mandela University will be used to access National and International databases, such as Emerald, EBSCO host, Sabinet and Google Scholar, which will be consulted to identify best practices in SCM. The relevant secondary sources obtained and utilised will form a basis for the research.

1.5.2 Primary research

This section will commence with an overview of the selected research design, paradigm and methodology followed in this study. A discussion on the population, sampling and data collection methods deemed most suitable for this study will follow. Reference will be made to the data analysis methods that the researchers will utilise to analyse the data collected. The section will conclude with an explanation of how trustworthiness of the data was ensured in this study.

1.5.2.1 Research design, paradigm and methodology

There are two main research paradigms that can be followed namely a positivistic methodology (quantitative research approach) and phenomenological methodology (qualitative research approach) (Sarantakos, 2012:119-120; Ngulube, 2018:71). Struwig and Stead (2013:3) assert that quantitative research comprises of a large sample and arranged data collection which make the research more conclusive. According Struwig and Stead (2013:10) a qualitative research approach is viewed as interdisciplinary and multi-method way to do research.

For the purpose of this study a qualitative research approach will be adopted in order to explore the best SCM practices in the retail industry. The qualitative research method produces descriptive data for example, the behavior of people (Taylor, Bogdan & DeVault, 2015:7). The study of best practices in SCM is not conclusive and thus a qualitative research approach is necessary as it allows probing and produce descriptive data. Furthermore, the study will adopt an interpretivistic research paradigm which will allow the SCM practices used in the Nelson Mandela Metropole to be explored by means of five semi-structured interviews with middle-managers and senior buyers.

1.5.2.2 Population, sampling and data collection

McLeod (2014) define a target population as a group of people relevant to the research project. Acharya, Prakash, Saxena and Nigam (2013:330) define a sample as a subset of a population selected to be representatives of a larger population. For the purpose of this study the population will be respective divisional buying offices for retail outlets in the Nelson Mandela Metropole, from which researchers will draw a sample of five middle management employees.

A combination of convenience, judgemental and snowball sampling will be applied to this study whereby a combination of five middle management individuals and senior buyers will be approached based on their availability, willingness to participate and by the recommendation of their mentors. These participants should actively be involved in managing retail supply chains in the Nelson Mandela Metropole. The sample of this study is small which is consistent with the qualitative research approach.

In order to determine the best practices used in SCM within the Nelson Metropole, primary information will be collected on the best SCM practices in the retail industry by conducting semi-structured interviews at divisional buying offices of retail outlets in the Nelson Mandela Metropole. A semi-structured interview schedule is used to collect information from participants. According to Galletta (2013:2) semi-structured interviews refer to interviews that are sufficiently structured to address specific dimensions of research questions whilst leaving space for the participant to offer additional information to the study. Semi-structured interviews will allow researchers

to probe on questions and also allow participants to add thoughts on questions asked (Galletta, 2013:2).

1.5.2.3 Data Analysis

Once primary data have been collected with regards to SCM practices, the data has to be analysed using appropriate methods. Bryman *et al.* (2014:344) and Quinlan, Babin, Carr and Zikmund (2011:182-183) identify several qualitative data analysis methods which can be followed, namely case studies, content analysis and the constant comparative method, all of which ensure an in-depth analysis of the data collected. Since this study follows a qualitative research approach, researchers will make use of case studies, content analysis and the constant comparative method to analyse the data collected.

Ethical aspects have been considered for data collection and analysis, and the Nelson Mandela University ethical clearance form is to be completed.

1.5.2.4 Trustworthiness

If researchers fail to address trustworthiness or validity and reliability issues in studies the findings could prove to be worthless. Guest, MacQueen and Namey (2011:83) and Struwig and Stead (2013:151) agree that general considerations when using validity and reliability in a quantitative study it is important to report validity test from previous studies and characteristics of the sample tested. Grbich (2012:112) and Struwig and Stead (2013:152) assert that the general considerations when establishing the trustworthiness of the data in qualitative study is consideration for researchers' background, taking data back to participants for comments on accuracy, the use of terminology and interpretation of data and using triangulation to provide rigour to findings.

Trustworthiness of the research findings of this inquiry will be strengthened by addressing the credibility, confirmability and dependability and transferability.

Yin (2011:19) assert that the objective of building credibility is to ensure qualitative research is performed in a publicly accessible manner with the research processes

being transparent. For the purpose of this study researchers will arrange follow-up meetings to discuss the interpretation of the data with participants. Researchers will also keep all notes, interview schedules, transcripts and memos to create an audit trail to ensure credibility of the research.

According to Struwig and Stead (2013:137) dependability refers to the quality of being coherent and being stable in changing conditions. In this study to achieve dependability, researchers will code data twice to see if data remain constant and also ensure that steps followed in the inquiry were logical, traceable and clearly documented by giving account of research and the creation of an audit trail.

According to Struwig and Stead (2013:137) confirmability refers to quality and verifiability of data presented. In this study researchers will continuously ask whether the data help confirm the general findings by providing detailed information and literature review confirmation. Researchers will remain aware of subjectivity and bias which may be present.

According to Struwig and Stead (2013:137) transferability refers to the extent to which the information can be used in a different context. In this study a detailed description of the research will be provided and participants for this study will be purposefully selected, which will facilitate the transferability of the inquiry in this study. The compilation of case studies for each of the participants will provide a summary of the setting and thus made transferability possible for this particular inquiry.

1.6 SCOPE AND DEMARCATION OF STUDY

Supply Chain Management plays an integral part in the value chain of businesses, it creates value for customers which leads to a competitive advantage. Given the importance of SCM, this study intends to focus primarily on the SCM practices of retailers and divisional buying offices operating within the borders of the Nelson Mandela Metropole. Furthermore, the demographic information pertaining to participants is limited to, gender, age, ethnicity, tertiary qualifications and duration of employment by organisation of participant.

1.7 CONTRIBUTION OF THE STUDY

Marucheck, Greis, Mena and Cai (2011:27) assert that industries are rapidly globalising thus supply chains become extended and more complex. In addition, Marucheck *et al.* (2011:27) add that existing theories can be used to develop better techniques and solutions to the role the supply chain plays in businesses.

This study aims to add value and expand on the limited body of knowledge that currently exists regarding the best practices in SCM. Given that customer satisfaction can affect businesses performance, this study offers potential in identifying the best practices in SCM for businesses within the Nelson Mandela Metropole which can result in a competitive advantage. Furthermore, this study aims to provide greater insight into role and importance of the supply chain and the influences it has on the financial and operational performances of businesses in the Nelson Mandela Metropole.

1.8 STRUCTURE OF THE STUDY

The structure of the research is as follows:

Chapter One provides an introduction and background to the study. In addition, reference will be made to the problem statement, the purpose of the research, as well as the research objectives, including the primary, secondary and methodological research objectives. The research objectives are followed by the scope and demarcation of the study which will then lead to the contribution and structure of the study.

Chapter Two will provide a literature review based on the practices in SCM. The chapter will commence with a discussion on the concepts, role, characteristics and importance of SCM. Thereafter, the aforementioned will be contextualised to the best practices in SCM.

Chapter Three will focus on the research design and methodology to be used in this study and the rationale behind the selected methodology, by elaborating on the sample participants, the measuring instrument to be used and the primary data

collection method that will be utilised. The analysis of the data will also be discussed here.

Chapter Four will provide a biographical profile of participants who participate in this study. The profile of each participant will give an indication of their involvement in SCM and also indicate how each of these participants fits into the SCM process in their respective businesses. An indication of their roles and how they manage processes related to SCM will also be presented in the chapter.

Chapter Five presents the results of the interviews with the selected managers by indicating the emerging themes, sub-themes and the issues that emerged.

Chapter Six will conclude the study by providing a brief overview of the preceding chapters, together with an abstract of the main findings. Based on the findings of the literature review and the empirical investigation, conclusions will be drawn. Furthermore, the contributions and limitations of the study will be explained, and recommendations and a list of best practices will be provided to participants and other retailers within the Nelson Mandela Metropole.

The following chapter will provide an overview of SCM.

CHAPTER 2 OVERVIEW OF SUPPLY CHAIN MANAGEMENT

2.1 INTRODUCTION

Chapter One provided an overview of the study and commenced with an introductory background to SCM. The research problem investigated was discussed, as well as the primary and secondary objectives of the study. Based on the purpose and primary objective of the study, three research questions were formulated. A brief overview of the proposed research design and methodology was presented followed by the scope and demarcation of the study.

Rowe (2014:242) defines a literature review as a critical summary and assessment of the range of existing materials dealing with knowledge and understanding in a given field. Chen, Lu, Peng, Rowlinson and Huang (2015:1406) broaden the scope by referring to a literature review as a systematic, explicit and reproducible method for identifying, evaluating and interpreting the existing body of recorded work. In order to identify best practices in SCM, it is necessary to conduct a thorough investigation on the importance and role of SCM, the characteristics of SCM and the influence of innovation and technology improvements on the retail value chain. A discussion on commonly used SCM practices are furthermore required. Horn *et al.*, (2015:5) and Christopher (2016:2-3) assert that there is a growing awareness and recognition within the business arena that logistics and SCM are vehicles for attaining efficiency and effectiveness in a business, which result in a competitive advantage and higher profits for the business.

This chapter will commence with a discussion on the objectives of SCM, followed by the importance and role of SCM in the retail industry. Reference will then be made to commonly used practices in SCM. The influence of innovation and technology improvements on SCM will be referred to followed by a discussion regarding the challenges that arise from ineffective SCM practices and how to overcome them. The numerous benefits of technology and innovation in the retail value chain will conclude this chapter.

2.2 OBJECTIVES OF SUPPLY CHAIN MANAGEMENT

When discussing the objectives of SCM it is of great importance to understand the benefits of improved efficiency on creating value and increasing profitability. The discussion below provides an overview of the focus areas which form the basis for creating mutual value for businesses and consumers. According Sharma (2015:9) there are many of objectives of a supply chain, but most of them are derived from the main aim which is to create mutual value for customers and retail businesses.

2.2.1 Profitability

Profitability must be achieved through all stages of SCM and sales must exceed expenses. This implies cost reductions must be achieved at the manufacturing and processing stages to ensure supply chain profitability (Randall & Farris, 2009:669; Sharma, 2015:9). This will ensure that customers benefit from lower prices and the businesses products are competitively priced in relation to its competitors.

2.2.2 Reliability

The objective of SCM is to provide superior service delivery by specifically providing a time and place at which the product will be available, as this would suggest reliability according to Sharma (2015:10) and Schmitt and Singh (2012:23). Product availability is essential to build customer loyalty which increases the profitability of the business. Furthermore, Schmitt and Singh (2012:23) assert that stock-out rates of 2.5% are still common among retail stores thus SCM has to ensure business' reliability. Reduced out of stock situations can be achieved by the implementation of effective SCM practices.

2.2.3 Flexibility

According to Sharma (2015:10) flexibility in the supply chain refers to the ability to absorb extra demand without incurring any extra costs. In addition, Merschmann and Thonemann (2011:43) assert that flexibility is a major response to market place uncertainty and business environment turmoil. Adaptability and responsiveness in the supply chain is required to compete in an evolving market and to quickly respond to increased customer demands.

2.2.4 Responsiveness

According to Sharma (2015:10) responsiveness refers to the duration to meet customer's demands, particularly when the design and quantity needs to undergo modifications. Hugos (2018:27) add that responsiveness to the ability to efficiently change operations in response to uncertain and changing demands placed upon it.

2.2.5 Turnover rate

A high turnover rate in a supply chain is essential to reduce the risk of obsolescence, increase productivity and return on investment (Horn *et al.*, 2015:93; Sharma, 2015:10). Good stock turns ensure constant stock flow and promotes a healthy working capital. The availability of cash flow as a result of increased turn over allows the business to invest in activities which improve SCM practices.

2.2.6 Communication and coordination

According to Sharma (2015:10) the coordination and communication of information through all the stages in the supply chain to ensure efficient delivery of schedules. Furthermore Horn *et al.* (2015:140) assert that it is clear that all efforts in SCM should be directed at creating superior mutual value in products or services offered to customer. In addition, Sharma (2015:9) adds that these efforts are used to fulfil customer demand cost effectively in order to increase profitability.

2.3 IMPORTANCE AND ROLE OF SUPPLY CHAIN MANAGEMENT IN RETAIL STORES

Having identified and given an understanding of the objectives of SCM, a discussion on the importance of SCM is provided, followed by the stages of SCM. The discussion will continue with the importance of integrating SCM activities in the business and conclude with a discussion of the characteristics of SCM.

2.3.1 The importance of Supply Chain Management

The evolving market lead to increased customer demands as customers expect new and improved quality products in a shorter period of time. According to Horn *et al.*

(2015:5) there is a growing awareness and recognition within the business arena that logistics and SCM are the vehicles for attaining the twin goals of efficiency and effectiveness in the retail value chain, which ultimately can result in a competitive advantage and higher profits for the business. Boosting customer service, reducing operating costs and improving financial position are important aspects relating to SCM (The Importance of SCM, 2018). Customer service can be enhanced by ensuring that the correct product range is at the correct location at the correct price and with the desired after sale support. Wilson (2017) indicates that the world is an inter-connected supply chain due to the rapid globalisation of the corporate industry, and everything that happens in the world will ultimately affect the supply chain thus it needs to be managed correctly. Wilson (2017) also indicates that SCM allows for integrated and cooperative logistics which streamlines activities from product flow to planning for unexpected natural disasters which will ultimately strengthen the businesses competitive position. Sorbi, Zorrieh, Jalilian and Sani (2017:177) state that SCM is the flow of goods and the conversion of inputs from the stage of sourcing of raw materials to the stage of delivery of final goods to the consumer.

SCM tasks businesses with activities that have an impact on the future performance of the business. Richey, Roath, Whipple and Fawcett (2010:238) state that strategic decision-makers within a business have recognised the importance of SCM recently due to factors such as globalisation, pressures on time, quality expectations, and marketplace uncertainty. Supply chains include business activities needed to design, make, deliver and use a product or service. Hugos (2018:2) state that businesses depend on supply chains to provide the necessary means they need to survive in the marketplace. Businesses that learn how to build and participate in supply chains will ultimately have a competitive advantage in their respective markets (Hugos, 2018:2).

2.3.2 The characteristics of Supply Chain Management

The characteristics of SCM reflects the central values philosophy which is to create customer value and reduce cost to business. SCM is a complex topic thus it is important to discuss what characterises SCM.

SCM is a philosophy to conducting business which includes joint planning and mutual exchange of information across all the nodes of the supply chain (Hugo & Badenhorst-Weis, 2011:19). The collaboration of multiple tiers in businesses striving to improve the shared supply chain processes is evident in SCM (Hugo & Badenhorst-Weis, 2011:19). Badenhorst-Weiss *et al.* (2018:16-17) identified more characteristics, adding that SCM is an ever-changing network which requires constant oversight to ensure that the focus remains on customer value creation, also the capturing, access and interchange of data across the supply chain is seen in SCM. The implication of this is that management decisions across all links in the supply chain are based on the same information which is available to all channel members at the same time.

Hugo and Badenhorst-Weis (2011:19) and Badenhorst-Weiss *et al.* (2018:16-17) assert that SCM is based on a shared vision of what customer value is and therefore joint planning and compatible philosophies are essential for achieving the necessary levels of planning and coordination. The final characteristic identified is that in SCM not all links and interfaces are equally important and therefore management tasks will differ according to the potential impact of the relevant supply chain processes on the creation and delivery of customer value.

2.3.3 The flow of a supply chain

According to Sanders (2012:4) the supply chain design will depend on consumer needs, the roles of the stages involved, and the value each stage offers. Sanders (2014:4); Janvier-James (2012:194-195); Paksoy, Bektaş and Özceylan (2011:532) refer to a supply chain as a value chain or a value network as only the stages that add value to the network are being considered. However, Nam, Shen, Ryu and Shin (2018:2) assert that a supply chain refers to the flow of materials, information, and capital among various organisations, whose processes are linked for delivering products to final consumers. It is important to distinguish the difference between the inbound direction of the product flow and the outbound direction of the product flow. Inbound direction refers to the stages that product flow towards the business and outbound direction refers to stages that product flow away from the business (Wu, Ohzahata & Kato, 2012:417; Sanders 2012:4; Börjesson & Kristoffersson, 2015:137).

Sanders (2012:4) and Monczka *et al.* (2015:13) avow that the first flow of supply chain begin with suppliers who supply and transport raw materials to manufacturers. Christopher (2016:11-12) adds that these materials will then be transformed into finished products and shipped to distribution centers or wholesalers. Finally, the product is shipped to retailers who sells the product to final customers. Hugos (2018:21); Goldberg, Holdaway, Reinaud and O’Keeffe (2012:11) affirm this and state that the stages of the supply chain starts with the raw materials which is then transported to manufacturers who then produce the product and send it to the distributor, who then distributes to independent retailers. In addition, Sorbi, Zorrieh, Jalilian and Sani (2017:177) suggest that SCM is the flow of goods and the conversion of inputs from the stage of sourcing of raw materials to the stage of delivery of final goods to the consumer.

There are different stages in supply chain, and the most generic representation of these supply chain stages includes suppliers who provide the raw materials to producers who manufacture the products then ship it to distributors who then supply retailers with the products. Retailers then sell to consumers (Sanders, 2012:4; Goldberg *et al.*, 2012:19; Chin, Tat & Sulaiman, 2015:695).

2.3.4 Activities of Supply Chain Management

SCM is a dynamic process that requires synchronising of all activities among affiliates of the supply chain. The activities of SCM include:

2.3.4.1 Coordination

Coordination involves the management of goods and services from suppliers to manufacturers to distributors and to the final customer (Sanders, 2012:6). It also involves the movement of funds through the supply chain as products are being purchased and sold. Hugo and Badenhorst-Weis (2011:35) add that coordination is important because the purchasing and supply function acts in an advisory capacity on aspects relating to the supplier market, and in a verifying capacity with, for instance, quality control factors and querying of specifications.

2.3.4.2 Information sharing

SCM requires relevant information sharing which includes sharing demand, sales forecasts and promotional activities which influences inventory levels. This is important to ensure effective functioning of the entire chain (Sanders, 2012:6). Sharma (2015:87) adds in order for information to flow effectively and efficiently the supply chain must have an integrated resource planning system at business level.

2.3.4.3 Collaboration

SCM requires collaboration between supply chain members to ensure joint plans, operations and business decisions are made together (Sanders, 2012:6). This could enhance cost efficiency and improved quality of products throughout the supply chain. Sharma (2015:319) suggests that when collaboration is forecast based it is important to know the level of aggregation, the level of information sharing, particularly from retailers and the level of variance recorded from the past forecasts.

2.3.4.4 Managing flows materials, information and resources

Managing the flows of products, information and funds through the supply chain is essential to reduce the cost of doing business and improve customer service (Sanders, 2012:7). Products first flow through various stages of production to final customer. Products can also flow back through the chain in the form of returned products that are unacceptable for various reasons. With regard to information, demand and sales data is shared to improve replenishment and forecasting. The flow of funds refers to payment flow back and forth in exchange for the products and services received.

Mangan *et al* (2016:11) affirm that a supply chain encompasses the physical backward or forward flow of materials through the supply chain, the flows of information that informs businesses in a supply chain, and resources like finance, networks and equipment.

2.3.5 Integration of SCM activities

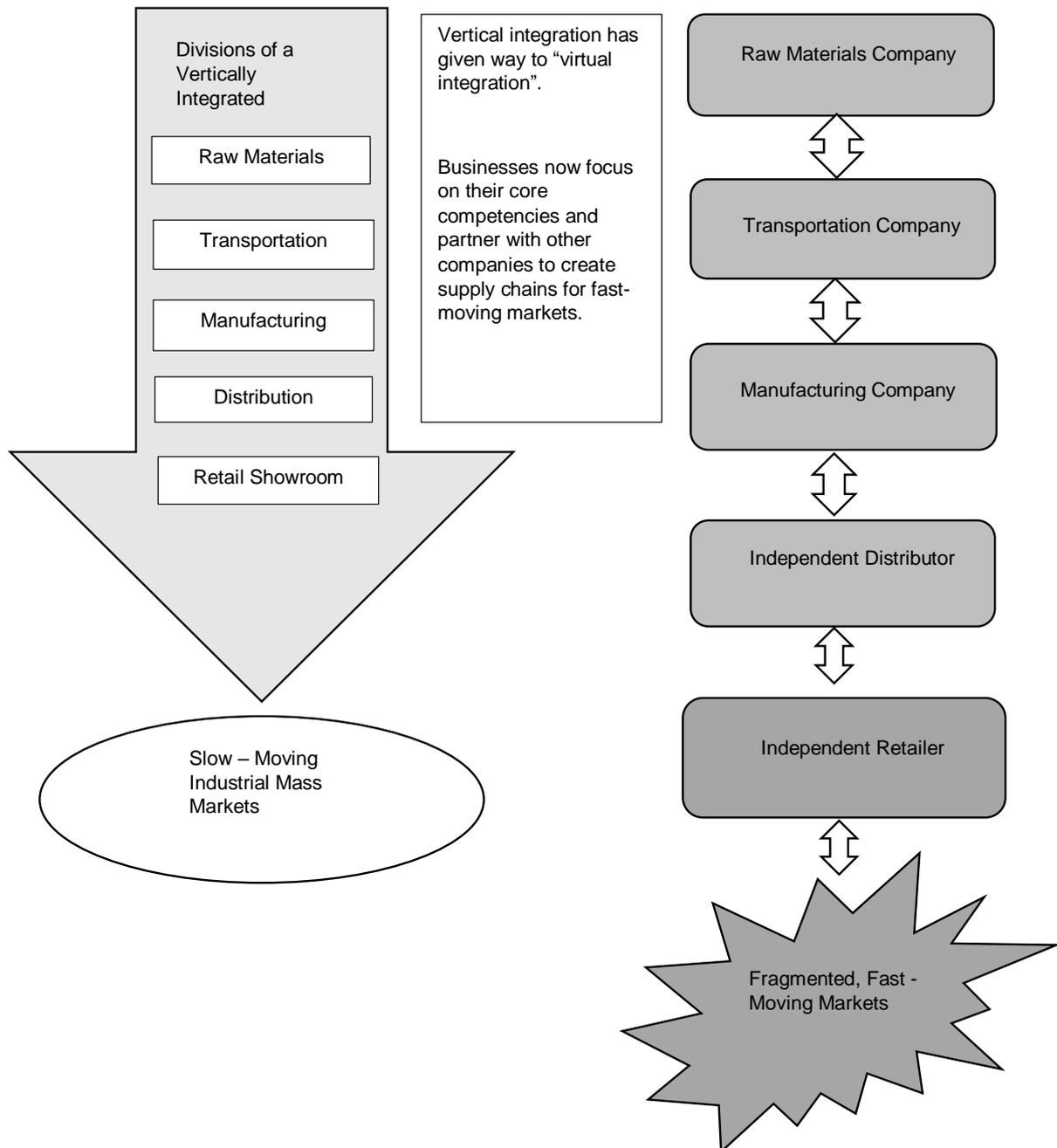
Flynn, Huo and Zhao (2010:59) define integration as the unified control of a number of successive or similar economic or especially industrial processes formerly carried on independently. Horn *et al.* (2015:184) simplifies this definition by referring to integration as the process of bringing together different groups, functions or organisations to work concurrently on a common business-related assignment or purpose. Flynn *et al.* (2010:58) state that supply chain integration also refers to the degree to which a manufacturer strategically collaborates with its supply chain partners and collaboratively manages internal organisational processes. Wong and Boon-itt (2008:400) affirm this by defining supply chain integration as a process of interaction and collaboration in which companies in a supply chain work together in a cooperative manner to arrive at mutually acceptable outcomes.

Supply chain integration must comprise both information and material (Prajogo & Olhager, 2012:514). Integration in material is achieved through logistics integration which refers to specific logistics practices and operational activities that coordinate the flow of materials from suppliers to customers throughout the value stream. Information integration refers to the sharing of key information along the supply chain (Moshkdanian & Molahosseini, 2013:186; Prajogo & Olhager, 2012:514). The benefits of supply chain integration have been confirmed by research results, these benefits include the maximisation of supply chain performance and the reduction of ordering cost, cycle time and inventory level and business uncertainty (Flynn *et al.*, 2010:58; Wong & Boon-itt, 2008:400).

Vertical integration aims to gain maximum efficiency through economies of scale (Hugos, 2018:20; Guan & Rehme, 2012:187). In the past most, companies owned their own supply chain because of slow moving mass markets (Hugos, 2018:21; Guan & Rehme, 2012:188). Fast-moving market companies, however require a more flexible and responsive supply chain. Hugos (2018:21) suggests a new integrated model of supply chain which has a more integrated reverse flow of products, where there is an independent company that handles the raw materials which is transported by an independent transportation company who then deliver the raw materials to an independent manufacturing company, the manufacturer then supplies independent

distributors with a product and distributors distribute the products to independent retailers. This explanation is illustrated in Figure 2.1, on the following page.

Figure 2.1: Exhibits old supply chain versus new virtually integrated supply chains



Source: Adapted from Hugos (2018:21)

From Figure 2.1, it is clear that supply chain integration requires collaborative efforts and a shared vision on how information and materials are managed and used to

maximise supply chain performance on cost reduction, cycle time and inventory level. This ultimately can lead to a competitive advantage. In addition to integration, customer service and cooperative logistics of a supply chain can also lead to a competitive advantage.

2.3.6 The importance in creating value through customer service

Zahra, Muriati, Shahnorbanun and Ali (2013:299) affirm that response to customer demands and the profit maximisation for all businesses involved in the supply chain is the reason the supply chain exists. Talib, Rahman and Qureshi (2011:268) add that customer needs are the focus of the whole supply chain approach which has led to the development of a customer focus orientation in businesses, leading to the introduction of customer relationship management programmes. Customer focus orientation programmes are developed to delight customers, encourage their loyalty and build long term mutually beneficial relationships (Brockman, Jones & Becherer, 2012:429).

According to Badenhorst-Weiss, van Biljon and Ambe (2017:103) customer service is a value adding and value insuring supply chain strategy consisting of activities and processes targeted at improving internal and external customer benefits and customer satisfaction throughout the whole supply chain in a cost-effective way. Badenhorst-Weiss *et al.* (2017:103) define customer service as a process of how all customer elements will be integrated into the service mix at the lowest possible cost. Makanawala, Godara, Goldwasser and Le (2013:548) refer to customer services as the activities performed to provide satisfaction to customers and facilitate correct use of products.

Fishbowl (2018) asserts that if businesses cultivate and maintain good a supply chain, it enables businesses to better prepare and be in a position to meet customers' expectations and demands. One of the important requirements in SCM is the availability of information related to product design, price, inventory order and delivery status (Sharma, 2017:292). Offering these services to customers creates value and reduce costs to the business.

In the service industry the supply chain might be shorter and may resemble a hub more than a chain it is just as relevant and the customer plays an even bigger role here, reason being customer information and inputs has the ability to change the service delivery (Alhyari, Al-Ali & Nuseir, 2014:4; Sanders, 2012:10).

In light of the above it is understood that providing effective customer service, entails constant communication flow at various stages of the supply chain which creates value, improves efficiencies and reduce costs which ultimately can result in a competitive advantage.

Having discussed the role and importance of SCM for businesses. The following section will present commonly used SCM practices as identified from various literature sources.

2.4 COMMONLY USED SCM PRACTICES

SCM is a complex philosophy and a lot of effort has been put into identifying best practices to support companies achieve superior performance (Netland & Alfnes, 2011:66). Best practices in SCM lead to growth and prosperity (LTD Management, 2018). Slade (2017) assert that effective strategies coupled with a well-defined plan and the right tools can help supply chain professionals ease fulfillment burdens and prepare managers for market changes in the future.

A number of best SCM practices have been identified. From the detailed literature review, best SCM best practices associated with logistics, inventory management, information and communication technology and purchasing were summarised.

Sharma (2015) state that SCM is logistics taken to a higher level of sophistication, as logistics involves managing order processes, warehousing, transportation, materials handling and packaging. Logistics adds value to the supply chain process if inventory is in a position to achieve sales (Mangan, 2016:4). Table 2.1 provides a summary of the best practices associated with logistics.

Table 2.1: Practices associated with logistics.

SCM practices associated with Logistics	Sources
<ul style="list-style-type: none"> ○ Customer-driven supply chain which refers to products and services made based on feedback from the bottom of the supply chain. ○ Demand-driven sales planning which refers to economic forces of demand and supply in which demand is a triggering instrument for supply. ○ Cross docking where products are received into a warehouse and consolidated where it will be loaded out or delivered to its final destination. ○ Implement lean logistics refers to the reduction of time and waste created in manufacturing. ○ Establishing a governing supply chain council whose purpose is to give direction and help align supply chain strategy with the company's overall strategy. ○ Establish appropriate levels of control and minimise risk where businesses should keep procedure and policies up to date by frequently reviewing them. ○ Compress cycle time. Cycle time runs from the time the need for a product-now or replenished-is determined and goes until it is delivered to the customer or to the store. ○ Utilise meaningful metrics which refer to delivering orders complete, accurate and on time. ○ Align the supply chain organisation. SCM needs to define strategic role and begin to execute value-added activities across all aspects of the supply chain. ○ Recruit and develop supply chain professionals. Supply chain professionals are strategic thinkers, analytical and have good interpersonal relationship skills ○ Dedication to performance management. Refer to businesses providing incentives for attaining process excellence, linking attaining metrics to strategic objectives and to corporate results and proactively controlling gaining processes. ○ Management distribution and logistics. Businesses should work closely with distributors in order to standardise products, reduce inventories and reduce the touches before heading to final customer. It would be wise for businesses to manage distributors as if they are part of the business. ○ Adopt a demand-driven planning and business operating model based on real-time demand insights and demand shaping. ○ Build an adaptive and agile supply chain with rapid planning and integrated execution. ○ Align supply chain with business goals by integrating sales and operations planning with corporate business planning. ○ Ensure a reliable and predictable supply. 	<p>Badenhorst-Weiss <i>et al.</i> (2018:14-15); Benton (2010:137-149); Engel & Wesoky (2010); Engel (2011); Horn <i>et al.</i> (2015:15-17); Hugo & Badenhorst-Weis (2011:17-18); INTALERE (2016); LTD Management (2018); Mohtashami (2015:221); Saber, Bahraami & Haery (2014:76-79); Slade (2017); Trowbridge (2017).</p>

Having just the right amount of inventory level is the primary objective for businesses as they hold inventory mainly to reduce cost or optimise customer satisfaction levels. SCM's inventory reductions often translate to cost savings (Achieving Customer Service Success with Lower Total Inventory Costs, 2016). Table 2.2 provides a summary of SCM practices associated with Inventory Management.

Table 2.2: Practices associated with Inventory Management

SCM practices associated with Inventory Management	Sources
<ul style="list-style-type: none"> ○ Optimise company owned inventory. ○ Manage inventory by limiting access to inventory, establishing benchmarks and making sure integrity is maintained. ○ Efficient transportation, facilitation and inventory refer to satisfying customer demands at the least possible cost to supply chain network. ○ Lean Manufacturing refer to instilling manufacturing operations that are effective and efficient. ○ Strategic sourcing. Refer to the process of making strategic decisions on who will perform specific supply chain functions. ○ Increase inventory velocity. Refers to the speed in which inventory moves from supplier to customer. Being inventory rich and cash poor is not a sound approach. ○ Improve supplier performance. Suppliers must deliver quality items and do it complete, accurate and on time. Whether the products are finished goods or materials for factories, suppliers must perform well and collaboration plays an integral part in supplier performance. ○ Maximise inventory revenue. Refer to when there is a window of opportunity to get the maximum revenue for products and businesses need to react to that window of opportunity, if not businesses face reduced pricing and profit margins. ○ Supply chain segmentation. Refers to when businesses focus performances where it is most beneficial and not practicing one-size-fits-all supply chain management. The one-size-fits-all approach reduces performance and deters resources. ○ Establish and monitor controls. When you do not have standards, you pay more thus businesses should establish key performance indicators that are regularly monitored. 	<p>Badenhorst-Weiss <i>et al.</i> (2018:14-15); Benton (2010:137-149); Horn <i>et al.</i> (2015:15-17); Hugo & Badenhorst-Weis (2011:17-18); INTALERE (2016); LTD Management (2018); Saber, Bahraami & Haery (2014:76-79); Slade (2017); Trowbridge (2017).</p>

Chigbuson, Durtur and Nimfel (2018:217) refer to Information and communication technology (ITC) as the process of gathering accessing and spreading of data for improved knowledge which gives rise to new concepts and ideas, innovation, and making a positive impact in businesses operations.

Prajogo and Olhager (2012:516) state that information and communication technology play a central role in SCM It allows businesses to increase the volume and density of information which needs to be communicated, it allows businesses to provide real-time supply chain information such as inventory levels, delivery status, and production planning and scheduling, it also enables the alignment of forecasting and scheduling of operations between business and their supplier. This all allows for supply chain activities to operate more efficiently and effective. Table 2.3 exhibit a summary of the best practices associated with Information and Communication Technology.

Table 2.3: Practices associated with Information and Communication Technology

SCM practices associated with Information and Communication Technology	Sources
<ul style="list-style-type: none"> ○ Information refers to the data and analysis about product availability, suppliers, facilities, cost, prices and transport availability. The flow upward or downwards of this information supplies goods and services which can help supply chain. ○ Just-in-time refers to input materials are ordered to arrive just in time when needed in a production process. ○ E-Procurement is about positioning products and integrating with platform technology. It opens multi-channel possibilities which enhances customer satisfaction. ○ Electronic Data Interchange (EDI) and purchasing refers to the electronic transmission of orders, invoices and payment between buyer and seller. ○ Radio Frequency Identification (RFID) refers to any technology that uses radio waves to identify and track items. This can be products, containers, automobiles, animals or a human being. ○ Technological advancement. Businesses must find a way to use technology to produce beneficial information without having to do various things to extract and view data. When embedding technology, it is important for businesses to identify processes that need improvement and only then select a technology that best suits business's needs. ○ Employ supply chain technology. A supply chain that incorporates technology is important to managing a global supply chain and provides visibility of products throughout the entire supply chain. Technology in cohesion with collaboration manage these issues. ○ Streamline the order to payment process. This practice highlights the need for technology in SCM as it is extremely important to implement a common and automated requisition-to-pay process that guides requesters approvals and reduce buyer physical involvement when purchasing through preferred suppliers. ○ Embed sustainability into supply chain operations. This technique requires businesses to show that they are striving for social and environmental sustainability as it would achieve major competitive advantages, especially with regard to production efficiency, supplier management skills and attractiveness to employees. Business must also ensure continuous improvement through systemic measurement, audits and knowledge management. 	<p>Badenhorst-Weiss <i>et al.</i> (2018:14-15); Benton (2010:137-149); Engel & Wesoky (2010); Engel (2011); Horn <i>et al.</i> (2015:15-17); Hugo & Badenhorst-Weis (2011:17-18); INTALERE (2016); LTD Management (2018); Saber, Bahraami & Haery (2014:76-79); Slade (2017); Trowbridge (2017).</p>

Purchasing refers to the acquiring of material in order to accomplish objectives. Some businesses also refer to purchasing as procurement, sourcing or the supply management function (Melander & Lakemond, 2012:2). Tate (2014) add that the role of purchasing evolved into a cost-saving function in which supplier relationships were developed with cost-savings in mind through process improvements, product improvements, or supplier development efforts.

SCM practices associated with purchasing is summarised in Table 2.4.

Table 2.4: Practices associated with Purchasing

SCM practices associated with Purchasing	Sources
<ul style="list-style-type: none"> ○ Direct to Market (D2M) refers business who cut out the agent, create an own identity and sell directly to the final customer. ○ Properly align staff and supply chain organisation. Correctly staffing the supply chain organisation is vital to success. Businesses can staff by putting SCM professionals in various business units or they centralise operations. Businesses can also adopt a hybrid approach of a centralised and decentralised or place business function like logistics and purchasing under a Supply chain leader. ○ Establishing alliances with key suppliers. Buyer and seller must jointly establish and manage a relationship to promote effective two-way communication, this refers to an alliance management. Alliance management will equip businesses to use talent of your supply base to create sustained vale whilst constantly seeking improvement. ○ Collaborative sourcing. Refer to when businesses get customers actively involved in decision making processes and more importantly implore feedback and information regarding objectives and strategies. ○ Total cost of ownership (TCO) requires viewing the whole process of acquiring and consuming the product or service in which businesses consider many factors in procuring and consuming. ○ Put contracts under the supply chain function. Deploying SCM to attend to the contract management function allows supply chain manager to effectively leverage the business spending. ○ Take green initiatives and social responsibility seriously. Purchasers and consumers take environmental impact and corporate social responsibility into consideration when they choose suppliers. ○ Establish a strategic sourcing strategy. Refer to the elimination of dismissals, modification of business processes, ideas for continuous improvement and formalised savings tracking systems. A strong strategic sourcing function comprises of numerous benefits around lower costs, higher quality and greater customer service, while also leading to more accurate forecast and good end results. ○ Develop a supplier management process. This practice puts more emphasis on proactively managing supplier relationships and developing a framework for measuring the ongoing performance of key supplier like supplier scorecards shared process improvements. 	<p>Engel & Wesoky (2010); Engel (2011); INTALERE (2016); LTD Management (2018); Macharis, Lebeau, Van Mierlo & Lebeau (2013:2); Saber, Bahraami & Haery (2014:76-79). Slade (2017); Trowbridge (2017);</p>

The tables presented highlights various commonly used SCM practices. These practices were discussed as it was identified as most common SCM practices in literature. In Chapter Six these practices will be compared to the practices as found during the semi-structured interviews.

The influence of innovation and technology improvements on SCM will be discussed in the following section. This will highlight the benefits of technological improvements in order to streamline processes and activities in the supply chain.

2.5 THE INFLUENCE OF INNOVATION AND TECHNOLOGY IMPROVEMENTS ON SCM

Innovations in retail involve sharing information and changes in products and processes, which either reduce costs or improve efficiency (Ganesan, George, Jap, Palmatier & Weitz, 2009:90-91). Sorescu, Frambach, Singh, Rangaswamy and Bridges (2011: S7) add that product and process innovations can enhance customer value through improved market offerings. Sharma (2015:68) affirm this statement by indicating that SCM involves information sharing and spreading it across a wide network, adding that the use of proper information technology systems and its processing is an integral part of SCM. A lack of information may result into misalignment of the supply chain (Sharma, 2015:68).

In light of the above, various concepts prompting innovation and technology and the influence innovation and technology has on SCM will be presented. Reference will be made to e-commerce in SCM to conclude this section.

2.5.1 Technological enhancement concepts and its influence on SCM

Some of the techniques that can be used to enhance the efficiency of SCM include:

- The Continuous Replenishment Program (CRP) is a method of replenishing products in real time as needed only for the sold amount as it results in optimisation of logistics and by replacing the schedule-based inventory restock strategy with pull or demand based restock strategy (Sharma, 2015:61; Kooiman, 2014:7).
- The Computer Assisted Ordering (CAO) is a software application package that in conjunction with a Perpetual Inventory (PI) system would assist store managers by suggesting a product replenishment order based on the stores actual Point-of-Sale (PoS) movement history for that item and assumed actual inventory on hand (Sharma, 2015:61; Kooiman, 2014:8).

- With Barcode identification (BI) barcodes are used to identify products, containers, locations in a warehouse and batch numbers. BI are used because it is simple to operate, inexpensive, accurate and updates the warehouse management system in real time (Horn *et al.*, 2015:105; Lippi & Plebani, 2011:233).
- The Magnetic strip identification refers to a magnetic strip where a large amount of information can be encoded. This is beneficial as it gives information on contents of a delivery in a truck of the travel route for making deliveries or pickups (Horn *et al.*, 2015:106; Finkelstein, 2014).
- The Radio Frequency Identification (RFID) provides data about the objects in which they are embedded thus enabling accurate, real time tracking of every single product, from the manufacturer to checkout in stores (Horn *et al.*, 2015:106; Sarac, Absi & Dauzère-Pérès, 2010:79). This function can reduce warehouse, distribution and inventory costs, increase margins and provide better in-stock positions (Horn *et al.*, 2015:106; Ganesan *et al.*, 2009:91; Sarac *et al.*, 2010:79).
- The Voice recognition entails the use of a headset and microphone on an employee who will receive instructions from the warehouse management system which will communicate a sequence of tasks to the operator (Horn *et al.*, 2015:106; Henricks, 2018).

Badenhorst-Weiss *et al.* (2017:262) and Umney (2011) concludes by suggesting retailers make use of the “Going Mobile” concept in SCM as it provides businesses with highly efficient, fast and accurate means of collecting sharing information and data on the movement of goods and on other important events. The use of mobile technologies increases the level of visibility and productivity in the supply chain, such as location decisions, purchasing decisions, inventory decisions and transportation activities (Car, Pilepić & Šimunić, 2014:210).

2.6.2 E-Commerce in SCM

In the previous section the study provided ways as to how technology can be used to enhance the efficiency of SCM and reducing cost for business' in the supply chain. In this section E-Commerce in SCM will be discussed as it is also a technology-based endeavour to create efficiencies for retailers' and its customers.

With the changes in business conditions, businesses are forced to re-examine their supply chains to meet the increasing sophistication of new technologies (Gregory, Ngo & Karavdic, 2017:1). The emergence of information technology has created a technology and information-based supply function that interacts with other business functions (Hugo & Badenhorst-Weis, 2011:219; Gregory *et al.*, 2017:2).

According to Harsono (2014:11) e-commerce was created to describe internet enabled change, which include various business activities, such as electronic funds transfer (EFT), online marketing, online transactions and electronic data interchange (EDI), as well as other SCM-related functions and activities.

E-commerce includes a wide variety of activities involving the exchange of information, data or value-based exchanges between two or more parties (Badenhorst-Weiss *et al.*, 2018:240; Kaur & Joshi, 2012:802). Harsono (2014:11) add that e-commerce involves trading goods and services within an electronic market place, as well as servicing customer, collaborating with business partners and conducts electronic transactions within a business. Huang and Benyoucef (2013:248) suggest that e-commerce also focuses on the application and management of these technologies to create and increase business value for the business concerned. Masimbe and Bigirimana (2014:1) agrees.

Badenhorst-Weiss *et al.* (2017:251) suggest it is important to understand that the internet represents the networking infrastructure and protocols that allow computers to communicate with each other while the World Wide Web, a term often used in the same semantics contexts as the Internet, represents a user-friendly, point-and-click environment that serves as an interface to the Internet. What the Web does is to provide a graphic way of organising and viewing the information available on internet.

Electronic data interchange (EDI) refers to exclusive technologies and rigid communication protocols and standards. EDI reduces the ability of trade partners to share dynamic data and graphics which enhances differentiation of products and unique branding efforts (Khan, 2016:2).

E-commerce and SCM has many benefits for leading businesses as it focusses on the integration, automation and synchronisation of four major flows, namely, physical, financial, information and decision making at business level (Badenhorst-Weiss *et al.*, 2018:241). This has triggered the need for e-supply chain management(e-SCM), as e-commerce changed the way supply chain process are conducted by adding new dimensions and transforming SCM into e-SCM (Badenhorst-Weiss *et al.*, 2017:257; Pulevska-Ivanovska & Kaleshoveska, 2013:314). Pulevska-Ivanovska and Kaleshovska, (2013:314) define e-SCM as a network of independent partners who are not only distributors of certain products and services in the supply chain, but also stimulate the demand and lead to the synchronisation of capabilities and resources in the whole supply chain in order to provide levels of operational efficiency and leadership in the market.

The objectives of e-SCM are the incorporation of the activities across and within organisation in order to provide customer value (Badenhorst-Weiss *et al.*, 2017:257). Valverde, Saadé and Barrad (2016:3) concur by indicating that providing information availability and visibility, enabling single point of contact of data, allowing decisions based on total supply chain information and enabling collaboration with supply chain partners are the objectives that can provide customer value. Badenhorst-Weiss *et al.* (2017:257) add that e-SCM brings together building elements that contribute to improved and integrate supply chain relationships.

Badenhorst-Weiss *et al.* (2017:258); Pulevska-Ivanovska and Kaleshoveska (2013:315) have identified the following factors that contributed to the transition from SCM to e-SCM:

- Additional cost reduction which refers to need for additional reduction in cost;
- Computerisation and digitalisation which refers to the computerisation and digitalisation of the internal functions of the business;
- Efficiency and agility which refers to the ability to respond quicker to customer demands;
- Optimising inventory level which refers to having enough stock to provide supreme quality and service;

- Outsourcing which refers to tendency to hire specialists to do jobs that the business does not specialise in;
- Globalisation which refers to business entering international markets as a factor that contributes to the transition from SCM to e-SCM; and
- E-business technologies which entails levelling the grounds for all businesses to have a large network and be closely connected with partners

Having discussed the objectives, importance and role of SCM, it is important to deliberate on the challenges that arise from ineffective SCM practices.

2.6 CHALLENGES THAT ARISE FROM INEFFECTIVE SCM PRACTICES

Having discussed the influence of innovation and technology improvements on the retail value chain, it is integral to highlight what challenges could be faced in the supply chain by implementing ineffective SCM practices. According to Wang and Disney (2016:691) demand forecasts at each stage of the supply chain are the result of the demands observed one level downstream, thus when each individual in a supply chain determines one's demand level forecasts, the bullwhip effect can occur. Hussain and Drake (2011:797-798) note that the bullwhip effect occurs when information moving up the supply chain become more fluctuated and inaccurate as it moves up the supply chain. Retailers build safety stocks for protection against uncertainty in consumer demand where distributors then observe customer demands in the orders of the retailer and builds even larger safety stocks, resulting in inflated demands at the supplier's level (How the Bullwhip Effect Impacts the Supply Chain, 2017; Sharma, 2015:56).

Basic causes of the bullwhip effect, can be the following: faulty demand forecast updating, order batching, price fluctuations, and shortage gaming which is characterised by extreme changes in perceived demand at upstream mechanisms of supply chain (Sharma, 2015:56; Sanders, 2012:8; How the Bullwhip Effect Impacts the Supply Chain, 2017; Hussain & Drake, 2011:797-798; Wang & Disney, 2016:694). Initiatives to control the bullwhip effect, includes the following (Sharma, 2015:57; Hussain & Drake, 2011:811; How the Bullwhip Effect Impacts the Supply Chain, 2017; Wang & Disney, 2016:695):

- Information sharing where all business partners share Point-of-Sale data and base forecasts on this data only;
- Channel alignment where the alignment of a supply chain in terms of coordination of efforts in form of pricing, transportation, inventory planning, and ownership between upstream and downstream sites in the supply chain take place;
- Provision of third-party logistics(3PL) services which can help businesses movements from multiple suppliers using minimum transportation trips or using a hub that reduces the cost on a long term bases.to the buying company as well as reducing inventory levels and the need to store and warehouse it;
- Discouragement of promotional pricing; and
- Discouragement of shortage gaming.

From the above mentioned it is evident that severe consequences including a lack efficiency and effectiveness come with ineffective SCM practices. In the following section the benefits for retailers' of implementing effective SCM practices are presented.

2.7 BENEFITS OF SUPPLY CHAIN MANAGEMENT

Having discussed the objectives, role and importance and commonly used SCM practices, and the challenges that arise from ineffective SCM practices, it is fundamental to also highlight the benefits of implementing SCM.

Sharma (2015:25) and Hugo and Badenhorst-Weis (2011:35) identify a reduction in working capital deployments like inventories, warehousing and financial costs as the first benefit of SCM. Sharma (2015:25) further notes that the re-engineering, simplification and the optimisation of processes across different components and stages at different levels of SCM could also prove to be beneficial. Furthermore, the optimisation of workforces across departments and clients at different levels and locations is another key benefit (Key 7 Advantages and Benefits of Supply Chain Management, 2017).

Reduction in time to market through disintermediation and better logistics, and the reduction in processing and administrative lead times at all stages of SCM can pay dividends for participants in a supply chain network (Key 7 Advantages and Benefits of Supply Chain Management, 2017; Sharma, 2015:25). Dempsey (2017) notes additional benefits of SCM are the capturing and tracking of feedback from all supply chain partners at each stage and better collaboration based on the feedback, likewise conveying accurate inventory forecasting and planning.

Two more benefits associated with SCM is that it streamlines incoming material flow and synchronising it with production at the plant level, particularly in a lean environment, as well as ensuring a certain work-in-process material and finished goods flow (Hugo & Badenhorst-Weis, 2011:35).

In conclusion, the tracing and tracking of order information, its fulfilment status and maintaining a certain promised service delivery level which would ultimately lead to improved satisfaction levels of internal and external customers can be identified as more benefits associated with SCM (Sharma, 2015:25).

The above information indicates that there are numerous benefits that can be derived from implementing SCM into a business model. In other words, if businesses involved in a supply chain network collaborate, share information and manage materials and resources effectively, the whole network will be optimised for enhanced strategic and financial objective achievements.

2.8 SUMMARY

This chapter provided a literature overview of SCM. Reference was made to the following objectives of SCM, profitability, reliability, flexibility, responsiveness, turnover rate, communication and coordination. A discussion ensued on the importance and role of SCM where the characteristics of SCM was identified, the flow of a supply chain was illustrated and activities of SCM were presented. Reference was then made to commonly used practices in SCM. The influence of innovation and technology improvements on SCM was probed by discussing technology enhancement concepts in SCM and by referring to e-commerce in SCM.

The information included in this chapter reinforced the importance of effective SCM practices by highlighting the challenges that arise from ineffective SCM practices, and also the numerous benefits of technology and innovation in the retail value chain. The following chapter will discuss the research design and methodology followed in this study.

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

Chapter Two provided an overview of the study and commenced with the objectives of SCM which was followed by the role and importance of SCM in retail businesses. There after reference was made to the characteristics of SCM which was followed by different SCM techniques found in business today. A discussion on the commonly used practices in SCM was presented. The challenges related to SCM and how to overcome them, as well as numerous benefits of technology and innovation on supply chain practices were also presented.

Bimenyimana, Poggenpoel, Myburgh and Van Niekerk (2009:6) define a research design as a set of guidelines and instructions to be followed in addressing the research problem by gathering and analysing data. Collis and Hussey (2013:59) indicate when planning research, a number of features need to be considered, such as the purpose of the study, the nature of the information, data sources and means of data collection. Berndt (2009:05) suggest that the purpose of a research design is to present the master plan that will specify the methods and procedures for collecting and analysing the information. The purpose of this research is to investigate the best SCM practices in retail and suggest improvements to participants and selected retail outlets in the Nelson Mandela Metropole.

The chapter commences with a discussion regarding the research design, and the primary research paradigms available in modern-day research. The population, sample size and sample selection of the study are discussed, followed by the data collection methods where reference is made to the secondary and primary research that was undertaken. The measuring instruments are described, after which the data analysis for these phases is subsequently discussed. The chapter concludes with a discussion regarding how the trustworthiness of the data collected was ensured.

3.2 RESEARCH DESIGN AND METHODOLOGY

According to Issak and Kwasira (2012:450) the purpose of a research design is to achieve greater control of the study and research plan which enables the researchers to address the problem of the study by examining the research problem. In addition, Issak and Kwasira (2012:450) note that the research methodology provides a detailed discussion of the research design, population, data collection procedure and data analysis. Collis and Hussey (2013:344) affirm that a research design summarises the comprehensive strategy for running a research inquiry. Bryman *et al.* (2014:100) add that the research design acts as a structure to collect and examine data and respond to the research questions. Crowe and Sheppard (2012:1494) refer to research design as the overarching approach or approaches used to answer the research question such as true experimental or phenomenological designs.

According to Bryman *et al.* (2014:100) the research design indicates decisions about some vital elements of the research process, such as:

- how to express fundamental associations between variables;
- whether, and how, the results can be made relevant to a larger group of individuals or businesses than those actually forming part of the current study;
- how to comprehend and explain behaviour and the significance of that behaviour in its particular context; and
- how to explain social incidences, their interdependence and changes over time.

According to Collis and Hussey (2013:59) the starting point in the research design is to select a research paradigm. The different research paradigms available are presented in the following section.

3.2.1 Research paradigms and approaches

A research paradigm is a philosophical strategy and structure that guides how scientific research should be conducted. Lameck (2013:19) refers to a research paradigm as the scientific approach used by the research to conduct research and refers to qualitative and quantitative approaches. The positivistic paradigm is known as quantitative, objectivist, scientific, experimental or traditional research, and the

interpretivist paradigm is known as qualitative, subjectivist, humanistic or phenomenological research (Collis & Hussey, 2013:46). These two paradigms are discussed in more detail in the following sections.

3.2.1.1 Positivistic research paradigm

Positivism emphasises the belief that reality is not dependent on people and the goal is to ascertain theories based on empirical research (Collis & Hussey, 2013:44). Since it is supposed that social occurrences can be appraised, positivism is associated with quantitative methods of analysis based on the statistical analysis of quantitative inquiry data. According Struwig and Stead (2013:6) data collected by positivistic research must be expressed in numbers. Bryman *et al.* (2014:10) adds that the positivistic research method uses deductive reasoning when prevailing theory is tested.

According to Aleca, Mihai, Stanciu and Vrîncianu (2009:77) the purpose of positivistic research is to test theories and causal realities that explain and predict phenomena. Quantitative researchers are not concerned with portraying how things are, but rather attempt to know why things are the way they are (Bryman *et al.*, 2014:40). Antwi and Hamza (2015:221) indicate that positivistic researchers assess variables on a sample of subjects, and show a relationship between variables using statistics such as correlations, relative frequencies or differences in averages, with intent to examine the theory.

As is evident from the above mentioned the positivistic paradigm can be applied in a research context where the findings need to be generalised and a large number of people need to be researched. However, a number of criticisms have been raised against research following this approach and due to these criticism researchers often choose the interpretivistic research paradigm, which is presented next.

3.2.1.2 Interpretivist research paradigm

According to Collis & Hussey (2013:44) interpretivism is derived from the inadequacy of positivism to meet the requirements of social scientists. Interpretivism is reinforced by the belief that reality created through social interaction is not objective, but highly subjective, because it is moulded by views and opinions. Interpretivism focusses on

exploring the complexity of social occurrences to improve interpretive understanding, and interpretivists set off from the belief that the subject matter of social sciences- people and their institutions – is essentially dissimilar from that of the natural sciences (Bryman *et al.*, 2014:14). A separate research reasoning is therefore required for the study of the social sciences where the distinctiveness of humans is reflected.

Collis and Hussey (2013:45) state that interpretive research is any type of research where the outcomes and deductions are not derived from statistical examination of qualitative data. Instead, the outcomes and deductions stem from qualitative methods of analysis which are based on the interpretation of qualitative research data. Havenga, Mentz and De Villiers (2011:28) both suggest that the interpretivistic paradigm relates to knowledge and deep insight that are intentionally obtained by the interpretation of constructs through the lived experience of human beings such as words, pictures and actions.

According to Dornor (2015:27) the purpose of an interpretivist paradigm is to obtain in-depth and informative data which can cultivate new theories. Bryman *et al.* (2014:42) add that this research approach generates theory and different categories are established as a consequence of the analysis of the data collected. Tekin and Kotaman (2013:84-85) state that this kind of research permits researchers to understand the contexts in which decisions and activities are undertaken and focuses on how and why things happen the way they do. Yin (2011:6) suggests the challenge in drawing a sufficient sample of respondents and obtaining an adequately high response rate that is required in quantitative survey adds to the appeal of using the qualitative approach.

The interpretivistic paradigm can be applied in a research context where there is a need to understand issues from the perspective of individuals and how they experience these issues.

3.2.1.3 Paradigms and research approaches followed in this study

Collis and Hussey (2013:50) suggest that the specific paradigms to be embraced in research are determined by the research assumptions and the nature of the research

problem to be investigated. The study's interpretivistic paradigm (qualitative approach) inquiry can be regarded as exploratory as it attempts to understand and investigate SCM practices in order to identify best practices so that guidelines can be provided to retailers within the Nelson Mandela Metropole in order for them to perhaps gain a competitive advantage over competitors.

The exploratory nature of this inquiry suits the interpretivistic paradigm and requires a qualitative approach. The inquiry will follow a qualitative research approach where five semi-structured interviews will be conducted with middle-managers and senior buyers within the Nelson Mandela Metropole retail sector.

3.3 POPULATION, SAMPLE AND SAMPLING METHOD

The population, sample and sampling methods will be presented in the following sections.

3.3.1 Population and sampling frame

The first step in defining a research sample is to define the population (Struwig & Stead, 2013:115). The population of a research can be defined as all of the individuals, members or units relevant to a study (Quinlan, 2011:206). Furthermore, Collis and Hussey (2014:197) indicate that if a population is moderately small, the entire population can be selected, otherwise a sample needs to be selected. Struwig and Stead (2013:115) affirm that as it is not always practical to collect data on every possible observation in a population, there is a need for sampling in the population.

The population for this study will be divisional buying offices for retail outlets in the Nelson Mandela Metropole.

After defining the population of a research study, it is important it to construct a sampling frame. According to Lohr (2010:3) and Miller, Strang and Miller (2010:28) a sample frame refers to a list of items of the population from which the sample may be selected. In addition, Struwig and Stead (2013:115) note that in order to establish how many members there are in a population, an appropriate sample frame should be

constructed. The sampling frame of the divisional buying offices for the retail outlets in the Nelson Mandela Metropole is listed below:

- Massmart Holdings Ltd
- Pick n Pay Corporate
- SPAR franchise
- Shoprite Holdings Ltd.
- Smollan Holdings Ltd.
- Dis-Chem franchise

3.3.2 Sample

For most research it is impossible to and impractical to include everyone in the sample population (Struwig & Stead, 2013:114). According to Bryman *et al.* (2014:176) sampling is concerned with the selection of individual observations with the intention to yield some information about the population of concern. In addition, Hair *et al.* (2015:165) state that the sample of a study should be truly representative of the populations' characteristics and free of any bias. A sample of five participants at divisional buying offices of retail outlets in the Nelson Mandela Metropole will be interviewed as they all reside in the area and are involved in various activities of SCM. The sample consists of two volunteers who are appointed as senior buyer's, one who is appointed as a divisional financial manager, one who is appointed as a regional buyer and the last participant who is appointed as a store manager.

Bryman *et al.* (2014:172) and Struwig and Stead (2013:116) assert that there are two primary sampling techniques, namely probability and non-probability sampling. These two sampling methods are elaborated on in the following sections.

3.3.2.1 Probability sampling techniques

According to Struwig and Stead (2013:118) probability sampling is established on the basis that every member of the population has a recognised non-zero probability of occurring in the sample and chosen on a purely random basis. Bryman *et al.* (2014:170) add that a representative sample is more probable when using the probability sample techniques which include methods such as simple random,

systematic, cluster and stratified sampling. These methods are briefly discussed in the sections to follow.

(a) Simple random sampling

A simple random sample is an unbiased surveying method and the most basic form of probability sample (Bryman *et al.*, 2014:172). Struwig and Stead (2013:118) add that in simple random sampling each attainable sample grouping within the population has an equal likelihood of being chosen and include in the sample, and the researcher requires a comprehensive and accurate list of all members in the population. Quinlan (2011:200) indicate that in order to create random samples researchers frequently use tables of random numbers and that these tables can also be computer generated. However, Struwig and Stead (2013:118) warn that although random sampling is perceived as the most precise sampling method, the selected sample might not always be an exact replica of the population as no research statistic is ever absolutely correct.

(b) Systematic sampling

Struwig and Stead (2013:118) describe systematic sampling as a method in which only the first member of a sample is selected randomly, and the remaining members of the sample are selected at fixed intervals. This method involves the selection of members from an ordered sampling frame. Furthermore, Struwig and Stead (2013:120) suggest that the sampling should begin by choosing a member from the list at random and every n^{th} member in the sample frame is selected subsequently. However, Bryman *et al.* (2014:173) warn that it is vital to ensure to ensure that there is no intrinsic ordering of the sample frame, since this may bias the subsequent sample.

(c) Cluster sampling

It is sometimes not possible to select respondents independently and as a consequence, it is appropriate to use cluster sampling (Quinlan, 2011:211). According to Bryman *et al.* (2014:174) researchers divide the members of a population into groups, and then selects any number of these groups randomly, including all the members in those groups. Furthermore, Quinlan (2011:211) observes that cluster

sampling is particularly helpful with populations that are geographically split into clusters.

(d) Stratified sampling

Struwig and Stead (2013:119) define stratification as the process of choosing a predetermined number of members from each group, splitting members of the population into similar subgroups-referred to as strata – instead of selecting from the complete population. Struwig and Stead (2013:119) add that questions should be asked with regard to the criteria used to sample the group, the number of groups and the sample size within each group. Based on the information available from a sample frame, units with more or less similar characteristics are being measured, in this way the stratum will become homogenous and thus the aim will be achieved (Hair, Celsi, Money, Samouel & Page. 2015:171). Bryman *et al.* (2014:174) add that the sample taken from each stratum can be either balanced or unbalanced in terms of the number of members in the strata. Once the population is stratified simple random sampling or systemic sampling can be used within each stratum as this often the representativeness of the sample by reducing the sampling error. Bryman *et al.* (2014:174) further observe that stratified sampling can only happen when it is relatively easy to detect and allocate members to groups.

Non-probability sampling techniques will be presented next.

3.3.2.2 Non-probability sampling techniques

Struwig and Stead (2013:116) indicate that non-probability sampling is appropriate to employ when researchers have confidence in personal judgement. Non-probability sampling techniques cannot be used to induce from the sample to the general population, since it ignores the probability of occurrence. Yeager, Krosnick, Chang, Javitiz, Levendusky, Simpser and Wang (2011:711) are of the opinion that non-probability samples may intermittently produce results that are just as accurate as probability samples. There are four types of non-probability sampling namely convenience, snowball, quota and judgement sampling (Cooper &Schindler, 2008:169-170; Bryman *et al.*, 2014:178; Struwig & Stead, 2013:116). These non-probability sampling methods are discussed below.

(a) Convenience sampling

According to Bryman *et al.* (2014:178) convenience sampling involves choosing members by virtue of their accessibility. Struwig and Stead (2013:116) note that convenience sampling can be utilised when the population has a great deal in common. According to Lucas (2013:54), since members of the population are selected based on their relative ease of access, this method is subjective because researchers may interact with some respondents and deliberately avoid others. Lucas (2013:54) adds that respondents who volunteer for the study may differ from non-participants considerably. Bryman *et al.* (2014:178) assert that the data will not allow conclusive findings to be produced, because of the problem of generalisation, however, it could provide a catalyst for additional research.

(b) Snowball sampling

With snowball sampling the researchers initially communicate with a small group of people who are relevant to the research subject, and then employ these people to generate contact with others (Bryman *et al.*, 2014:178). Bryman *et al.* (2014:179) add that the snowball sampling approach can be used when there is no readily available sample frame for the population from which the sample is to be taken, or where the features of the population are not fully recognised. Babbie and Mouton (2012:167) suggest that snowball sampling is chiefly employed in qualitative research and for exploratory purposes. Furthermore, Struwig and Stead (2013:118) note that this process is also utilised to trace members of uncommon populations through a referral process.

(c) Quota sampling

A quota sample is chosen according to the demographics of the members and includes various groups or quotas of the population in the study, based on some criteria. (Struwig & Stead, 2013:117). However, Bryman *et al.* (2014:180) argue that this method is comparable to stratified sampling, but in quota sampling the choice of the sample is non-random, because the final selection of the members is assigned to the interviewer. Bryman *et al.* (2014:180) further observe that a quota sample is moderately easy to manage and when speed is important, a quota sample is

invaluable when compared to the more awkward probability sample. Babbie and Mouton (2012:167) however caution against the use of this method stating that it is challenging to obtain precise and up-to-date information on the sub-groups of the populations. According to Bryman *et al.* (2014:180) another challenge of quota sampling is that sampling error cannot be measured, because the method of selection is non-random.

(d) Judgemental sampling

A judgemental sample is when participants are chosen for their distinctive characteristics and experiences and allows a researcher to use cases that have the necessary information with regard to the objective of the study (Richards & Morse, 2013:231). Babbie and Mouton (2012:167) suggest that in situations where the researcher has data on the characteristics of the population to be studied and where it is almost unattainable to count the entire population, a judgemental sampling procedure is suitable. Babbie and Mouton (2012:167) add that if the purpose is not to generalise a population, but to gain insight into a phenomenon, individuals or events, the researcher purposefully chooses individuals, groups and individuals, groups and setting for this stage that will stretch understanding of the initial phenomenon.

The sampling techniques adopted for this study will be discussed in the following section.

3.3.3 The sampling techniques adopted in this study

For this study the non-probability sampling techniques, convenience, snowball and judgemental sampling methods were utilised. A sample size of ten is deemed desirable for interviews to be conducted as information from participants will likely become saturated after five interviews. A combination of middle management candidates and senior buyers amounting to five interviewees will be approached in the Nelson Mandela Metropole based on their availability, willingness to participate. These participants will be selected based on their involvement in SCM in their field of work. Convenience sampling is advantageous in that it entails the selection of the most accessible subjects in the Nelson Mandela Metropole to form the sample for the study and is quick inexpensive and need very little planning. Conveniently chosen

participants also make referrals to people they know (snowball sampling) to increase the possibility of obtaining valuable information from them. Having participants in the specific line of work (judgmental sampling) that deals with the SCM activities also increases the chances of attaining relevant information to the study. Data collection will be discussed in the following section.

3.4 DATA COLLECTION

To address the objectives of this study, both secondary and primary research was undertaken.

3.4.1 Secondary research

Secondary data is data that has already been gathered and recorded by someone else, other than the user, for an alternative reason than the current research (Struwig & Stead, 2013:82; Levchenko & Haidoura, 2016:33). In addition, Bryman *et al.* (2014:267) define secondary data as interpretations of key, original data. Sources of secondary data include annual reports, journal articles, newspaper articles, government publications and business reports (Struwig & Stead, 2013:82). The goal of secondary research is to gather relevant and up-to-date secondary data to be utilised in a study and to contextualise the study within the general body of scientific knowledge (Babbie & Mouton, 2012:565). Bryman *et al.* (2014:268) add that secondary data has been collected for another reason and may also be used in combination with primary data so that a relative element can be merged into the research design. However, Cheng and Phillips (2014:374) caution that although secondary data sources provide researcher with a vast amount of information, quantity is not synonymous with appropriateness simply because it has been collected to respond to a different research question or objectives and may therefore not be regarded as relevant.

For the purpose of this study a literature review was conducted on the objectives and, the importance and role of SCM in the retail industry. Reference was also made to commonly used practices in SCM. The influence of innovation and technology improvements on SCM was also referred to. The challenges that arise from ineffective SCM practices and how to overcome them was also presented. The numerous

benefits of technology and innovation in the retail value chain concluded the secondary research.

A variety of relevant textbooks and well-known journal articles were consulted. In addition, the library facilities available at the Nelson Mandela University was used to access National and International databases, such as Emerald, EBSCO host, Sabinet and Google Scholar. The relevant secondary sources consulted formed a basis for the literature research.

In order to become more knowledgeable about the SCM practices and different dimensions of SCM further exploration through primary research was required. The primary data collection process is discussed in the section below.

3.4.2 Primary research

Primary research comprises all the data gathered through the researcher's own efforts and excludes all data that existed before the beginning of the study (Struwig & Stead, 2013:82). According to Collis and Hussey (2014:343), all data created from a key central source such as interviews, surveys or focus groups is referred to as primary data. Driscoll (2011:3) notes that the eventual goal in conducting primary research is to study something new that can be approved and supported by others, while decreasing inflexible ideas during the course of the study.

3.4.2.1 Primary data collection methods

There are various means available for the gathering of primary data, namely surveys, interviews, focus groups and case studies (Quinlan, 2011:228; Struwig & Stead, 2013:89; Collis & Hussey, 2014:60). All of these data collection methods will be discussed below.

(a) Surveys

Thomas and Brubaker (2008:126) explain that surveys involve collecting information regarding a topic from a variety of sources, then conveying a summary of the findings. Harwell (2011:149) state that a survey is a suitable method if the study is quantitative in nature, and a representative sample of a large population is required. Collis and Hussey (2014:343) affirm that quantitative data is often collected through surveys and

questionnaires that are carefully established and organised to provide numerical data that can be examined statistically and produce a result that can be made relevant to a larger population. In survey research, structured questions are utilised to reduce the variances in answers provided (Bryman *et al.*, 2014:215). Structured questions are built on founded theory, research or experience of the researcher (Struwig & Stead, 2013:90).

(b) Interviews

According to Bryman *et al.* (2014:215) and Struwig and Stead (2013:89) interviews can be semi-structured or unstructured. In a semi-structured interview, the researcher has a list of themes and questions to be covered. The semi-structured interview has the capacity to be easily adjusted to allow the interviewee to raise issues and explain points of relevance (Bryman *et al.*, 2014:216). In qualitative interviewing, more meaning is attached to the interviewees' viewpoint and there can be a considerable deviation from the questions asked in the interview schedule (Silverman, 2010:194). Should the researcher wish for more comprehensive and rich answers the interviewee may be questioned more than once, as the interviewees are given the opportunity to discuss issues beyond the question's boundaries.

Semi-structured interviews will be conducted in this study to develop an understanding of:

- The importance of effective SCM practices and to investigate why retailers use different supply chain practices;
- To investigate why technology and innovation is integrated into the supply chain practices;
- Identify how supply chain practices can create a competitive advantage and streamline efficiencies in order reduce the lead time of making the product available to the final customer; and
- To suggest best practices in SCM at selected retail outlets in the Nelson Mandela Metropole.

An interview that is informal and is used for in-depth exploration of a subject of general interest, and which allows the interviewees to use their own words is referred to as an

unstructured interview (Silverman, 2010:194). Bryman *et al.* (2014:216) add that the questioning style is unusually informal and the type and advancement of questions will differ from interview to interview. Furthermore, Struwig and Stead (2013:102) perceive unstructured interviews as the most recognised form of interview in qualitative research. This interview technique can make it challenging for interviewer to establish patterns or common themes among interviewees with varied responses (Struwig & Stead, 2013:102).

(c) Focus groups

In the case of focus groups, which are typically used in qualitative research, interviews are conducted with a group of participants at the same time. The researcher will attempt to provide a relatively informal setting in order to extract the participants' opinions and perspectives on the research subjects (Bryman *et al.*, 2014:215). Quinlan (2011:224) refers to the fact that the group typically meets around a table as the focus group setting aids with securing equal involvement from all members. Struwig and Stead (2013:102) mention that a focus group study is an organised conversation to obtain probable information on a subject in a secure and accepting environment that allows participants to debate on more important issues. However, Bryman *et al.*, (2014:238) caution that focus groups can cause uneasiness among participants especially when details regarding private lives need to be exposed. Furthermore, Bryman *et al.* (2014:233) indicate that focus groups needs a large amount of resources to arrange and are difficult to organise.

(d) Case studies

When a case study method is utilised the researcher studies one or a few cases and engages in an in-depth examination of the case or cases (Quinlan, 2011:225). According to Bryman *et al.* (2014:117) a case can be a single business, a single location, a single event or an individual. Struwig and Stead (2013:7) state that case studies are not usually employed in quantitative research, due to the fact that they necessitate a concentrated examination of a relatively small number of cases. Quinlan (2011:182) however, contends that a case study methodology can pull from quantitative or qualitative data, or a combination of both. Bryman *et al.* (2014:110) note that users of a case study design often prefer qualitative methods such as participants

observation and semi-structured interviewing, because they help to generate rigorous and comprehensive examination of the case. Furthermore, Bryman *et al.* (2014:113) assert that case studies can be related to both theory creation and theory testing, which assists in making generalisations from the case study.

The previous sections discussed different primary data collection methods and it is evident that there are a wide number of methods available to the researcher. Primary data collection methods include surveys, interviews, focus groups and case studies. The methods that provide the most useful and appropriate data to the research questions should be used. The measurement instrument that was used for data collection are presented in the following section.

3.4.2.2 Measuring instrument for data collection

A semi-structured interview schedule was used in this study to obtain the primary research data. According to Quinlan (2011:303), an interview schedule is the list of questions to be asked regarding the points or issues needing to be discussed through an interview or a series of interviews. Interview schedules provide interviewees the chance to express themselves with regard to the specific aspect being explored and delivered an open approach to the interview (Robert Wood Johnson Foundation, 2008:1). Unlike an unstructured interview schedule, a semi-structured interview schedule is primed in advance, and provides a construct for the interview (McIntosh & Morse, 2015:4). The significance, for the interviewees, of the issue being investigated and their personal experiences and understanding of it, are allowed to develop interviews the semi-structured interview schedule design (Harrel & Bradley, 2009:27). Since a semi-structured interview guide provides a clear set of instructions for interviewers and clear and clear, reliable and comparable qualitative data is provided, many researchers like to use it because the questions can be prepared ahead of time. This allows the interviewer to be equipped and appear competent during the interview (Robert Wood Johnson Foundation, 2008:1).

For the primary data the study incorporated the qualitative data collection research approach in the form of a semi-structured interview schedule (see Annexure A) as it seems to be an appropriate data collection method as the study aims to find exploratory data that can be generalised to the population by evaluating a comparative

analysis of the participants shared information. This study only needs a small sample otherwise information received become saturated. Five participants from middle management and senior buyers from retail outlets and their respective divisional buying offices in the Nelson Mandela Metropole were selected. These individuals are actively involved in managing SCM practices daily in their respective businesses and have years of working experience.

The following section reviews the data analysis for qualitative research approaches that can be followed.

3.5 DATA ANALYSIS

With data analysis it is vital to note that the analysis and interpretation of the data differs for qualitative and quantitative research methods (Struwig & Stead, 2013:155). Data analysis for qualitative studies as pertaining to this study will be discussed to fit the research design utilised in this study.

It is acknowledged that a number of forms of qualitative research data analysis approaches can be found in literature and include, amongst others, case studies, content analysis and the constant comparative method (Quinlan, 2011:182-185; Bryman *et al.*, 2014:344-354). These data analysis methods are discussed in the following sections.

3.5.1 Case studies

Case studies can be regarded as a data collection method as well as a data analysis method. Case studies are widely used in business research and when a qualitative research design is preferred. A case study is a thorough and rigorous analysis of a solitary case and can be extended to include more cases for comparative purposes (Bryman *et al.*, 2014:347). Denscombe (2008:35) mentions that case studies concentrate on one instance of a specific issue to provide a complete account of events, relationships, experiences or processes taking place in that particular instance. Bryman *et al.* (2014:357) note that researchers utilising this method make use of a broad variety of sources of evidence, including written notes and documents and recordings of observations and participants observations. Yin (2011:118) asserts

that it is necessary to create a well-organised data base, which should comprise all the data gathered after the conclusion of each case.

In this study the biographical profiles of participants were recorded as case studies so as to provide a detailed background of the participants and to assist in identifying the commonly used practices at selected retail outlets and establish how these practices are integrated into these businesses. The case studies will also make it easier to understand the significance of the participants experiences and why they are regarded as a source to provide vital input.

3.5.2 Content analysis

Bryman *et al.* (2014:354) explain that content analysis within qualitative research concentrates on the content, underlying themes and significance of texts. Quinlan (2011:226) mentions that content analysis refers to the examination of some feature of a specific type of communication. Bryman *et al.* (2014:305) warn that in the use of content analysis, caution must be taken that it does not result in a disintegration of data so that the account and the flow of what people say is absent. Babbie and Mouton (2012:388) assert that content analysis is essentially coding and as long as the researcher has access to the information to be coded, a content analysis can be performed. In the analysis of content, one of the most widely used models to plan the data analysis process is Cresswell's (2014:196-200) six-step model. Cresswell's (2014:196) model consists of interrelated steps and do not necessarily follow in the order they are given, namely:

- Organise and formulate the data for analysis by recording interviews, and sort and arrange data if different sources of information are utilised;
- Read through all data to get an overall sense of the information and its overall importance, and also write down general notes of data;
- Code the data by organising it into themes of information and write a word that embodies a theme in the margin;
- Give detailed accounts of the setting or the people involved, as well as descriptions of the themes for analysis;
- Present the outcomes of the analysis in a narrative passage to deliver the findings of the analysis like connecting themes; and

- Interpret the results of the analysis.

Cresswell's six-step process will be followed in this study to analyse the content of the semi-structured interviews. Content analysis will be used to develop a better understanding of SCM practices in retail businesses.

3.5.3 Constant comparative method

According to Struwig and Stead (2013:179) constant comparative analysis is a qualitative data analysis technique which is used when data is inductively examined and theories are not set at the start of the research. The constant comparative method is utilised to develop concepts from the data by coding and analysing it simultaneously (Kolb, 2012:83). The method involves exploring likenesses and difference in the data gathered (Quinlan, 2011:428). Struwig and Stead (2013:180) note that after the procedure has been followed, an audit can be generated, which will allow other researchers to check the process followed and conclude if reliable and valid interpretations have been made.

In this study the constant comparative analysis technique was used. The finding of all participants and literature are compared to determine the best practices for SCM in the Nelson Mandela Metropole.

The following section focusses on how trustworthiness and rigour of the research findings were ensured.

3.6 TRUSTWORTHINESS AND RIGOUR OF THE RESEARCH FINDINGS

The issues of validity and reliability are engaged differently in qualitative and quantitative research. Generally, qualitative researchers are concerned with the trustworthiness of the data and research findings whereas quantitative researchers are concerned with the soundness and reliability of findings (Quinlan, 2011:306).

In qualitative research, quality is established by ensuring trustworthiness of the research, which relates to the objectivity of its findings (Babbie & Mouton, 2012:277). Struwig and Stead (2013:136) adds that trustworthiness relates to the extent to which the research can be depended upon and believed. Furthermore, Babbie and Mouton, (2012:277) state that qualitative research can use the following four suppositions to

precisely reflect the assumptions of the qualitative paradigm: credibility, dependability, conformability and transferability. These suppositions are discussed next.

3.6.1 Credibility

Struwig and Stead (2013:137) defines credibility as the degree to which the data and the data analysis can be considered believable and trustworthy. Yin (2011:19) asserts that the objective of building credibility is that qualitative research is performed in a publicly accessible manner and that the research processes are transparent. Credibility can be established in a qualitative inquiry by implementing the following strategies by Babbie and Mouton (2012:277) and Anney (2014:276):

- prolong engagement with the participants while doing research;
- using co-worker questioning to assist in providing analysis guidance;
- triangulation of various data sources;
- allowing participants to check and assess the data and interpretation thereof, and suggest changes; and
- adequate documenting and recording of the findings.

Follow-up meetings were arranged to discuss the interpretation of the data with participants. By keeping all audio recordings, notes, interview schedules, transcripts and memos to create an audit trail, credibility of the research is further ensured.

3.6.2 Dependability

According to Babbie and Mouton (2012:276), dependability is equivalent to the idea of reliability in quantitative research. Quinlan (2011:307) refers to dependability as a systematic, rigorous and well documented research procedure. Struwig and Stead (2013:137) add that the findings of qualitative research should be constant and reliable. Babbie and Mouton (2012:276) however argues that the demonstration of credibility in research is adequate to establish dependability. Quinlan (2011:307) advises qualitative researchers to document, explain and justify every decision made in the research project. Anney (2014:287) affirms that dependability is proven by using an audit trail and furthermore recommends that researchers codes the same data twice to see if the results remain constant. The researchers identified themes in order

to establish commonalities in practices from the collected data. This allowed researchers to assess current practices used by selected retail businesses in the Nelson Mandela Metropole and suggest improvements.

In this study to achieve dependability, researchers coded data twice to see if data remain constant and also ensured that steps followed in the inquiry were logical, traceable and clearly documented by giving account of research and the creation of an audit trail.

3.6.3 Confirmability

According to Struwig and Stead (2013:137), confirmability relates to whether the research is confirmed by other data sources. To achieve confirmability, Anney (2014:279) suggests the use of a reflective journal where the researcher documents personal thoughts in relation to the study to offer evidence that the researcher did not merely find out what he or she set out to find.

In this study researchers continuously asked whether the data help confirm the general findings by providing detailed information and literature review confirmation. Researchers remained aware of subjectivity and bias which may be present. The researchers also archived all data collected so that it can be made available should findings be challenged.

3.6.4 Transferability

According to Babbie and Mouton (2012:276) transferability is similar to the concept of external reliability in quantitative research. Struwig and Stead (2013:137) state that it should be probed whether the findings of the study would be advantageous in similar environments to that of the study and thus refers to generalisability. Babbie and Mouton (2012:277) suggest that researchers can ensure transferability through sufficient discussion of the sample and context. Quinlan (2011:307) affirms that transferability can be achieved by supplying a comprehensive and rich description of the setting in order to provide adequate information for assessing whether findings are applicable in other settings.

In this study a detailed description of the research was provided and participants for this study was purposefully selected, which facilitated the transferability of the inquiry

in this study. The compilation of case studies for each of the participants provide a summary of the setting and thus made transferability possible for this particular inquiry.

3.7 SUMMARY

The aim of this chapter was to discuss the research methodology that was followed in this study. Firstly, the two main research paradigms were discussed, and the paradigm most suitable for the study was found to be the interpretivist paradigm. Thereafter, the various research approaches were presented.

The population and sample of the study were referred to. Retail outlets and their respective divisional buying offices in the Nelson Mandela Metropole are the population of this study. Sampling methods were discussed in the form of probability- and non-probability sampling. Convenience sampling, judgemental sampling and snowball sampling were used in this study. A combination of five middle managers and senior buyers in the Nelson Mandela Metropole participated in the research.

The primary and secondary data collection methods were elaborated on. The various forms of primary data collection methods were discussed. Primary data collection for this study was done via semi-structured interviews with a newly developed semi-structured interview schedule. The research instrument was evaluated by considering the semi-structured interview schedule design and measuring techniques.

The different data analysis procedures which were used in this study were discussed and motivation were provided as to why they are deemed appropriate. In conclusion, trustworthiness and rigour of the measuring instrument used were discussed.

The next chapter will present a biographical profiling of all five participants who participated in this study.

CHAPTER 4 BIOGRAPHICAL PROFILE OF THE PARTICIPANTS

4.1 INTRODUCTION

Chapter Three provided a discussion on the research design and methodology used in this study. The research paradigms were discussed and the reason for the selection of the qualitative approach were provided. Chapter Three also discussed the data collection procedures with regard to secondary and primary data as well as how the trustworthiness of the data in this study will be ensured.

In this chapter, a summary is provided of the biographical profile of the participants, with an indication of their involvement in SCM. This chapter will discuss how each of these participants fits into the SCM process and how each of them operate to achieve a common goal. A discussion of their roles and how they manage processes related to SCM follows.

4.2 BIOGRAPHICAL PROFILE OF SENIOR MANAGERS

Five males at senior management level were interviewed. All five interviewees reside in the Nelson Mandela Metropole and are involved in various activities of SCM. The biographical profile of each participant will be presented as a case study.

4.2.1 PARTICIPANT A

Participant A is a senior buyer in the retail sector. He is currently (2018) a 43-year-old, white Afrikaans-speaking male who holds a Business Management degree from the University of Port Elizabeth, and is employed at the largest fast-moving consumer goods (FMCG) retail operation on the African continent. Participant A is based in Greenacres, in the Nelson Mandela Metropole.

Participant A was suitable for this study as his area of responsibility covers a large geographical area. The business makes use of a distribution center and sophisticated stock management processes that is used nationally as a business. Participant A has a wealth of experience in managing supply chain practices and is actively contributing to the success of his department daily. He is focused on increasing loyalty of customers by reducing out of stock situations and creating perceptions of being

reliable retailers. Participant A is responsible for information sharing which includes sharing demand, sales forecasts and promotional activities which influences inventory levels. It is important to have an effective integrated resource planning system as this ensures effective functioning of the entire chain and Participant A manages this closely. Participant A collaborates with suppliers through joint planning of operations and making business decisions together, this is done to enhance cost efficiencies and improve quality of products throughout the supply chain.

This holding company operates a total 1 246 corporate stores in 16 countries, all integrated electronically into a central data base and replenishment system. The group's primary business is food retailing to consumers of all income levels and there are outlets from Cape Town to Accra and on some Indian Ocean islands.

Management's goal is to provide all communities in Africa with food and household items in a first world shopping environment, at the lowest prices. At the same time the group is inextricably linked to Africa, contributing to the nurturing of stable economies and the social upliftment of its people.

Participant A has 22 years of working experience in the retail industry and has been in his position for the past seven years. Participant A has worked in various departments namely, Business Management, Logistics Management and Marketing.

4.2.2 PARTICIPANT B

Participant B is also a senior buyer in the retail sector. He is currently (2018) a 50-year-old, English-speaking Indian male and holds a National Diploma in Business Management from Port Elizabeth Technikon. Participant B is a senior buyer for the Eastern Cape region and is situated in the Port Elizabeth divisional buying offices. Participant B is responsible for coordinating all buying activities for a range of low-cost supermarket stores for this particular region.

Participant B's insight is necessary for this study as he is responsible for managing efficiencies that improve SCM and plays an integral role in managing supplier relations. He is focused on driving initiatives that involves suppliers. Participant B makes use of the distribution center space for strategic buying opportunities and negotiates with suppliers to get the best possible price. He is also focused on managing costs and mostly makes use of supplier logistics to service the stores in his

region. Participant B is strategic in his approach in doing business and managing the supply chain process; he ensures that his buying team is aligned with the business strategy in order to provide the best service to their customers.

Participant B is employed by a group which owns the youngest retail supermarket chain, which emphasise focus on the need of lower income consumers. The brand removes the cost of packaging and regular store frills and trimmings out of the value chain and passes this saving onto the consumer. This gives consumers the price advantage associated with bulk buying, without the need to buy in bulk. The small format stores strategy allows greater penetration into Africa and previously underserved communities in South Africa.

Participant B has 32 years of working experience in the retail industry and has been in his position for the past 10 years. Participant B has also worked as a store manager, as a distribution center controller and was eventually promoted to junior buyer for this particular group, before occupying the current position of senior buyer.

4.2.3 PARTICIPANT C

Participant C is a divisional financial manager in the retail sector. He is currently (2018) a 52-year-old, Afrikaans-speaking white male and holds a Bachelors degree in Accounting from the University of Pretoria. Participant C also did a host of retail courses including, retail sales and a management development programme at the Gordon Institute of Business Science (GIBS) in Johannesburg. Participant C is responsible for all training initiatives related to the System Application and Products (SAP) retail system for his division. His core function is managing the data integrity and ensuring effective integration of stores and the buying office.

Participant C's input contributed greatly to this study as his core function is a vital link in SCM. The decisions and direction set by Participant C affects many functions that can be used to create a competitive advantage for the business. Participant C is focused on all activities that reduces risk from a financial and shrinkage perspective. This is necessary as it affects daily operations, working capital, replenishment processes all of which requires effective management as it has a direct impact on the profitability of the business. Participant C is responsible to pilot all new projects relating to stock management in his division first before it is shared as best practices with the

rest of the business. He is focused on staff training to ensure all parties involved understand the benefits of using effective SCM practices and understand the risks involved of non-compliance.

Participant C is employed by a South African based subsidiary, who's core activities relate to the retail of FMCG. This business is 100% South African owned, operating from various locations of which its head office is situated in Brackenfell in the Western Cape. The group continuously advance its primary purpose, which is to be Africa's most accessible and affordable food retailer. The group opened a net of 124 new corporate stores and is trading from 2843 outlets, adding 3736 additional jobs to bring the total staff compliment to 147487. This group caters for higher living standard measure (LSM) groups and is mostly located in major centers or malls, where it offers a wide range of products as well as service departments. The implementation of Systems Applications and Products in Data Processing (SAP) and to the Enterprise Resource Planning (ERP) system will allow all stores and distribution centers to communicate in all countries on one common technology platform and will facilitate inventory accuracy and improved efficiencies whilst addressing scalability.

Participant C has 27 years of working experience in the retail industry and has been in his position for the past 15 years. Participant C has engaged in various rigorous training and development programmes in his career in business. He has experience in various job functions which includes systems management, project management and financial management which all led his to his title now as a divisional financial manager who has frequent professional communication with senior leadership.

4.2.4 PARTICIPANT D

Participant D is a regional buyer in the retail wholesale of FMCG. He is currently (2018) a 39-year-old, English-speaking Indian male whose highest level of education obtained is a matric certificate. Participant D however, did engage in learnerships and apprentices including a management development programme at GIBS in Johannesburg. Participant D's core functions as a regional buyer stretches from purchasing and controlling inventory of all products for branch office to reviewing recommended order reports (ROR) and decision-making on orders and quantities.

Participant D also negotiates pricing and maintains relationships with vendors and lastly continually maintaining relationships in the sales department.

Participant D was suitable for this study as he is an important stakeholder in the SCM process, he does the buying of two major categories of the stores in his region which contributes to more than 60% of their total business. Participant D has adopted a demand-driven planning and business operating model based on real-time demand insights and demand shaping. This will ensure a complete view of the supply chain and an effective response to risks such as suppliers going out of business and natural calamities affecting manufacturing which the business can counter by adjusting pricing and promotions strategies to shape demand. Participant D also builds an adaptive and agile supply chain with rapid planning and integrated execution. This technique ensures better visibility, enhanced collaboration across the value chain and accelerated decision-making with better analytics and support. Participant D also groups their stores into clusters and does strategic buys into bigger stores which will serve as a cross docking warehouse. This is done to ensure that the smaller stores also benefit from having a competitive cost price without having to purchase the volume. Stock is delivered to the big regional store and then distributed to the smaller store's, this ensures that pricing is aligned and allows the business to be more competitive.

Participant D works for a wholesale division which targets lower LSM groups. The business sells food, liquor, groceries and cosmetics in bulk to independent dealers. The holding company holds a philosophy of supplying the right range of products at competitive prices for low to middle income consumers. The group keeps costs down by employing a no-frills cash-and-carry warehouse format, coupled with basic distribution centers that supply their private label and important general merchandise ranges. The group has 75 stores with geographic presence in South Africa, Botswana, Lesotho, Mozambique, Namibia and Swaziland. The group has 10470 employees servicing an LSM 2 – 6.

Participant D has 21 years of working experience in the wholesale FMCG industry and has only been in his current position for the past three years. Before he entered his current position, he was a store-based buyer managing for confectionary and

groceries for most of his career. Participant D was also part of the senior management team and assistant to the general manager.

4.2.5 PARTICIPANT E

Participant E is a store manager in the retail industry. He is currently (2018) a 38-year-old, English-speaking Indian male whose highest level of education obtained is a matric certificate.

Participant E was suitable for this study as he is responsible for managing customer service internally and externally at the lowest possible cost in order to add value to the supply chain strategy. This includes training staff to ensure that staff poses the necessary product knowledge to engage and sell to customers; as well as managing benefits of all staff and ensuring they are motivated to fulfil their duties. Participant E manages the stock pipeline through effective information sharing which includes data and analysis about product availability, suppliers, facilities, cost, prices and transport availability; Participant E manages the upward and downward flow of this information which assists the supply chain processes. Sourcing is also a function managed by Participant E which is the process of making strategic decisions on who will perform specific supply chain functions. Participant E is involved in Electronic Data Interchange (EDI) and purchasing to ensure the correct electronic transmission of orders and invoices. Participant E makes use of Radio Frequency Identification (RFID) to track items.

Participant E is employed by a pharmaceutical retail group. The pharmaceutical group aims to continue growing market share across all categories by focusing on customer relationships and in turn build their brand. The group strives to maintain a category leadership by always being responsive to consumer preferences and trends. The destination format drives superior trading densities and customer loyalty. The company was founded in 1978 and has since grown to have a geographical footprint of 118 stores in Southern Africa. The group employs more than 13500 full-time and part-time employees. The group also has a wide range and assortment of front shop products with over 60000 stock keeping units (SKU), creating a competitive advantage for the group.

Participant E has 15 years of working experience in the retail and has been in his current position for the past five years. Before he entered his current position, he was a prominent sales consultant for four years, and also fulfilled a coaching and mentoring role where he was responsible for new staff induction and sales training. Participant E served as one of the custodians of the business with regards to customer relations management before eventually getting promoted to store manager. Stock management and speed-to-shelf initiatives is among the core functions of Participant E's current portfolio.

4.2.6 Summary of the biographical details of the participants

The biographical profile of the participants who are all involved in the field of SCM, as described in this chapter, are summarised in Table 4.1.

Table 4.1: Summary of biographical profile of participants

Biographical data	Description	Frequency
Gender	Male	5
Race	White	2
	Indian	3
Age	21 to 30 years	0
	31 to 40 years	2
	41 to 50 years	2
	51 to 60 years	1
Employment position	Store manager	1
	Senior buyer	2
	Divisional financial manager	1
	Regional buyer	1
Highest qualification	Matric	2
	Diploma	1
	Bachelors	2
Work experience	15 to 19 years	1
	20 to 24 years	2
	25 to 29 years	1
	30 to 35 years	1

Source: Self developed

From Table 4.1 it can be seen that all five participants were male. The average age of the participants was 44 years, the oldest being 52 years and the youngest 38 years. In terms of racial demographics, two of the participants were white South Africans and the remaining three were all from an Indian ethnicity, but South Africans nonetheless. All five participants were employed at senior management level, with one being a store manager, one a divisional financial manager, one a regional buyer and the remaining two being senior buyers. With regard to the highest educational qualifications, one participant had a diploma, two a bachelors degree and the remaining two matric certificates. All the participants had general work experience exceeding 14 years.

Table 4.2 provides a summary of the participants involvement in SCM.

Table 4.2: Participants involvement in SCM

SCM history	Description	Frequency
Period involved in Senior Management	1 to 5 years	2
	6 to 10 years	2
	11 to 15 years	1
Focus of SCM	Inventory management	1
	Purchasing	1
	Systems Application and Products audit (SAP)	3

Source: Self developed

As depicted in Table 4.2, two participants have been involved in senior management for one to five years, another two have been involved for six to ten years and the remaining participant have been involved within his position for 11 to 15 years. Although all applicants are able to manage whole supply chains their respective portfolios demand focus on particular SCM elements. One participant focuses on inventory, where another focusses on purchasing and the remaining three focus primarily on the Systems Application Products audit.

4.3 SUMMARY

In this chapter a biographical profile of the five participants who participated in this study, was provided. The biographical profile of the five participants, all residing in the Nelson Mandela Metropole, was presented as a case study with an indication of the

SCM practices at selected retail outlets. The participants have sufficient general working experience as all exceeded 14 years. All participants were employed at senior management level with all fulfilling this portfolio for more than four years. The average age of participants were 44 years.

The results of the semi structured interviews will be presented within the emerging themes, subthemes and challenges identified in SCM when conducting the content analysis in the following chapter. Thereafter, the results of the constant comparative data analysis method will provide insight into how similar or different selected retailers in the Nelson Mandela Metropole approach SCM.

CHAPTER 5 THE RESULTS OF THE SEMI-STRUCTURED INTERVIEWS

5.1 INTRODUCTION

Chapter 4 presented the biographical profiles of the selected participants that participated in the study. The biographical profile of five SCM conversant people were each depicted as a case study with an indication of their demographics as well as the specific line of work they are in and also the reason the participants were deemed suitable for this study. The participants comprised of males as the industry is disappointingly male dominated in the Nelson Mandela Metropole. The sample for this study consists of a regional buyer, a divisional financial manager, a store manager and two senior buyers.

The results of the semi-structured interviews will be presented within the emerging themes, subthemes and issues that were identified when conducting the content analysis regarding effective SCM practices utilised, challenges, benefits and costs of effective SCM practices. Thereafter, the results of the constant comparative data analysis method will provide insight into how similar or dissimilar selected retailers in the Nelson Mandela Metropole approach SCM.

5.2 THEME IDENTIFICATION

A content analysis identified four main themes emerging from the semi-structured interviews with participants regarding best SCM practices in the Nelson Mandela Metropole as summarised in Table 5.1, along with corresponding subthemes.

Table 5.1: Main themes and sub themes emerging from participant semi-structured interviews

MAIN THEME	SUBTHEMES
Effective SCM Practices	<ul style="list-style-type: none"> ➤ Technology Integration ➤ Just-in-Time Inventory System ➤ Information sharing ➤ Establishing alliances with key suppliers ➤ Transportation network ➤ Training and development

SCM Challenges	<ul style="list-style-type: none"> ➤ Technology and innovation ➤ Receiving and delivery process ➤ Shrinkage ➤ Data integrity ➤ Bullwhip effect
Benefits that arise from SCM	<ul style="list-style-type: none"> ➤ Positive working capital ➤ Reduction in time to market ➤ Improved efficiency ➤ Improved data integrity ➤ Information sharing
Costs associated with improving SCM practices	<ul style="list-style-type: none"> ➤ Technology

Source: Self developed

As depicted in Table 5.1, four main themes with subthemes transpired from the participant semi-structured interviews with ensuing issues pertaining to each subtheme.

5.3 RESULTS OF EFFECTIVE SCM PRACTICES

Based on the content analysis, the effective SCM practices have been identified as a main theme and divided into subthemes, as depicted in Table 5.1.

It emerged from the semi-structured interviews with the participants that businesses in the Nelson Mandela Metropole all use set SCM practices, however decision-makers have to be innovative in their decision-making in a fast-paced ever-changing environment which might vary with the needs of businesses at certain times.

As noted by the participants:

Participant A: Yes, but it changes depending on supplier needs and mostly our needs as a business.

Participant B: Yes, depending on the store needs.

Participant C: Yes, but it changes all depending on supplier needs and mostly our needs as a business. We also consider the geographical locations of stores.

Participant D: Yes, for all categories, however perishables and fresh orders are done at store level as this allows store level operations managers to manage the cold chain and shelf life of these products.

Participant E: Yes, there are set practices.

5.3.1 Technology integration

It emerged from the interviews with participants that technology is a crucial link in streamlining processes within the SCM function. All five participants make use of technological advancements in order to improve efficiencies that may result in a competitive advantage. The participants understand the benefit and value of investing in technology as it provides an end-to-end fulfilment processes while also giving employees enhanced visibility into their specific departments which leads to an ease on most supplier collaborative efforts or initiatives to do business.

As noted by participants:

Participant A: Business to Business Interlink (B2B system) ... System Application Products (SAP) retail system

Participant B: ...make use of direct delivery services from our suppliers, we do have a Distribution Center (DC) however it is mostly used for strategic buys.

Participant C: ...use System Application and Products (SAP) retail system, this system considers lead time, delivery time and promotion activity before calculating the inputs to be replenished.

Participant D: ...use a system called Arch Enterprise, this gives a detailed view of product cost, Stock-on-Hand and sales.

Participant E: ...use the latest software the System Application and Products (SAP) retail system ... we order those direct from suppliers via their reps...

The semi-structured interviews revealed the practices at selected retailers that are utilised in the Nelson Mandela Metropole include automated ordering or replenishment systems such as System Applications and Product (SAP) retail system which have enterprise resource planning and data management programmes, and also Arch enterprise retail system data management programmes. These retail systems store a lot of information which assist in forecasting and meeting changing market needs.

The second subtheme, Just-in-Time inventory system, will be discussed next.

5.3.2 Just-in-Time inventory system

The previous section discussed the integration of technology in SCM. Technology advances has made it easier to overview all production activities including inventory management. From a semi-structured interview with Participant C, a divisional financial manager, researchers came to an understanding that technological systems do consider lead times, delivery time and promotion activity before calculating the inputs to be replenished. It emerged that three participants make use of the JIT inventory systems. Participant A, a senior buyer, uses the JIT inventory system to cut costs and decrease waste by receiving goods only as they are needed, Participant B makes use of the system as it considers lead times and delivery times as this would lead to increased efficiency for his business. Participant D, regional buyer, makes use of the JIT inventory system as it gives necessary information to reduce response to customer needs. These retailers use this system to manage obsolescence in the different categories in their business units. All of the aforementioned has a direct impact on working capital and the primary goal for the participants is to influence working capital positively.

As noted by participants:

Participant A: ... nominated delivery day and minimum order quantities...

Participant C: ... this system considers lead time, delivery time and promotion activities when before calculating the inputs to be replenished.

Participant D: .. system gives a detailed view of product cost, stock-on-hand and sales...

From the semi-structured interview with Participant E, a store manager, withheld detail how he incorporates the JIT inventory system, however he did reveal that stock-on-hand is considered when making buying decisions. This is related to the JIT inventory system as the purpose of the system is to reduce time a product gets from supplier to the customer. Participant B, a senior buyer, also withheld detail in this regard, but researchers noted that Participant B was more focused on external activities and market trends when making a buying decision. Participant B revealed that he uses this information to make strategic buys and does only not rely on system generated

information to make buying decisions as it could potentially result investing in stock that will take longer to sell or having the incorrect stock inputs. It is noted by researchers that the shift in focus for Participant B and E to other SCM practices and JIT, is largely driven by the fact that they have different operating models and JIT is not best suited for their operations as JIT's main aim is to reduce time to market.

The third subtheme, Communication, will be discussed in the following section.

5.3.3 Information sharing

Internal information sharing

Technology advances has improved the ability to communicate, with the whole supply chain sharing valuable information retrieved from retail systems data. Selected retailers in the Nelson Mandela Metropole share information ranging from stock availability, activity grids and promotions to market trends and sales performances.

As noted by participants:

- Participant A: ... we share promotion grids with store to assist with...
- Participant B: ... buying office will share job allocations for each store...
- Participant C: ... store will inform buyers of stock adjustments...
- Participant D: ... buying office will send all cycle deals and updated pricing...
- Participant E: ... double check orders and communicate any discrepancies...

With regard to external information sharing

It is noted that all five participants consider communication to be an integral link in the SCM process as it affects many business processes which may result in customer dissatisfaction. Communication is necessary at all stages of SCM as it will have a ripple effect if neglected. From the semi-structured interviews, it emerged that there are different channels of communication in the SCM spectre, ranging from automated system orders, data sharing and physically maintaining customer and supplier relations. Participant E in particular focussed on consultative selling, which engages the customer to influence a buying decision. Participant E also stressed the importance of customer feedback to improve existing processes, this allows a quicker response to customer needs as most interaction with customers happen at rock phase.

As noted by participants:

- Participant A: ... I do bi-monthly trade visits with suppliers and complete sales reviews...
- Participant B: ... being limited by geographical supplier coverage, necessary alternative products need to be communicated.
- Participant C: ...challenges can be resolved through better communication with suppliers...
- Participant D: We consistently engage in negotiations for better costs on supplies...
- Participant E: ...suppliers have to negotiate to have products listed at head office...

The fourth subtheme, establishing alliances with key suppliers, will be discussed in the section that follows.

5.3.4 Establishing alliances with key suppliers

From the semi-structured interviews researchers noted that the three respective participants have established alliances with key suppliers. From the semi-structured interview with Participant B, it emerged that in addition to using a distribution center, he, who is a senior buyer, establishing an alliance with a supplier allows him to make use of supplier resources like transportation which would minimise the cost related to acquiring inventory. From the semi-structured interview with Participant C, who occupies a divisional financial management position, it emerged that the participant is reliant on supplier feedback regarding issues experienced on the SAP retail system. It was also noted by the researchers that Participant C is piloting all new projects hence the importance of all feedback related to the SAP retail system to ensure that issues are addressed accordingly in order to streamline all SCM processes. From the semi-structured interview with Participant D, it emerged that in addition to using a distribution center he, who is a regional buyer, has established alliances with suppliers, to keep track of counterfeit stock issues in the trade, as it has a negative effect on both parties. Participant D makes use of the alliances by entrusting suppliers to capture their own orders on the ARCH system as this allows for suppliers to be accountable for overstock and ensuring the stock pipeline is managed correctly.

As noted by the participants:

- Participant B: We make use of direct purchasing and delivery services from our suppliers, we do have a distribution center however...
- Participant C: An alliance with suppliers allows for better communication escalating all issues experienced...
- Participant D: ...we have suppliers who contact our offices and review our catalogues...

The fifth and second to last subtheme under effective supply chain practices, transportation network is discussed next.

5.3.5 Transportation network

From the semi-structured interviews with all five participants, researchers noted that a strong transportation network is beneficial to suppliers. It emerged that transportation is an effective practice of SCM as it complements the primary goal of ensuring efficiency throughout the supply chain. An effective transportation network starts with shipment visibility which was improved through technology advances. The visibility improves routing, capacity and profitability.

From the semi-structured interviews, it emerged that four out of the five participants make use of their own fleet of transportation to cart goods from the distribution center to the stores. Participants revealed that distribution center planning consider nominated delivery days from suppliers in order to better plan for store needs. Participant A indicated that the transportation practice is managed through the nominated delivery days. Participant B indicated that most deliveries are planned using supplier resources as this allows him to save on transportation cost by not using his own fleet. Participant C indicated that his company has their own fleet and transportation network because it allows the company to determine lead times and delivery times. Participant D indicated that effective transportation system can enhance efficiency by letting the product determine the transportation type. This planning only applies to certain categories such as groceries, non-edible groceries, cosmetics and general merchandise as all perishable suppliers deliver directly to the stores in order to better manage the cold chain.

As noted by participants:

- Participant A: Our effective SCM processes are managed through nominated delivery days...
- Participant B: ...super links are used to feed the distribution centers when making strategic purchases...
- Participant C: An effective transportation network is essential in servicing lead and delivery times...
- Participant D: A sophisticated transportation network is important to SCM... product however dictates which method of transportation would be used...

From the semi-structured interviews with Participant D and Participant E it emerged that outsourcing to third-party logistics for reliable transportation solutions is used. The two participants revealed that technology and resources of third-party logistics companies provides flexibility, reduces costs, increases space, enhances visibility and most importantly, enables the organisation to focus on their products and effectively service their customers.

As noted by participants:

- Participant D: Utilising 3PL for reliable transportation solutions, as infrastructure and delivery times has proved a challenge for some of our own fleet...
- Participant E: 22m 3PL trucks are used to transport from warehouse to Eastern Cape region... smaller delivery trucks deliver stock to relevant stores in the Eastern Cape.

The last subtheme under effective SCM practices, Training and development, will be discussed in the next section.

5.3.6 Training and development

From all five semi-structured interviews researchers noted that training and development is essential for effective SCM. Since technology plays a big role in modern supply chains, continuous additional training and development of employees is required. It emerged that all five participants deem it very important to invest in

training and development as it has a direct influence on operating efficiencies of the business.

- Participant A: ... the new system was very disruptive and improved when training was introduced...
- Participant B: ... the integration was improved with training...
- Participant C: ... SAP training was necessary at store level to...
- Participant D: ... suppliers are included in system related training as they capture their own orders...
- Participant E: ... we can see the benefit of training as its improved efficiencies and increased sales...

Participant A, B and C indicated that collaborative efforts in training and development is needed with all corporates in the industry and in particular, with all parties involved in their respective supply chains. This would mean, that although an employee specialises in a particular practice, the employee would still have an idea of how the overall supply chain operates and it gives the employee improved visibility in order to make informed decisions.

As noted by participants:

- Participant A: ... suppliers had to give regular feedback regarding system issues this allowed us to make improvements and amend training needs...
- Participant B: When suppliers moved to automated systems we had joint training initiatives in order to streamline...
- Participant C: ... supplier merchandisers were trained on how to do stock counts in order to capture stock adjustments...

The following section is a discussion of the main theme, challenges within SCM experienced in the Nelson Mandela Metropole. Subsequently, the subthemes will be discussed.

5.4 RESULTS OF THE CHALLENGES IN SCM

Based on the content analysis, the challenges within SCM have been identified as a main theme and divided into subthemes, as depicted in Table 5.1, and these are discussed in the subsequent sections.

From the semi-structured interviews researchers noted that participants do face challenges in their respective SCM practices. These challenges need to be addressed in order to formulate an effective and efficient SCM strategy for their businesses. Researchers also noted that there can be challenges for the business from an internal perspective and also challenges for the business from a supplier's perspective.

Participants reveal challenges for the business from an internal perspective.

As noted by participants:

- Participant A: Yes, we are always challenged... biggest challenges are the SAP retail system, unskilled employees...
- Participant B: ...we do not have major challenges unless there is a strike or something in that line...
- Participant C: Yes, challenges are incorrect master data...
- Participant D: As long as there are competitors I am challenged...
- Participant E: ... of course, security is the biggest one right now...

Participants also reveal that there are challenges they face from a supplier's perspective.

- Participant A: ...lack of funding to invest in new technology...
- Participant B: ...distribution network has limited geographical coverage...
- Participant C: ...adjusting time delivery approach...
- Participant D: ...counterfeit stock is s challenge from suppliers.
- Participant E: ...new product listing is a challenge due to wide assortment.

In the following section the subtheme, Technology and Innovation as a challenge, will be discussed.

5.4.1 Technology and Innovation

From the interviews it was noted that, although technology and innovation was beneficial to the improvement of SCM practices, it was accompanied by many challenges. Participant A revealed that the challenges he faces with technology and innovation is time consuming and very disruptive to business. Participant B also revealed that the implementation is time consuming and costly. Participant C notes that the cost associated with constant technological advances and training is a

challenge. Participant E's employees' inability to manage technological change is a challenge.

As noted by participants:

- Participant A: Introducing new technology can be disruptive until systems and data are integrated...
- Participant B: ... implementation is costly and time consuming when training operators...
- Participant C: Very costly, but we absorb cost through more efficient...
- Participant E: ...employee mistakes on technological systems can sometimes be unsettling.

In the following section subtheme, Receiving and delivery processes as a challenge, will be discussed.

5.4.2 Receiving and delivery processes

From the interviews it emerged that receiving processes are a challenge faced by participants. Researchers noted that participants put great emphasis on utilising the correct receiving processes as this affects the product flow to the end user which has a direct impact on customer satisfaction as well as financial performance of the business. The most common challenge faced by the five participants is the implementation of a generic automated receiving process that is commonly used by all suppliers. The absence thereof can create many time delays, shrinkages and inconsistent list pricing.

As noted by participants:

- Participant A: ...not all suppliers make use of E-Invoicing to create faultless deliveries...
- Participant B: ...experience time delays on deliveries due to supplier lack of technological advancements...
- Participant C: ...suppliers need to work towards adjusting time delivery approach.
- Participant D: Delivery issues can be resolved by better planning....

Researchers noted that delivery times are a big concern for participants as it can lead to them facing the problems of either running out of stock at the wrong time or carrying

too much stock and thus decreasing cash flow while increasing expenses to stock extra materials.

The section subtheme, Shrinkage as a challenge, will be discussed next.

5.4.3 Shrinkage

In retail SCM, shrinkage is an everyday concern and challenge. Shrinkage refers to any form of financial loss resulting from poor stock management, data integrity management and the ineffective management of processes that can minimise risk. Participants revealed that poorly managed shrinkage can lead to major losses for the business and profit margins. Most common shrinkage occurrences among participants were employee theft, shoplifting, administrative errors, damage in transit or in store and cashier errors that benefit the customer.

As noted by participants:

- Participant A: ...inventory losses through shoplifting is a major challenge... others cashier errors that benefit the customers...
- Participant B: ...missing inventory pose bigger challenges...
- Participant C: ...shrinkage due to employee theft and clerical mistakes are amongst the challenges in our supply chain.
- Participant D: ...challenging eliminating in-transit damaged goods and employee theft that lead to inventory losses.
- Participant E: Hijacking between warehouses and Eastern Cape depo and theft are often occurrences which are challenging to address.

The subtheme, data integrity as a challenge, will be discussed in the following section.

5.4.4 Data integrity

Participants acknowledged that data integrity is a major challenge and that the alignment of demand and supply is more difficult because most, if not all, supply chains have data integrity issues.

Effective data integrity management is essential to manage all automated replenishment or buying systems as the stock inputs and the accuracy there is dependent on that. Data integrity affects a number of processes within the business

from sales performance and category management analysis to better planning customer demand, all of which is necessary to better manage the financial performance of the business and ultimately create value for the business. The buying office will base all decision making on system generated information and has no immediate contact with physical stock on hand in stores, hence the importance of managing the processes which contributes to effective data integrity management. During the interview's Participant A revealed that inventory on hand data is not always accurate as his franchises experience a lot of shoplifting. Participant B added that stock count remains an issue that skew data. Participant C made mention of goods being damaged in-transit from suppliers. Participant D revealed that perishable waste is not accounted for fast enough which skews their data on the inventory system. Participant E noted that unskilled employees can often make mistakes which causes inaccurate inventory counts.

As noted by participants:

- Participant A: ... we have a lot of shoplifting...
- Participant B: Stock count accuracy remains a challenge...
- Participant C: ... supplier damages are not collected with each delivery this causes inaccurate stock on hand...
- Participant D: ... perishable waste is not actioned timeously on the system as staff are not very skilled in the process...
- Participant E: ... unskilled administrators make mistakes too often which results in...

The subtheme, Bullwhip effect, will be discussed in the following section.

5.4.5 Bullwhip effect

The bullwhip effect is an occurrence detected by the supply chain where orders sent to the manufacturer and supplier create larger variance than the sales to the end customer. In the bullwhip effect the irregular orders in the lower part, closer to the final customer, of the supply chain develop to be more distinct higher up, closer to the suppliers of the raw materials, in the supply chain. This alteration can interrupt the smoothness of the supply chain process as each link in the supply chain will over or

underestimate the product demand resulting in exaggerated fluctuations which can lead to great challenges.

It emerged that contributions to the bullwhip effect in the Nelson Mandela Metropole retail industry can be inconsistent list pricing, lack of communication, reliance on past demand information and free return policies. Participant A revealed that inconsistent cycle deals in his business contribute to the bullwhip effect. Participant B noted that national deals are not always filtered down to regional level and due to this price claims are generated and create inconsistent list pricing. Participant C noted that suppliers do not communicate the stock situation that could affect Participant C as the customer. Participant D notes that he is not able to compete in price due to counterfeit stock that is sold at lower prices in the market.

As noted by the four participants:

- | | |
|----------------|--|
| Participant A: | ...suppliers have inconsistent cycle deals which generates price claims... |
| Participant B: | National deals are not always shared with the regional buying office and can result in reduced margins at store level... |
| Participant C: | ...suppliers do not give us line of sight of out of stock situations this results in... |
| Participant D: | ...counterfeit stock is filtering into our region this results in us being out priced compared to opposition... |

The following section is a discussion of the main theme, Benefits that arise from effective SCM in the Nelson Mandela Metropole.

5.5 RESULTS OF THE BENEFITS THAT ARISE FROM EFFECTIVE SCM

Based on the content analysis, the benefits that arise from good SCM have been identified as a main theme and divided into subthemes, as depicted in Table 5.1.

Having discussed the SCM challenges selected retailers in the Nelson Mandela Metropole face, researchers had to inquire as to what the actual benefits of good SCM in the Nelson Mandela Metropole are. From the semi-structured interviews with all five participants, it emerged that good SCM practices are beneficial.

As noted by participants:

- Participant A: ... the reduced stock holding allows us to free up cash flow as we are able to forecast better due to SAP
- Participant B: ...with system advancements and e-invoicing we are able to increase speed to market...
- Participant C: ...with the implementation of SAP, we are able to reduce manually processes...
- Participant D: ...ARCH allows us to manage stock days better and better forecast...
- Participant E: ...information sharing regarding stock availability to better plan...

Results show that all participants benefit from their respective SCM practices, thus the subsequent sections will outline the most common benefits that the five participants indicated. The first subtheme, Positive working capital as a benefit, will be discussed next.

5.5.1 Positive working capital

From three semi-structured interviews it emerged good SCM practices result in a positive working capital. Researchers understood that working capital refers to when a business faces a situation where the short-term receivables of the business is more than its short-term payables. This is a desirable situation for all businesses. Participant A and E revealed that the technology has allowed them to monitor stock more efficiently as it allows them to monitor more variables influencing the buying decision which ultimately can lead to a positive working capital. Participant B noted that effective forecasting of stock enabled him to increase sales as the customer demands are met. Participant C also noted that improved efficiencies of effective practice have enabled him to meet customer demands which ultimately result in a positive working capital. Participant D reveals that he achieves a positive working capital through the ability to make bulk purchases at discounted price from suppliers which results in an increase stock turn.

As noted by participants:

- Participant A: SAP assists with only ordering as required this allows us not to invest in stock heavily...

- Participant B: ...we are able to increase sales due to increased stock pressure...
- Participant C: ... customer demands are met due to improved efficiencies...
- Participant D: ... we are able to buy in bulk and negotiate better with suppliers resulting in increased margins...
- Participant E: ... we have access to draw stock from two warehouses and plan delivery from the one with the shortest lead time...

The subtheme, Reduced time to the market as a benefit, will be discussed in the subsequent section.

5.5.2 Reduction in time to market

All five participants revealed that reduction in time to market is a benefit that arise from effective SCM practices. Researchers understood that reduction in time to market refers to the length of time it takes from a product being conceived until it is available for sale. It emerged that reduction in time to market for the participants lead to increased profitability and increased customer satisfaction.

As noted by participants:

- Participant A: ... we negotiate with suppliers to deliver directly to some of our stores....
- Participant B: ... implemented automated receiving processes to increase the speed...
- Participant C: ... provide more training for receiving staff to ensure work is done faster and more efficiently...
- Participant D: ... plan delivery schedules to ensure all parties involved can better plan to take in a load when...
- Participant E: ... use advanced automated German picking system to increase speed and accuracy...

From the semi-structured interviews, two participants indicated the way in which they achieved a reduction in time. Participant D shared that having efficient departmental managers and also stay a step ahead of your competitors has increased the speed to shelf. Participant E shared that he achieved reduced times to market through technology advances and managing stock pipeline based on stock availability and lead time reduction.

As noted by participants:

- Participant D: ... we have skilled individuals who use EDI (Electronic Data Interchange) scanners to ensure the accuracy and efficiency of our receiving processes...
- Participant E: ... use advanced German engineered picking systems to improve efficiencies...

The subtheme, Reduction in receiving processes, will be discussed in the subsequent section.

5.5.3 Improved efficiency

With technology advancement playing an increasingly important role in of SCM, it was obvious that it would enhance processes of product availability within a supply chain and improve efficiency. Participants revealed sources that assist in reduction in processes involves automating processes with technology advances as discussed before, and restructuring operational resources to contain costs that uncovers organisational inefficiencies and introduces new software and applications to connect systems and cut down on manual labour. Participants revealed that there are core benefits that arose when they reduced the process' like increased productivity, employee satisfaction, reduced hazardous risk, customer satisfaction, agility and the integration of technology.

As noted by participants:

- Participant A: SAP allowed us to reduce many manual driven processes...
- Participant B: ... technology integration at receiving improved productivity...
- Participant C: ... reduction in idle time due to E-invoicing used by some suppliers....
- Participant D: ... stores are able to plan delivery lead times due to information availability on the ARCH system
- Participant E: ... we use a very sophisticated SAP system that allows us to see stock on hand at all warehouses when placing orders...

The subtheme, Improved data integrity as a benefit, will be discussed in the next section.

5.5.4 Improved data integrity

From the semi-structured interviews, researchers understood that the integration of technology in SCM will lead to multiple benefits including accurate inventory forecasting. Researchers noted that accurate inventory referred success in planning stock purchases and effective inventory management. It is further noted by researchers that the data integrity greatly influences the accuracy of information used or needed to do forecasting. From semi-structured interviews that the buyers rely on automated system information and do not have immediate contact with physical stock-on-hand at store level to verify the accuracy thereof, which can skew the accuracy of the data on the automated systems. Participants revealed the effective data integrity lead to accurate inventory forecasting which results in more obvious benefits like improved service levels, lower operating costs and it improves working capital use.

As noted by participants:

- Participant A: ... we receive weekly updates of stock adjustments done at store level to ensure data integrity is...
- Participant B: ... suppliers are urged to collect returns before placing orders as this skew the accuracy of data...
- Participant C: ... increase security is needed at our back-door processes to ensure compliance...
- Participant D: Major stock takes are twice a year to ensure data integrity...
- Participant E: ...regular spot check on weekly counts to ensure data accuracy...

The subtheme, information sharing, will be discussed in the next section.

5.5.5 Information sharing

From the semi-structured interviews, it emerged that information is integral to business and its operations thus when you are able to retrieve and give information it can be beneficial to the business. Inventory reduction and efficient inventory management, cost reduction, increased visibility, significant reduction of bullwhip effect and reduced cycle time from order to delivery are among the benefits of effective information sharing, researchers noted. Participants also reveal there are different channels one can share information with in the retail sector. Information can be shared with suppliers to discuss pricing, stock availability and promotion grid. Information can be shared with

stores to better manage the stock pipeline and line of sight of any issues shared from a supplier point of view such as pricing, promos, stock availability, product flows, space buys and in store activities. Information can also be shared with customers through social media, television, leaflets regarding promotions or product launches.

As noted by participants:

- Participant A: ... store and buying office systems are integrated this allows us to share information...
- Participant B: SAP integrates and shares information with stores to plan promotions
- Participant C: The buying office shares cycle deals to ensure that stores manage their average cost and reduce price claims...
- Participant D: ... all promotions are planned at regional office and shared with stores to ensure it is executed timeously...
- Participant E: ... we use national advertisements and social media to communicate with our customers...

The following section is a discussion of the main theme, Costs associated with improving SCM practices of SCM processes in the Nelson Mandela Metropole.

5.6 COSTS ASSOCIATED WITH IMPROVING SUPPLY CHAIN MANAGEMENT PRACTICES

Based on the content analysis, the cost implications of SCM processes has been identified as a main theme and divided into subthemes, as depicted in Table 5.1,

Effective SCM practices are beneficial to businesses, however, optimisation of a supply chain comes at a cost to the business. This cost is seen as an investment as it would lead to improved efficiency. From the semi-structured interviews with Participant A, B and C researchers noted that the cost implication of improving a supply chain processes are high.

Furthermore, Participant D and E suggested that all costs related to improving SCM processes will be shared with the business as well as suppliers. These two participants assert that suppliers see the benefit in this investment as it guarantees constant replenishment of their product and it allows them to effectively manage customer relations with the business.

As noted by participants:

- Participant A: ...the implementation of SAP was very costly; however, we can see the benefits from a customer service perspective and...
- Participant B: It is very costly however, it is something that we budget for and invest in...
- Participant C: Very costly, but the company absorbs the costs through more efficient supply chain management...
- Participant D: They are funded by suppliers, we collect ad-hoc income to fund these initiatives as we promote different suppliers.
- Participant E: Cost is not absorbed by customer. Instead its absorbed by the suppliers (supplying warehouse)

From the semi-structured interviews, it emerged that the cost associated with improving a supply chain in the retail sector is high. The subsequent section will exhibit that technology was the highest cost contributor of improving SCM practices. The following section the subtheme, cost associated with technology, will be discussed.

5.6.1 Cost associated with technology

It was noted that technology was necessary and required continuous improvement to ensure the effective implementation of new upgraded automated systems. However, the trade-off was the cost of associated with the investment in technology which includes training and development, upgraded equipment as well as the disruptive time delays of implementation.

As noted by participants:

- Participant A: Introducing the new system can be disruptive, until systems and data are all integrated...
- Participant B: The implementation of the new SAP system was very disruptive; however, we are confident that we will reap benefits of reducing cost and improved efficiencies.
- Participant C: ... supplier technology advancements allow for speedy receiving of goods, however not all suppliers can afford this investment...
- Participant D: ... all costs associated with technological advancements are shared with suppliers and not only carried by the business

Participant E: ... costs related to technology improvements are funded by suppliers...

The findings from the semi-structured interviews conducted with all participants and literature will be compared in the following section. This will provide insight into what are the best SCM practices globally and what are the best SCM practices in the Nelson Mandela Metropole.

5.7 COMPARATIVE ANALYSIS OF GLOBAL SCM PRACTICES VERSUS NELSON MANDELA METROPOLE BEST PRACTICES

The comparative analysis revealed that literature suggest that customer service, cost control, planning and risk management, supplier/partner relationship management and talent is the five biggest challenges in the supply chain for retailers. Literature also has concern towards the reverse flows of data and product in supply chains in order enhance demand-driven supply and to ensure appropriate recycling and sustainable systems. When the retail link in supply chain is vulnerable and SCM practices are loose, many challenges like inefficiencies and operational ineffectiveness can arise. However, literature revealed that globally, better management of the supply chain can establish a position of sustainable advantage of competitors in terms of customer preference and adds that supply chain managers must respond to market changes faster and ensure quality products are delivered by overseeing the process of product manufacturing. Literature revealed that creating value for customers is what leads to a competitive advantage and, this is achieved by holding the right quality products at the right amounts that are delivered at the right time and price.

The semi-structured interviews with two senior buyers, one divisional financial manager, one regional buyer and one store manager revealed that the most common challenges faced are technology and innovation, receiving processes, shrinkage, data integrity, inconsistent list pricing and the bullwhip effect. This all can affect customer satisfaction and financial performances of the business. The interviews revealed that none of the participants had initiatives within their SCM practices that was focused on recycling as well as environmental consciousness, however all waste management practices met the necessary legislative requirements. The interviews revealed that all five participants adapt their SCM practices in line with their business strategy. Four of

the five participants have a bigger geographical footprint hence they make use of distribution centers to ensure all products are evenly distributed amongst retailers in a specific cluster or location. Furthermore, the interviews revealed that Participant D makes use of cost differentiation advantage and this is in line with the business strategy as it allows all business within the group to bulk buy in order to achieve a price differentiation. Practices utilised by participants seeks to ensuring quality product holdings at the correct amount in order to delivers superior customer service.

Researchers found that in literature there are a large amount of practices that stand alone whereas in actual practice in the Nelson Mandela Metropole businesses have integrated different practices improve efficiency. The importance of implementing technology in SCM is stressed in literature, and from the semi-structured interviews it emerged that technology integration is in essence the most important to the businesses in the Nelson Mandela Metropole.

Table 5.2: Most common SCM practices versus the best SCM practices at selected retailers in the Nelson Mandela Metropole.

Best practices in literature	Best practices in the Nelson Mandela Metropole
<ul style="list-style-type: none"> • Practices associated with logistics <ul style="list-style-type: none"> ○ Cross docking ○ Recruit and develop supply chain professionals ○ Align the supply chain organisation • Practices associated with inventory management <ul style="list-style-type: none"> ○ Efficient transportation, facilitation and inventory ○ Lean Manufacturing ○ Strategic sourcing ○ Improve supplier performance • Practices associated with ICT <ul style="list-style-type: none"> ○ Just-in-Time inventory system ○ Employ supply chain technology ○ Information • Practices associated with purchasing <ul style="list-style-type: none"> ○ Establishing alliances with key suppliers ○ Properly align staff and supply chain organisation ○ Collaborative sourcing ○ Total cost of ownership (TCO) 	<ul style="list-style-type: none"> • Technology integration • Just-in-Time inventory system • Information sharing • Establishing alliances with key suppliers • Effective transportation • Training and development

Source: Self developed

5.8 SUMMARY

In this chapter, the results of the semi-structured interviews with the two senior buyers, one divisional financial manager, one regional buyer and one store manager were presented in terms of the themes and subthemes when conducting the content analysis. Based on the content analysis, the four main themes identified were effective SCM practices, SCM challenges, benefits that arise from good SCM practices and the costs associated with improving SCM practices. In the discussion on effective SCM practices, subthemes identified related to technology integration, just-in-time inventory system, information sharing, establishing alliances with key suppliers, effective transportation and training and development as practices of SCM. The SCM challenges related to technology and innovation, receiving and delivery processes, shrinkage, data integrity and bullwhip effect. The discussion furthermore referred to benefits that arise from effective SCM practices which are positive working capital, reduction in time to market, improved efficiency, improved data integrity and information sharing. The discussion then concluded with the cost associated with the improving of SCM practices, which is cost that are associated with improved technology.

The chapter concluded with the results of the best practices at selected retailers in the Nelson Mandela Metropole analysis using the constant comparative data analysis method which provided how similar or dissimilar SCM best practices are according to literature.

The following chapter summarises the study and presents the conclusions and recommendations of the study.

CHAPTER 6 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The main objective of this study was to investigate which are possible best practices in SCM within the retail industry in order to provide guidelines to businesses as to how to effectively practice SCM. This chapter provides an overview of all the chapters in this study. It includes conclusions, recommendations, contributions and limitations to the study. Future research areas to which the study could be extended to, are provided and concluding remarks are presented.

The following section entails an overview of Chapters One to Five in this study.

6.2 OVERVIEW OF CHAPTERS

Chapter One provided an introduction and background to the study. Reference was made to the problem statement along with the purpose of the research. Research objectives were presented and the research design and methodology to be adopted in this study was highlighted. The scope and demarcation of the study was indicated.

Chapter Two focused on the objectives of SCM and indicated the importance and role of SCM in the retail industry. Reference was made to the characteristics, activities and flow of SCM. Commonly used SCM practices was also presented. Thereafter the influence of innovation and technology improvements on SCM was discussed followed by the challenges that arise from ineffective SCM practices. The chapter concluded with a discussion of the benefits of SCM.

Chapter Three discussed the research methodology that was followed in this study. Each step in the research process was discussed and motivations were given regarding selection of the chosen methods. The paradigm selected as most suitable for this study was the qualitative paradigm. Reference was made to steps followed to ensure the trustworthiness of the data collected by means of semi-structured interviews.

Chapter Four presented a biographical profile of the five participants who participated in the study. The profile of each participant gave an indication of their involvement in

SCM and also discussed how each of these participants fits into the SCM process and how each of them operate to achieve a common goal. An indication of their roles and how they manage processes related to SCM was also presented.

Chapter Five presented the data collected from the semi-structured interviews. The results of the semi-structured interviews were presented where a discussion ensued of the emerging themes, subthemes and issues that were identified when conducting the content analysis. Themes identified related to effective SCM practices, SCM challenges, benefits and costs associated with improving SCM practices. Thereafter, the results of the constant comparative data analysis method provided insight into how similar or dissimilar selected retailers in the Nelson Mandela Metropole approach SCM.

The following section presents the research objectives of the study.

6.3 RESEARCH OBJECTIVES

The research objectives of this study are discussed next.

6.3.1 Primary objective

In line with the problem statement, the primary objective of this study is to investigate which are possible best practices in SCM within the retail industry in order to provide guidelines to businesses as to how to effectively practice SCM.

6.3.2 Secondary objectives

To give effect to the primary objective of this study, the following secondary research objectives have been formulated:

- SO¹. To explore current supply chain practices in the retail industry;
- SO². To investigate how innovation and technological improvements influence the retail value chain; and
- SO³. To establish how the retail value chain improvements can influence customer satisfaction.

6.3.3 Methodological objectives

In order to achieve the above mentioned primary objective and secondary objectives, the following methodological objectives were identified:

- MO¹. To conduct a literature review on best practices in SCM, the effect these practices have on the retail value chain and the interconnectivity of retail and its supply chain;
- MO². To select an appropriate research methodology and research methods for the study;
- MO³. To develop a research instrument and draw a sample;
- MO⁴. To collect primary data from selected retailers in the Nelson Mandela Metropole; and
- MO⁵. To provide conclusions and recommendations to all participants on the best SCM practices in the retail industry.

6.3.4 Research questions

Based on the problem statement, primary, secondary and methodological objectives of this study, the following research questions were posed:

- RO¹. What are the most commonly used SCM practices?
- RO². Do businesses integrate SCM practices?
- RO³. What are the benefits of SCM?
- RO⁴. What are the challenges that arise from ineffective SCM practices?

The following section is a brief discussion of the research design and methodology researchers utilised in this study.

6.4 RESEARCH DESIGN

This section began with a discussion of the secondary and primary research, which was followed by a discussion on the research design, paradigm and methodology followed in this study. Reference was made to data analysis techniques that were utilised and the section concluded with an indication of how the trustworthiness of this inquiry was established. Chapter Three provided more detail of the research design and methodology of this study.

6.4.1 Secondary research

Secondary data is data that has already been gathered and recorded by someone else, other than the user, for an alternative reason than the current research (Struwig & Stead, 2013:82; Levchenko & Haidoura, 2016:33). In addition, Struwig and Stead (2013:82) state that sources of secondary data include annual reports, journal articles, newspaper articles, government publications and business reports.

In order to achieve the primary objective of this study, the secondary research of this study consisted of a literature review in order to identify the objectives, role and importance and the commonly used practices in SCM as well as the benefits and challenges in SCM. The secondary research of this study was conducted by consulting a variety of relevant textbooks and well-known journal articles. In addition, the library facilities available at the Nelson Mandela University were used to access National and International databases, such as Emerald, EBSCO host, Sabinet and Google Scholar, which was consulted to identify preceding on best practices in SCM.

6.4.2 Primary research

The primary research section of this study comprised of four subsections, starting with an overview of the selected research design, paradigm and methodology followed by a discussion of the population, sampling and data collection methods deemed most suitable for this study. Subsequently, reference was made to the data analysis methods that the researchers utilised to analyse data collected. Thereafter, the section concluded with a discussion on how trustworthiness of the research data was established.

6.4.2.1 Research design, paradigm and methodology

There are two main research paradigms namely positivistic methodology (quantitative) and phenomenological methodology (qualitative) (Sarantakos, 2012:119-120; Ngulube, 2018:71).

According to Struwig and Stead (2013:10) a qualitative research is viewed as interdisciplinary and multi-method way to do research.

A qualitative research approach was followed in this study in order to explore, improve and discover potential strategic direction in SCM. The qualitative research method produces descriptive data for example (Taylor, Bogdan & DeVault, 2015:7). The study adopted an interpretivistic research paradigm which allowed the SCM practices used in the Nelson Mandela Metropole to be explored by means of five semi-structured interviews with middle-managers and senior buyers.

6.4.2.2 Population, sampling and data collection

McLeod (2014) define a target population as a group of people relevant to the research project. Furthermore, McLeod (2014) and Acharya, Prakash, Saxena and Nigam (2013:330) define a sample as a subset of a population selected to be representatives of a larger population. For the purpose of this study the population was divisional buying offices for retail outlets in the Nelson Mandela Metropole, from which researchers selected a sample of five managers at middle management level volunteers.

A combination of convenience, judgmental and snowball sampling were employed in this study. Five participants were approached based on their availability, willingness to participate in the interviews. These participants are actively involved in managing the major retail the supply chains in the Nelson Mandela Metropole. The sample of this study is small which is consistent with the qualitative research approach.

This literature review provided information on the best SCM practices in literature and were used to construct questions for the semi-structured interviews. Semi-structured interviews allow researchers to probe on questions and also allow participants to add thoughts on questions asked (Galletta, 2013:2).

6.4.2.3 Data Analysis

Once primary data had been collected with regards to SCM practices, the data had to be analysed.

Bryman *et al.* (2014:344) identified several data analysis methods which include; case studies, content analysis and constant comparative method, all of which ensure an in-depth analysis of data collected. This study followed a qualitative research approach which emphasised the necessity to use case studies, content analysis and the constant comparative method to analyse the data collected.

From an ethics perspective, ethical aspects had been considered for data collection and analysis. In order to proceed with ethical clearance, the Nelson Mandela University ethical clearance form had to be completed.

6.4.2.4 Trustworthiness

Trustworthiness refers to the extent research can be trusted and believed (Struwig & Stead, 2013:136). For this study the trustworthiness of research data was established and not validity and reliability because the study was qualitative in nature. Trustworthiness of the research findings of this inquiry was strengthened by addressing the credibility, confirmability and dependability and transferability of the data.

Credibility refers to the quality of being believed (Struwig & Stead, 2013:137). For the purpose of this study researchers arranged follow-up meetings to discuss the interpretation of the data with participants. Researchers also kept all notes, interview schedules, transcripts and memos to create an audit trail to ensure credibility of the research.

Dependability refers to the quality of being coherent and being stable in changing conditions (Struwig & Stead, 2013:137). In this study to achieve dependability, researchers coded data twice to see if data remain constant and also ensured that steps followed in the inquiry were logical, traceable and clearly documented by giving account of research and the creation of an audit trail.

Confirmability refers to quality of verifiability of data presented and lastly (Struwig & Stead, 2013:137). In this study researchers continuously asked whether the data help confirm the general findings by providing detailed information and literature review

confirmation. Researchers also remained aware of subjectivity and bias which may be present.

Transferability refers to the extent to which the information can be used in a different context (Struwig & Stead, 2013:137). In this study a detailed description of the research was provided and participants for this study were purposefully selected, which facilitates the transferability of the inquiry in this study.

Following is Table 6.1 which provides an overview of the objectives of this study and a brief explanation of how each objective was achieved.

6.5 HOW OBJECTIVES WERE ACHIEVED

Table 6.1 depicts how the objectives of this study were met.

Table 6.1: How objectives of this study were met

Objectives of the study	How and where these were achieved
To conduct a theoretical investigation, providing insight into possible best practices in SCM within the retail industry in order to provide guidelines as to how to effectively practice SCM	This has been achieved by conducting an extensive literature review on Chapter Two. The review referred to the objectives of SCM and indicated the importance and role of SCM which addressed the characteristics, activities, and flow of SCM. Commonly used SCM practices were also identified. Thereafter the influence of innovation and technology improvements on SCM were discussed followed by the challenges that arise from ineffective SCM practices. The chapter concluded with a discussion of the benefits of SCM.
To choose an appropriate research methodology and research methods for the study	This was achieved in Chapter One and discussed in Chapter Three, after considering the nature and the purpose of this study and the qualitative research methodology was deemed appropriate for this study. The research methods were selected based on the qualitative research methodology.
To develop a research instrument that will be used to collect data from the sample	This was established in Chapter One and was broadly discussed in Chapter Three. A semi-structured interview schedule was compiled and consisted of questions that were deemed fit to probe participants and obtain valid information to the study. The semi-structured interview schedule consisted of two sections, Section A which probed the biographical profile of the participants and Section B probed the SCM practices of the participants.
To collect and analyse the primary data	Primary data was collected by means of semi-structured interviews that were constructed to the selected sample in the Nelson Mandela Metropole. This study followed a qualitative research approach which emphasised the necessity to use the case studies, content analysis and constant comparative methods to analyse the data collected. The data analysis of the study followed seven phases, firstly where data was collected and organised, then the data was carefully studied and divided into categories and themes. Data was then coded followed by an interpretation of the data by researchers. To conclude the analysis of the data researchers reduced the information obtained into meaningful chunks. Researchers ensured that the inquiry was trustworthy by taking extensive steps to ensure

	credibility, dependability, confirmability and transferability of the information obtained from the semi-structured interviews.
To provide conclusions and recommendations to the retailers on how they can improve the effectiveness and efficiency of their operations by effectively practicing SCM, based on the empirical findings on the best SCM practices in the retail industry of the Nelson Mandela Metropole	This was achieved in Sections 6.8 and 6.9 of this chapter where conclusions and recommendations were made based on the empirical results and the literature review.

Table 6.1 provided an overview of the objectives of this study and a brief explanation of how these objectives were achieved.

The main findings from the literature review will be presented in the following sections.

6.6 MAIN FINDINGS FROM LITERATURE REVIEW

In the main findings from literature, all the elements necessary to better understand SCM were discussed.

The literature review commenced with a discussion of the objectives of SCM. Profitability, reliability, flexibility, responsiveness, turnover rate and communication and coordination was found to be the primary objectives of SCM. These objectives are all attributes necessary for effective SCM to take place.

The importance and role of SCM in the retail industry were then discussed. Researchers deliberated on the importance, characteristics, the flow of a supply chain and activities of SCM. Researchers found that SCM is important for attaining the twin goals of efficiency and effectiveness in the retail value chain, which can result in a competitive advantage and higher profits for individual businesses. The researchers found that SCM should focus on customer value creation and the capturing, access and interchange of data across the supply chain. The flow of supply chain begins with suppliers who supply and transport raw materials to manufacturers, these materials are then transformed into finished products and shipped to distribution centers or wholesalers. Finally, the product is shipped to retailers who sells the product to final customers. The activities to allow SCM integration include coordination, information

sharing, collaboration, managing flows of materials information and resources and integration.

A discussion on the commonly used SCM practices ensued. The researchers acknowledged that a number of SCM practices have already been integrated and grouped similar practices together. It was found that SCM practices associated with logistics, SCM practices associated with inventory management, SCM practices associated with ICT and SCM practices associated with purchasing were the most commonly used practices.

The influence of innovation and technology on effective SCM was also discussed and it was illustrated how technological enhancements influence SCM. Technological techniques to enhance the efficiency of SCM were identified to be continuous replenishment programmes, computer assisted ordering, perpetual inventory systems and “going mobile”. E-commerce in SCM was also discussed as it is a technology-based endeavour to create efficiencies for retailers’ and its customers.

Challenges that arise from ineffective SCM practices were also referred to. Researchers found that the bullwhip effect is a major challenge as it can occur from number variables which includes faulty demand forecast updating, order batching, prices fluctuations and shortage gaming. It was highlighted that severe consequences including a lack efficiency and effectiveness come with ineffective SCM practices.

The literature review was concluded with a discussion on the benefits of SCM. It was found that a reduction in working capital deployments like inventories, warehousing and financial costs, reduction in time to market through disintermediation and better logistics, and the tracing and tracking of order information, were the most common benefits that businesses enjoy from effective SCM practice.

The information discussed in this chapter reinforced the importance of effective SCM practices by highlighting the challenges that arise from ineffective SCM practices, and also the numerous benefits of technology and innovation in the retail value chain.

6.7 MAIN FINDINGS FROM THE EMPIRICAL INVESTIGATION

From the semi-structured interviews researchers identified four main themes namely, effective SCM practices, SCM challenges, benefits that arise from SCM and cost associated with improving SCM practices.

The chapter commenced with theme identification, and under each main theme, subthemes were identified. The first subtheme was technology integration and it was found that technology is a crucial link in streamlining processes within the SCM function. Researchers also found that technological advancements improve efficiencies that may result in a competitive advantage hence participants try to integrate it into day to day operations.

The second subtheme identified was Just-in-Time inventory system. Researchers found that participants make use of the JIT inventory system as it cuts costs and decrease waste by receiving goods only as they are needed. Lead and delivery times are also reasoning that participants use the system.

Information sharing was the third subtheme identified and it was found that selected retailers in the Nelson Mandela Metropole share information ranging from stock availability, activity grids and promotions to market trends and sales performances. Researchers learnt that sharing of inventory information allows for better forecasting the future and this enhances the ability to plan.

The fourth subtheme identified was establishing relationships with key suppliers. Researchers found that participants establish alliances with key suppliers to gain a competitive advantage.

The fifth subtheme identified was transportation network and effective transportation methods was an important practice in SCM. Effective implementation of transportation schedules complements the primary goal of ensuring efficiency throughout the supply chain.

The last subtheme identified was training and development. The researchers found that training and development is essential for effective SCM. Training and development specialist in the field of SCM is a necessity when businesses want to

effectively manage the supply chain. Researchers also found that, since technology plays a big role in modern supply chains, continuous additional training and development of employees is required.

The main theme, SCM challenges, discussed the following subthemes; technology and innovation, receiving processes, shrinkage, data integrity and the bullwhip effect. Researchers found that, although technology integration is beneficial to the improvement of SCM practices, these benefits are accompanied by challenges. Technology and innovation as a SCM challenge, is that it is time consuming and very disruptive to business. Researchers also found that poor management of shrinkages can lead to major losses for the business and profit margins. The most common shrinkage occurrences for selected retailers in the Nelson Mandela Metropole are employee theft, shoplifting, administrative errors, damage in transit or in store and cashier errors that benefit the customer. The Bullwhip effect as a SCM challenge in the retail industry can be attributed to inconsistent list pricing, lack of communication, reliance on past demand information and free return policies. Other challenges researchers found were inconsistent receiving and delivery processes and poor data integrity.

The main theme, benefits that arise from SCM discussed the following subthemes namely; positive working capital, reduction in time to market, improved efficiency, improved data integrity and information sharing. From the semi-structured interviews, it was noted that good SCM practices result in a positive working capital. Researchers understood that working capital refers to when a business faces a situation where the short-term receivables of the business is more than its short-term payables. The participants revealed that reduction in time to market is another benefit that arise from effective SCM practices as it leads to increased profitability and customer satisfaction. Participants revealed sources that assist in reduction in processes involves automating processes with technology advances as discussed before and restructuring operational resources to contain costs that uncovers organisational inefficiencies and introduces new software and applications to connect systems and cut down on manual labour. Researchers found that accurate inventory management, improved data integrity, information are additional benefits that arise from effective SCM practice.

The final main theme, cost associated with improving SCM practice was identified and had one subtheme namely technology. Researchers found that technology is necessary and required continuous improvement to ensure the effective implementation of new upgraded automated systems. However, the trade-off was the costs associated with the investment in technology which includes training and development, upgraded equipment as well as the disruptive time delays of implementation.

Conclusions and recommendations on effective SCM practices will be elaborated on in the section to follow.

6.8 CONCLUSIONS AND RECOMMENDATIONS ON EFFECTIVE SCM PRACTICES

Based on the problem statement, the study aimed to address the effective SCM practices in the retail industry.

A list of commonly used practices associated with logistics, inventory management, ICT and purchasing were presented in the literature. The researches discussed these practices to better understand and see how it relates to participants in their daily management of SCM. From the empirical results researchers found that participants make use of these practices to increase efficiency in the supply chain.

Literature suggest that supply chain integration requires collaborative efforts and a shared vision on how information and materials are managed, also how it is used to maximise supply chain performance on cost reduction, cycle time and inventory level. This ultimately can lead to a competitive advantage, in addition to integration, customer service and cooperative logistics of a supply chain can also lead to a competitive advantage. From the empirical results it was found that participants collaborate with suppliers in order to streamline processes such as transportation and inventory management as this also allows them to maintain and build effective business relationships.

Based on the aforementioned it is thus recommended that retail outlets in Nelson Mandela Metropole should make use of the following SCM practices:

- Technology integration, this will allow retailers to make use of automated replenishment processes to enhance efficiency.
- Information sharing, this will enable stakeholders in the supply chain to access and share information in order to reduce response time and make better decisions.
- Transportation network, this enables retailers to access more suppliers in order to better meet customer needs by ensuring product availability.

Conclusion on SCM challenges practices will be elaborated on in the section to follow.

6.9 CONCLUSION ON SUPPLY CHAIN MANAGEMENT CHALLENGES

Based on the problem statement, the study aimed to address the SCM challenges in the retail industry.

Literature identified the bullwhip effect as a major challenge in supply chains. The basic causes of the bullwhip effect can be faulty demand forecast updating, order batching, price fluctuations and shortage gaming. From the empirical investigation researchers found more challenges that arise from ineffective SCM practices in the Nelson Mandela Metropole. In addition to the bullwhip effect participants identified technology and innovation, poor receiving and delivery processes, shrinkage and a lack data integrity as challenges.

Conclusions and recommendations on the benefits that arise from effective SCM will be elaborated on in the section to follow.

6.10 CONCLUSIONS AND RECOMMENDATIONS ON THE BENEFITS THAT ARISE FROM EFFECTIVE SUPPLY CHAIN MANAGEMENT

Based on the problem statement, the study aimed to address the benefits that arise from effective in the retail industry.

Literature suggest that there are numerous benefits that can be derived from implementing effective SCM practices. If businesses involved in a supply chain network collaborate, share information and manage materials and resources effectively, the whole network will be optimised for enhanced strategic and financial objective achievements. In the empirical investigation participants revealed that they enjoy benefits like positive working capital, reduction in time to market, improved efficiency, improved data integrity and enhanced access to information when engaging in SCM.

Researchers recommend that retailers should aim to manage SCM as it has a direct influence on the financial performance of a business. The following benefits can arise from effective SCM management:

- Positive working capital, this aligns the operational performance with financial success.
- Reduction in time to market, this will improve lead times which has a direct influence on stock turn and stock days.
- Improved efficiency, this will allow the business to improve profitability by reducing waste.
- Information sharing, this is necessary to make better decisions that can improve SCM processes

Conclusions and recommendations on the costs associated with improving SCM practices will be elaborated on in the section to follow.

6.11 CONCLUSIONS AND RECOMMENDATIONS ON THE COSTS ASSOCIATED WITH IMPROVING SUPPLY CHAIN MANANGEMENT PRACTICES

Based on the problem statement, the study aimed to address the costs associated with improving SCM in the retail industry.

Effective SCM practices are beneficial to businesses, however, optimisation of a supply chain comes at a cost to the business. This cost is seen as an investment as it would lead to improved efficiency. Costs can be shared with suppliers; most suppliers see the benefit in this investment as it guarantees constant replenishment of their product and it allows them to effectively manage customer relations with the business. Technology has the highest cost and requires continuous improvement to ensure the effective implementation of new upgraded automated systems. The trade-off is the cost associated with the investment in technology which includes training and development, upgraded equipment as well as the disruptive time delays of implementation.

Based on the aforementioned it is thus recommended that retail outlets in Nelson Mandela Metropole should invest in technology as it will ultimately allow the business to achieve the twin goals of SCM which is to improve customer service and increase profitability.

The conclusions were based on the research questions, and drawn from the literature review done in Chapter Two and also the empirical investigation results in Chapter Five. Recommendations were made based on conclusions in each section.

The following section researchers discuss the shortcomings of this study.

6.10 SHORTCOMINGS OF THE RESEARCH

The sample selection in this study was limited to the residents in the Nelson Mandela Metropole. Judgemental, convenience and snowball sampling methods were used in this study which might suggest that the sample does not fully represent the population.

The following section will discuss recommendations for future research.

6.11 FUTURE RESEARCH

Based on the findings and conclusions derived from this study, the following future research are provided:

- The study can extend to other regions in South Africa;
- A bigger sample of the same study to confirm the findings and to ensure information is extremely saturated;
- A quantitative study can also be done to confirm findings of this study;

In the following section the researchers reflect on the lessons learnt while conducting the research.

6.12 SELF REFLECTION

This study has enabled the researchers to develop an in-depth understanding of what SCM actually entails, how it evolved over time and how much room there still is for improvement with the help of technology integration and specialists in the field. This study also increased the researcher's knowledge and their ability to do research, specifically in the area of reviewing literature, interpreting empirical results and analysing the qualitative findings through case studies, content analysis and the constant comparative method. The analytical, writing and research skills researchers obtained in will definitely prove beneficial in their quest for an MBA qualification as well as their professional life.

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5 July 2018

**BEST SUPPLY CHAIN MANAGEMENT PRACTICES AT SELECTED RETAIL
OUTLETS IN THE NELSON MANDELA METROPOLE**

Good day

We are honours students at the Nelson Mandela University, Port Elizabeth, South Africa, and are currently (2018) conducting research on the best practices in Supply Chain Management (SCM) at selected retail outlets in the Nelson Mandela Metropole.

We are collecting information via semi-structured interviews with middle managers and senior buyers at divisional buying offices. Information will be canvassed on the SCM practices at retail outlets, challenges in the retail value chain and the influence technology and innovation has on the supply chain in the Nelson Mandela Metropole. Ethical clearance has been obtained from the NMU ethics committee. All information will be treated in the strictest confidence and results will be reported anonymously as Participant A, B, C etc.

The interview schedule comprises of two sections:

- Section A canvasses biographical data of the participants.
- Section B explores information on SCM practices.

Your cooperation is appreciated.

Mr. R. Inglis

E-mail: s20410621@mandela.ac.za

Mr. C. Mngomezulu

E-mail: s220017794@mandela.ac.za

Supervisor: Dr. N. Oosthuizen

E-mail: nadine.oosthuizen@mandela.ac.za

ANNEXURE A**SECTION A: BIOGRAPHICAL DATA**

1. Name of business/organisation: _____
2. Name of interviewee: _____
3. Position in organisation: _____
4. Contact details:
Phone: _____
E-mail: _____
5. Age: _____
6. Ethnic affiliation: _____
7. Gender: _____
8. Number of years working experience: _____
9. Number of years in this position: _____
10. Level of education: _____

SECTION B: SUPPLY CHAIN MANAGEMENT PRACTICES

1. Which processes/practices are in place to ensure effective supply chain management in your organisation? Elaborate on these practices.
2. Are these set practices or are they changed depending on the product category and supplier? Elaborate.
3. Elaborate on aspects that you consider when making a buying decision.
4. Explain the influence of innovation on SCM practices in your organisation?
5. Explain the influence of technological improvements on SCM practices in your organisation.
6. What is the cost implication of the improvements on SCM? Does the business absorb the cost or is it passed onto the customer by inflating retail selling prices?
7. What are the challenges currently experienced with SCM from your organisation's point of view?
8. How can these challenges be resolved?

ANNEXURE A

9. What do you perceive to be SCM challenges from your supplier's point of view?
10. How can these challenges be resolved?
11. What do you perceive to be the benefits for your organisation of effective SCM?
12. What do you think retail stores should do to improve SCM practices in the Eastern Cape?
13. Any other issues or factors that you would like to share regarding SCM practices.