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**An investigation into supply chain challenges at Durban
North Liquor Distributors in eThekweni Metro, KwaZulu-
Natal**

By

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degree of Master of Business Administration (MBA)**

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College of Law and Management Studies**

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DECLARATION

I, Sandile Mavundla, declare that:

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ABSTRACT

The liquor industry plays an important role in the South African economy. It contributes greatly towards job creation as well as economic growth. The fragmented structure of the industry provides an opportunity for firms of different sizes to play a role in the liquor supply chain. The large companies act as suppliers and manufacturers, while medium-sized companies are involved mainly in wholesale distribution, and the smaller companies act as retailers who connect with the final consumers. Although the industry is a strategic player in the economy, it is not without challenges. Some of the challenges include high operating costs due to statutory controls, yet margins are low. As a result, the industry is highly competitive. The aim of this research was to investigate supply chain challenges within the liquor industry, with an intention to propose solutions to unlock the industry's full potential. A qualitative research design was adopted in this study, in which the researcher interviewed customers to understand the liquor supply chain challenges from their perspective. A research sample was drawn from a list of targeted participants who deal with the distributor Durban North Liquor Distributors. A purposive sampling strategy was used to draw a sample of clients from different wards around eThekweni Municipality. According to the research findings, the distributor provides an impeccable customer service. However, the challenges identified include lack of and inconsistent communication around non-availability of products and anticipated time of delivery. The respondents also highlighted that the prevalence of receiving incorrect products that were not part of the initial order was high, which points to the lack of quality controls at Durban North Liquor Distributors. Due to a centralised distribution strategy, the respondents also felt that the distributor should improve on delivery plans. Recommendations include that the distributor should standardise the ordering system by using e-commerce platforms, and immediately communicate non-available items to customers, before sending orders for picking. In addition, there is a need to conduct quality control before dispatching orders. Finally, to address the delivery constraints caused by centralised distribution, the distributor should complement their fleet by procuring the transport services of third-party transport service providers, so as to improve geographical coverage, within customers' operating hours.

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CHAPTER ONE

1. Introduction

Corporate Finance Institute (2022) defines supply chain management as the entire system of producing and delivering a product or service, from the earliest stage of sourcing the raw materials to the final delivery of the product or service to end-users. The term 'supply chain' includes all processes and stakeholders that are involved in the transformation of raw materials into final products. Furthermore, according to Fredendall and Hill (2016), supply chain management extends to communication between firms, independent of the facilitation of the movement of services and products between them. By their definition it is viewed as movement of product and materials from producers, by means of a value chain, to the final consumers. As noted by Orel and Kara (2014), it is crucial to fulfil customer demand, leading to some firms regarding customer satisfaction as an output of marketing strategies. The management of relationships is important in achieving profitable outcomes for all involved in a value chain. Supply chain comes with challenges because it is difficult to satisfy everyone involved as all the parties have their own interests (Christopher, 2016). This study aims to investigate supply chain challenges at Durban North Liquor Distributors (DNLD) in the eThekweni Metro. Chapter one discusses the background of the study, the aim, research objectives, research questions, as well as the limitations of the study.

1.1. Background for the Study

The liquor industry, wholesale and distribution, in eThekweni is dominated by companies such as DNLD, Liberty liquors, Panjivans liquors, Makro liquors, Chelmsford liquors, and Westmead Cash and Carry. These wholesalers supply liquor stores, taverns and restaurants with liquor and mixers. They buy stock from manufacturers like Diageo South Africa, Heineken South Africa, South African Breweries, Distell South Africa, National Sorghum Breweries, Coca-Cola Africa, KWV, Pernod Ricard, and Edward Snell.

DNLD specialises in liquor sales, wholesale and retail, and distribution of liquor in the eThekweni Metro. Its headquarters are at No. 33 Umhlanga Rocks Drive, Durban North, and the company is wholly owned by Dan Moodley and his son Strini Moodley. Strini used to work for the business during school holidays and weekends to get vital business experience in the liquor industry. He was fully employed by the business in 2003 after finishing school. The business was purchased by the Moodleys in 2009, as a going concern, and the experience and business relationships built in the past has helped them to grow the current business. The business initially traded solely as a retail store, until the owners started introducing wholesale sales which became a success; this division was so successful that the retail eventually contributed less than 5 % of the total turnover. In September 2011, the wholesale division was relocated to a warehouse in the North Coast area and Bridge City Liquors was purchased. In 2013, the owners purchased a liquor store in Chatsworth, which is mainly retail. In 2017, the wholesale business was moved from Bridge City to new premises in Phoenix that operate independently from Phoenix central liquor store to the Phoenix wholesale store, which operates independently from the Phoenix central warehouse. In 2017 Bridge City Liquors was sold to Spar Tops.

Effective distribution and logistics can provide DNLD with a competitive advantage over its counterparts, which may lead to customers preferring DNLD. To improve its quality of service, Durban North Liquor Distributors is using the services of hired trucks during the December peak season to distribute stock from their depots and warehouses to customers. This advantage will differentiate DNLD from its competitors, as it will potentially lower costs and improve profitability (Fernie and Sparks, 2018).

DNLD employs approximately 100 people. The company is committed to staff development and partnered with the Wholesale and Retail Sector Education and Training Authority (W&R SETA) to start training programmes to upskill staff and to improve service to customers and communities in which it operates (Davids, 2015). It is also committed to the long-term investment of its brands and sales execution, while focusing on cost-cutting.

1.2. Statement of the problem

Supply chain is a powerful tool for DNLD to gain access to new markets, improve growth rates, and add shareholder value (Moore, 1998). According to the recent research by Global Data (2021), cited in Pay Space Magazine (2021), South Africa was among the top 10 fastest growing economy in Africa in 2021, despite global economic slowdown challenges. One of South Africa's growing companies is DNLD, with a reported growth in sales of 19.8% in 2020. However, the company has been struggling to meet the increased demand and adequately deliver products to its customers, thereby negatively impacting customers' expectations of DNLD's service level (Durban North Liquor Distributors, 2021). The company's inability to effectively supply the eThekweni Metro market has also been influenced by the rapid increase of liquor outlets in the area, as well as the continued growth of the product range and launch of new products by manufacturers (Smart, 2016). The delivery of quality service is important for DNLD if it is to retain its current customers and to grow the business (Phiri and Mcwabe, 2013). Customers' expectations are that the company should maintain effective communication between the supplier and the customer, as well as the timely delivery of complete orders. The supply chain challenges experienced by DNLD, in the eThekweni Metro, are the focus of this research.

1.3. Justification of the study

The study seeks to evaluate and understand supply chains within the liquor distributing industry functions in South Africa, with a particular focus on DNLD. While past research focuses largely on the supply chains of firms, this research examines a significant liquor distributor. To the best of the researcher's knowledge, this is the first study to examine the supply chain of DNLD and offer recommendations that may potentially improve their supply chain; findings from this research will likely improve efficiency in DNLD's supply chain, whether it is in the sourcing of suppliers or sufficient distribution to the market. The study should assist DNLD to increase sales, revenue, and market share. Moreover, the study will contribute towards a better understanding of the supply chain in the South African economy regarding the extent to which the

supply chain leads to improvement in customer service, which in turn leads to gaining more customers. Increased insight into this aspect of operations may assist other firms to successfully invest in emerging markets in South Africa.

1.4. Objectives of the study

The objectives of this study are to:

- (i) understand DNLD's supply chain challenges.
- (ii) understand clients' perceptions about DNLD's supply chain services.
- (iii) establish the impact of DNLD's supply chain challenges on their client base.
- (iv) investigate possible supply chain improvement interventions at DNLD.

1.5. Research questions

The research questions underpinning the study are:

- (i) What are DNLD's supply chain challenges in the eThekweni Metro?
- (ii) How do DNLD's clients feel about DNLD's supply chain services?
- (iii) What is the impact of DNLD's supply chain challenges on their client base?
- (iv) What is the possible continuous supply chain improvement intervention to improve DNLD's supply chain?

1.6. Contribution of the study

An investigation into supply chain challenges at DNLD will not only benefit DNLD, but will benefit other liquor traders, especially in eThekweni Metro. A comprehensive understanding of the SC challenges will allow liquor traders to implement preventative measures to address logistics challenges, while at the same time identifying opportunities to improve their operations to save costs and improve customer service.

1.7. Chapters outline

This dissertation is structured as follows:

Chapter one: provided an introduction into the study.

Chapter two: dealt with literature review, the literature review unpacks the existing body of knowledge in supply chain.

Chapter three: dealt with a presentation of the research methodology that was used by the researcher. A qualitative research methodology was used.

Chapter four: presented and discussed the research findings.

Chapter five: presented the recommendations and conclusions.

1.8. Chapter Summary

Unemployment is a major issue in South Africa. While small, medium and micro enterprises (SMMEs) are perceived as catalysts for employment and economic growth, these enterprises face a number of challenges – including with supply chains – which hinder their ability to make a positive contribution to the economy. Against this backdrop, this study undertook to investigate supply chain challenges, within the context of an SMME specializing in distributing alcoholic beverages in the eThekweni Municipality. Understanding supply chain challenges is important in providing solutions and strategies to improve operational efficiency within the liquor industry. To fully understand the supply chain challenges, it was important to conduct a literature review which highlights the existing body of knowledge that deals with the phenomenon. The following section is a review of literature focusing on the area of supply chain, as well as the challenges that are prevalent in the liquor industry.

Chapter Two

LITERATURE REVIEW

2.1. Introduction

This chapter discusses the existing body of knowledge in the area of supply chain management, which is a key phenomenon under study. Findings, arguments, and key issues related to the liquor industry are discussed in this chapter.

2.2. Role of supply chain and logistics in the economy

Supply chain and logistics are crucial in determining the country's economic growth and increasing competitiveness. Every country should aim to develop logistics and supply chain as key to its economic sector. Countries with inefficient supply chain and logistics will experience an increase in costs and a reduction in global integration (Gringaus et al., 2020).

Macroeconomics criteria and indices showing logistics efficiency have different approaches in measuring pointers. Some of them compare logistics of the leading countries according to the rating of the logistics performance index (LPI), established by the World Bank in 2007. This (LPI is widely used in research. LPI is used to determine the difference between the participating countries. The rankings of the participating countries have been changing depending on actions taken by the countries to advance their logistics performance indicators. Studies that have been conducted indicate the need for constant enhancement and changes to improve logistics. Researchers need to follow recent trends in the supply chain to improve logistics components and activities. Companies need to invest in a supply chain that is time-effective and less cost sensitive; this helps them to maximise profits (Gringaus et al., 2020). In addition, increased competitiveness and developments in the growing

global economy makes the logistics sector of strategic importance (Hayaloglu and Issues, 2015). Logistics and supply chain are a strategic resource for the South African economy, and they are important in providing a global competitive advantage.

2.3. Evolution of supply chain management and logistics

Supply chain is the active management of supply chain activities from source to final consumption, to maximise customer value and achieve a sustainable competitive advantage, through effective and efficient operational excellence among supply chain partners (Handfield, 2021). According to Handfield (2021), supply chain management is based on focusing processes and practices on the effectiveness and efficiency of their separate business functions such as production, purchasing, financing, logistics and purchasing. These functions need to be connected because if they are not connected it leads to organisational goals being incongruent and creates inefficiencies by duplicating organisational resources and efforts. Companies compete in a global marketplace. However, they no longer compete as independent entities with unique brand names; instead, they operate as part of supply chain links (Min, 2015).

Evolution of supply chain has been a gradual process. In the last century, there were three major revolutions in the supply chain management field, and these are examined below in the context of a broader evolution in the technological and economic environment.

2.3.1 First evolution: Ford supply chain (1910-1920)

The first evolution was by Ford Motor Corporation which built a tightly integrated chain. Ford Motor Corporation owned every part of the chain from timber to rails. Through its chain, Ford could manage the chain from the iron ore mines to the finished automobile in 81 hours. The criticism around supply chain was that it was uncompromising because it could not handle a wide variety of products and it was not sustainable in the long term. General Motors understood the demands of the marketplace and offered the market a variety of models, colours, and automobiles.

Ford supply chain used to take a long time to set up changes and they had to work with high stock in the chain (Coyle et al., 2016).

2.3.2. Second evolution: Toyota Supply Chain (1960-1970)

The manufacturing industry saw several changes, including the trend towards a variety of brands, with Toyota streamlining their supply chain to be efficient and flexible. Supply chains were required to deal with a variety of products without holding a lot of inventory. The Toyota Motor Corporation addressed all the concerns by ushering in the second evolution. Toyota initiated the idea that permitted final assembly and manufacturing of key components to be done in-house. The bulk of the components were sourced from companies that fall under Keiretsu, a group of companies with shareholding and interlocking business relationships.

Toyota had a good relationship with suppliers and improved their systems. For instance, set-up times used to take hours, but they were able to significantly reduce their set-up time. The short set-up time and long-term relationship with suppliers were a feature that propelled the second revolution. Toyota started following the principle of lean production. With the introduction of electronic data interchange, which assisted electronic exchange of information between companies it was possible for companies to integrate without relocating their plants closer to manufacturers' plants. The rigidity of Toyota's supply chain, such as permanent relations with suppliers, could become a liability over time. This led to a third revolution which was spearheaded by DELL (Coyle et al., 2016).

2.3.3. Third evolution: Dell Supply Chain (1995-2000)

Through advanced technology Dell computers allowed its customers to customise their computers. Dell customers can configure their computers and track the same product in the distribution and production system. Dell had a long-term relationship with world-class suppliers with their technology and maintained cost leadership in their

fields. Dell maintained medium to long-term relationships with customers who were integrated electronically, including those who were partners in the medium term. Dell was reducing stockholding significantly by allowing customers to respond to any changes in the market. Dell did not see the need for relocating their suppliers to their assembly plants since they were connected electronically.

2.3.4. Fourth Evolution: Automation (2000-2020)

Due to the evolution in information technology, supply chain management in the 21st century has evolved drastically. Supply chain management in the 21st century is knowledge-driven, instead of process-driven (Min, 2015). The key performance indicators are defined by real-time communication through various communication technologies like email, electronic data interchange (EDI), web-based and other technological solutions. The business intelligence among the supply chain partners has been the key competitive advantage that separates winners from losers.

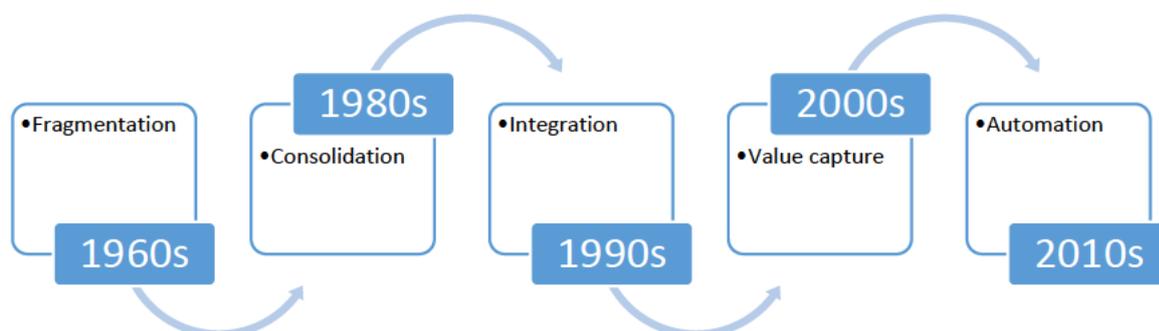
Another trend driving supply chain management in the 21st century is automation. Automation entails the usage of technology in supply chain including artificial intelligence robotics to achieve outcomes with minimal human input. Companies like Toyota has developed humanoid robots, that can do various complex activities in the manufacturing plant to improve production efficiencies like speed, consistency, and quality.

Even though supply chain management has been technology-driven, the interconnection among internal and external supply chain management partners is still an important key success factor. The success of the firm will depend on the management's ability to coordinate and integrate the complicated networks of business relationships between supply chain partners. Supply chain is used to integrate a system that combines different interrelated business processes to acquire raw material and parts, create demand for products, transform raw materials into

finished goods, add value to products, promote and distribute products to either customers or retailers, facilitate information exchange between different businesses e.g., manufacturers, distributors, suppliers, logistics companies and retailers. The main objectives of supply chain is to improve operational efficiency, improve profitability, improve the competitive position of the firm and its trading supply chain partners (Min, 2015).

Logistics management and supply chain management are fascinating areas that affect all people's lives. Different products that are purchased and consumed every day reach consumers through supply chain. Supply chain management and logistics have become widespread and gained prominence in the last three decades, however, it has been around longer than that. Supply chain management and logistics are not only important in the business world today but are also essential to non-profit organisations and public sectors. Supply chain is known as a manufacturing sector; it has expanded into a highly successful application of logistics and supply chain management principles in a service business. Supply chain management has improved efficiencies in a service business such as banking and hospitals where the emphasis has shifted towards serving customers, faster, better and cheaper (Mangan and Lalwani, 2016). The evolutionary development is illustrated in Figure 2.1 below.

Figure 2.1. Evolution in supply chain



Source: Rodrigue (2020), The Evolution of Supply Chain Management

In line with supply chain evolution, DNLD's supply chain has evolved over the years from manual operations into automated systems, whereby activities like order processing, picking and dispatching are being conducted through the system in order to improve efficiencies.

2.4. Participants in the supply chain

A supply chain consists of a company, suppliers, and customers of that company. This is the group of participants who create the supply chain. There is also what is called an extended supply chain, which consists of three participants. The first participant is a supplier's supplier at the beginning of the supply chain. The second party of the supply chain is a customer, followed finally by firms within the supply chain who supply logistics, marketing, finance, and information technology services to other companies.

Companies perform different functions in a supply chain. For example, some companies are producers, wholesalers, distributors, retailers, and companies who are customers, and some are final consumers of the product (Hugos, 2018). As noted by Christopher (2016), supply chain management is defined as the management of upstream and downstream relationships with customers and suppliers to deliver superior value at lower costs to customers and the supply chain. The focus of supply chain management is the management of relationships to achieve more profitable outcomes for all parties involved in the supply chain (Christopher, 2016).

At the University of Tennessee, the Supply Chain Council Research Group defined a supply chain as a group of three or more organizations that are directly linked by one or more of the upstream and downstream flows of funds, products, services, and information from a source to a customer (Snyder and Shen, 2019). They also defined supply chain as the strategic coordination of the traditional business function within an organisation and across businesses within the supply chain, with the intention of improving the long-term performance of the individual organisations and supply chain (Snyder and Shen, 2019).

Supply chain is often confused with logistics management. The concept of supply chain is wider than logistics management. Logistics management can be defined in many ways. Christopher (2016) describes logistics management as the practice of

strategically managing the purchase, storage, and distribution of materials, parts, and finished inventories, via the company and its marketing channels, in order to maximize current and future profitability through cost-effective techniques. According to the Council of Logistics Management, logistics is part and parcel of the supply management process that implements, plans, and controls the efficient reverse flow, and effective forward flow and storage of goods, services, and related information between the point of origin and the point of consumption to meet the requirements of customers. The aim of logistics management is to serve customers in a manner that saves costs for the company.

2.5. Supply Chain Operations

Supply chain has what is called the Supply Chain Operations Reference (SCOR). The SCOR model was developed by the Supply Chain Council. It helps companies to gain competitive advantage and to improve their organisational performance, and it helps companies to measure their performance and increase their level of service (Delipinar and Kocaoglu, 2016). The SCOR model has four categories of operations: plan, source, make and deliver, each of which is briefly described below.

2.5.1. Plan

Planning is a vital activity for organising operations in the other three categories, and also for aligning supply and demand that will help in developing a plan that meets the company's production, purchasing and distribution requirements. This category comprises three operations: product pricing, demand forecasting and inventory management.

2.5.2. Source

Goods and services must be procured to meet the demand and supply. This category is crucial as it includes all the activities that are necessary to acquire the inputs to make products and services. Two operations are important in this category. The first

one is to procure the acquisition of material and services. The second operation is collection and credit. These activities have a big impact on the efficiency of supply chain.

2.5.3. Make

Transforming raw materials and components into finished goods is important in supply chain. This category consists of operations that build and develop products and services that a supply chain provides. Operations that are discussed in this category encompass product management, product design and facility management. The SCOR model is included in the product design and development process and is an integral part of the production process.

2.5.4. Deliver

These operations include delivering products to customers and receiving customers' orders. The three important aspects of this category are product delivery, management and return processing. These operations are essential as they constitute the connection between companies in the supply chain. Delivery includes supplying finished products, warehouse management, order management and transport management.

2.6. Global supply chain

Customer demands and competitive pressure have forced businesses to restructure and to take advantage of international products and capital markets. There are several challenges associated with operating in a global market, including: economic, logistical, political, competitive, infrastructure and cultural challenges. A company operating internationally needs a highly coordinated flow of goods, information, and services, including cash across and within national boundaries.

Profit maximisation in a global environment includes sourcing from locations that offer the lowest total procurement costs, assembling products in a least-cost country, manufacturing, and marketing in high potential-demand centres. Recent events, for example, Coronavirus, have demonstrated the danger of an occurrence that affects the supply chain of various firms in the supply chain.

2.6.1. Global Supply Chain challenges

Understanding the differences between global and domestic supply chains is vital when comparing risks faced in each market with regards to the objectives of a supply chain. These are to maximise profit, find the balance between profitability and productivity and to move goods and services between countries in a timely manner with the intention of improving productivity and profitability to enhance supply chain. Global supply chain must consider differences in economies, politics, cultures, competitive environment, and infrastructure. Economic challenges include tax rate, exchange rate, inflation, and transfer pricing. There are other challenges such as infrastructural differences, quality, quantity, available mode, type of documentation and nature of facilitators, e.g., banks and transport agencies. These may need companies to use strategies that correspond with those of the countries in which the operations are being conducted. Implications of these challenges should be well understood if global supply chains are to be successful.

The infrastructure in some developing countries is a limiting factor which constrains the efficiency of supply chain and logistical systems. High resource requirements and a competitive environment may create challenges in terms of customer service levels, desired profitability, and anticipated costs. Political factors e.g., stability of the government, law and order and government sanctions have implications for supply chain structure.

Managing and administering global logistics systems create conflicts between central management of the whole system and management of local divisions of the total system. Global supply chains have greater uncertainties, more delay points and there is a need for greater coordination, monitoring, and communication.

A unique performance measurement standard is needed due to fluctuations in varying inflation rates and in national currencies, both in developing and industrialised countries. Companies need to first, build organisational structures that can transfer

skills and knowledge on a global basis; second, be able to master a set of complex relationships (regarding integrating a system of domestic laws) and third, have an executive leadership team capable of managing logistical and information flow to support global manufacturing and marketing strategies.

Companies are choosing global supply chains, even though they are difficult to manage, because they know of the associated benefits. The global supply chain provides access to cheap labour, subsidised financing opportunities, raw materials, larger product markets, and governments offer different financial inducements (e.g., tax abatements) to attract new business. Global supply chains can access the benefits of tax minimisation, information arbitrage, and product shifting, as well as benefits of outsourcing, acquiring information, transnational mobility of capital and people, increased E-business opportunities and, finally, exploiting the economies of location such as cheap labour costs, taxes, and productivity levels.

2.6.2. Identification of risks in global supply chain

Companies need to identify and manage global supply chain risks. There are various methods of risk identification that can be employed by firms to deal with risk. Two trends that affect the dynamics of global supply chain include globalisation and consolidation of the firm. Uncertainties in logistics operations exist at a tactical, strategic and operational level. These uncertainties become pronounced by the challenges in global environments such as rising oil prices and security issues. These issues must be considered when planning a multinational logistics system.

Global competition is uncertain regarding competitive advantage; this includes the lack of historical rules regarding initial moves and competitive reactions. Other essential factors in the global supply chain consist of uncertainty regarding lead times and the reliability of suppliers. Logistics activities are affected by lead time uncertainty and the variable reliability of suppliers.

2.6.3. Global chain risk management strategies and mitigation plans

At the top management level, risk management is focused on identifying and assessing the probability and consequences of risks. In addition, top management is responsible for choosing appropriate risk strategies to reduce the probability of losses

associated with adverse events. Mitigation of risks focuses on reducing or minimising consequences if an adverse event is occurring. Three motives were suggested for mitigating business risks. They include, firstly an agency motive which suggests that relatively low-risk firms have low company value. Managers consider both business risks and market risks, but shareholders are only interested in market risk since they can diversify their portfolio to account for business risk. Secondly, cash flow motive suggests higher cash flows are linked with lower business risks. In a stable business environment, corporate operations are very efficient, and earnings' volatility is very low. Thirdly, the rates of return indicate that a positive relationship exists between business risks and the rate of return. Due to transaction costs such as brokerage fees and time costs, shareholders are prepared to acquire stock with little risk. Seven risk management tactics (discussed below) are employed, including avoidance, postponement, speculation, hedging, control, sharing and transferring, and security.

Avoidance:

Avoidance strategy is used when the risk associated with trading in each product, geographic market and working with customers or suppliers is considered high and unacceptable. Managers who know demand and supply issues know how to avoid risk and trade-offs associated with the options and decisions taken to avoid some risks. Avoidance may take the form of exiting through delay of entry, divestment of some specialised assets and participating in a low, uncertain market.

Postponement:

To preserve flexibility, postponement implies delaying the commitment of financial resources as well as the incurring of costs. After customer orders are received, the movement of items from manufacturing sites is postponed. The feasibility of the postponement strategy depends on demand customisation, products' life cycle, product modularity and component costs.

Speculation:

Speculation is also known as selective risk taking or assumption. Under speculation, decisions are made based on anticipated customer demands. When customer service standards are defined by the competitive environment and driven by customers, supply chain resources are given to those specific customers and products that give the firm a competitive advantage.

Hedging:

There are two ways of hedging the risk, namely, statistical and economic approaches. The statistical approach works with large numbers. In event of a huge population, the number of people who are likely to be affected can be estimated very precisely. If the distribution for each group or person is known, the sample mean has a good likelihood of being predicted. Hedging is done across a supply chain involving geographically distributed suppliers, clients, and facilities since a single occurrence, such as a natural disaster, does not affect all of the entities at the same time or by the same degree.

Control:

By capacity limits, supplier power balance, and asset specificity, risks that give incentives for vertical integration opportunistic and asset specificity. Vertical integration can also improve control by lowering the risk of supply and demand failure in the supply chain, converting variable expenses to fixed costs. The corporation can meet high-probability demand while delegating low-probability work to others. This is known as tapering integration, and it leads to the use of the firm's equipment while allowing suppliers to absorb the risk.

2.6.4. Transferring and sharing of risk

Offshoring, outsourcing, and contracting are ways of transferring risks in supply chain. Global supply chain outsourcing can take place through domestic and international sourcing of services and products. Outsourcing involves the transfer of risk to suppliers. The collective risk of offshoring should be evaluated against control. International factoring is used by exporters to facilitate the cash flow and to focus on core activities such as sales, manufacturing, and design. This helps exporters to offer favourable buying terms by providing services such as credit protection and collection.

Different contracts can be used in supply chain to persuade different retailers with different levels of risk to select unique contracts, which influences retailers in the supply chain to order quantities that increase the expected value.

2.6.5. Security

Due to various risks in supply chain, it is important for organizations to study potential risks in order to develop necessary control system to mitigate risk. Technological research in the field of chemical, biological, or nuclear elements may help in identifying the shipments that are at risk. It is also important to identify what is moving as well as suspicious elements, and to focus on them. The following section will explore the state of logistics in different markets, i.e., developed, developing and under-developed economies.

2.7. State of logistics in developed, developing and under-developed countries

Logistics plays an important role in supply chain by ensuring that the goods are in the right place at the right time for consumption. Road freight is also an important mode of transport due to its ability to connect remote and under-developed areas with main economic hubs. The following section discusses the state of logistics in different markets.

2.7.1. State of logistics in developed markets

Through economic liberalisation, the flow of commercial trade around the globe has used a well-coordinated transport network, allowing enterprises in the industrial and retail sectors to thrive in industrialized countries. According to Freight Tender Info (2017), the World Bank usually reviews the logistics performance of 160 selected countries to gauge how different countries in developed, developing and under-developed economies performed. According to a recent review, the following countries were placed as the world's best top 10 logistics performers.

Table 2.1.: Top 10 countries with best logistics performance

No.	Country
1	Germany
2	Luxembourg
3	Sweden
4	Netherlands
5	Singapore
6	Belgium
7	Austria
8	United Kingdom
9	Hong Kong
10	United States

Source: Freight Tender Info (2017).

The state of logistics in the top 10 countries is underpinned by efficient customs processes, well-developed logistics infrastructure, efficient facilitation of international shipments, logistics competence, well-developed tracking and tracing capabilities as well as on-time deliveries.

2.7.2. State of logistics in developing markets.

The level of development in developed and developing markets varies widely. For example, infrastructure in developed countries is more advanced, while in developing countries infrastructure in logistics networks is still in the developmental phase. Access to technology is also not the same between developed and developing countries. Developed countries have access to a high level of technology like artificial intelligence (AI), while in developing countries access to technology is still limited. Some of the challenges in developing countries include increasing population, higher transport costs, poor infrastructure, and low Gross Domestic Product (GDP). The developing countries need to develop their logistics systems in order to improve logistics performance. In addition, developing countries like Brazil, Russia, India and China all acknowledge that in order to be competitive, there is an urgent need to improve their transport infrastructure and operations (Mokonyama, Vilana and Mpondo, 2013).

2.7.3. The state of logistics in under-developed countries

According to Reference.com (2020), a state that has poor education, standards of living, healthcare, life expectancy and industrialisation, cultural and technological values, is regarded as underdeveloped. Fifty of the states that are regarded globally as underdeveloped are to be found in Africa. The economy in some of the under-developed countries is declining, unemployment is high, and infrastructure is lacking. Table 2.2. shows a list of the top 10 under-developed countries in Africa.

Table 2.2.: Top 10 most under-developed African countries

No	Country
10	Eritrea
9	Guinea
8	Madagascar
7	Nigeria
6	Ethopia
5	Malawi
4	Sierra Leon
3	Liberia
2	Congo
1	Burundi

Source: Top 10 most under-developed countries (Basic Planet, 2016).

It is important to note that most of the under-developed countries in Africa are landlocked. That means they do not have access to seaports; therefore, their imports and exports shipments are not transported by sea, which is a cheaper mode of transport. They are instead discharged in neighbouring countries and then cross-hauled inland to the respective countries. The transportation of goods from seaport to inland countries leads to an increase in logistics costs. As a result, the logistics performance of under-developed countries is very poor. For example, in the Southern African Development Community (SADC), underdeveloped states include Malawi as it experiences problems in accessing international markets for import and export

traffic. Owing to its poor road and rail infrastructure there is an absence of dependable transport.

The ratio of transport costs in landlocked Malawi is 55% of the costs of the product which is in contrast with other countries in sub-Saharan Africa, where the average is below 20% of landing costs in terms of transport. The increase in global business development through economic liberation has brought transformation to global businesses which are increasingly competitive. The demand for high quality transport logistics has a major influence on decisions by sellers and buyers on which consumer market will be attractive for their brands. This problem is not peculiar to Malawi as other under-developed countries, especially those that are land-locked, suffer the same challenges.

2.7.4. State of Logistics in South Africa

Supply chain management, and the logistics sector worldwide, is changing at a fast pace. These changes are caused by changes in demand, disruptive technology, growth in E-commerce, and changes around cybersecurity and government policies. The World Economic Forum (2017) recognised the following eight megatrends that will drive the future of supply chain and logistics:

- Logistics skills shortages
- Supply risk and recovery
- Restructuring global supply chains
- Digital transformation of supply chains
- Sustainability of supply chains
- E-commerce driving demand chains
- Logistics property and infrastructure
- Collaborative business models

The megatrends listed above are of critical importance for this sector to grow and become integrated in the country. Supply chain is important within the country because it allows business transactions among countries and across borders. Supply chain is not valued as highly as it should be, although the significance of

supply chain is noticed when something goes wrong. Logistics and supply chains are core enablers of development.

The World Bank's Logistics Performance Index (LPI) provides a snapshot of logistics and supply chain performance in most nations, throughout the world, as evaluated by logistics experts both inside and outside the country. The latest study conducted by LPI shows that the South African logistics sector is still doing well although its ranking has decreased from 20th out of 167 countries in the 2016 study, to 33rd out of 160 countries in 2018. During the 2018 survey, the World Bank gave South Africa's aggregate LPI ranking and score for the years 2012 to 2018 as 29th and LPI score of 3.38 respectively.

The LPI ranking indicates a country's position relative to that of other countries worldwide. The LPI score is one of the most important indicators as it gives an accurate comparison. In the past 11 years there have been no changes in South Africa's LPI, indicating that its supply chain and logistics performance has remained stable during this period. In the 2018 survey, South Africa also featured in the top 10 of top performing upper-middle income economies. China (3.61) and Thailand (3.41) are both ahead of South Africa in this group.

In Africa, South Africa is consistently the top performing country, being way ahead of other African countries that participate in the survey. The following six indicators are used to determine the LPI score for South Africa:

- Customs
- Infrastructure
- International shipments
- Logistics quality and competence
- Tracking and tracing
- Timeliness

South Africa's supply chain management and logistics have been performing consistently, with South Africa's performance corresponding strongly with a high quality of service over the 11-year period that was measured. The analysis that was

done by the World Bank in the last survey shows that South Africa, in terms of its GDP per capita, is one of the top performers, and that it is outperforming its peers. It also shows that the performance of the logistics sector in South Africa has remained at a high level, and this can be maintained in the future.

There is only one area of concern in South Africa that is linked to the logistics sector, this being the South African post office and delivery of mail. There are ongoing complaints in the media and other communication forums regarding poor service from the post office, including that items are not delivered on time, service is not reliable, items are lost, customer service is extremely bad, tracking and tracing of registered email is worse. The performance of the South African post office is not in line with the logistics and supply chain as depicted in the World Bank LPI study. Postal services are under pressure all over the world and need to diversify, a process most post offices around the world have embarked on; postal services need to improve their operational efficiency and adapt to the changing environment. In South Africa, logistics and supply chain should be reliable and predictable, and provide excellent customer service.

2.8. Importance of supply chain

Supply chain management is believed to be the most crucial part of business and is essential for customer satisfaction (LeMay, Helms, Kimball and McMahon, 2017). Supply chain management is important for the following reasons:

- Customers expect the correct quality to be delivered and the correct product assortment.
- Customers expect the right product to be available at the right location. Customer satisfaction diminishes if the supplier does not stock the correct product, and there is no commitment from the supplier.
- Right delivery time – Customers expect the product to be delivered on time and in full.
- After-sales support – Customers expect the product to be serviced quickly should faults arise.

2.8.1. Reduce operating costs

- Decreases purchasing costs – Wholesalers and retailers depend on the supply chain to quickly deliver required products and materials to avoid holding costly stocks longer than necessary.
- Decrease production costs – Producers and manufacturers depend on supply chain to deliver material to production plants to avoid material shortage that will shut down production. For example, an unexpected material shipment delay may cause a production plant shutdown costing millions of rand per day in lost wages.
- Decrease supply chain cost – Retailers and manufacturers depend on supply chain managers to create networks to meet customer service goals at an affordable cost. An efficient supply chain enables the organisation to be competitive in the market. For example, Heineken is producing beer based on customer order, and they deliver beer directly to the wholesalers who buy in bulk. As a result, they avoid having large beer stock stored in a warehouse which saves them millions of rands. Also, Heineken avoids carrying large beer stock in their factories and warehouse that could expire.
- Supply chain allows more effective and efficient customer service as customers receive their orders quickly. If Heineken delivers products directly to customers, customers are likely to receive fresh stock and there will be fewer losses (LeMay et al., 2017).

2.8.2. Improve financial position

- Increase profit leverage – Supply chain increases profit leverage for the company and helps to reduce supply chain costs. This helps to increase profit for the company.
- Decrease fixed assets for the company – Supply chain management reduces the use of fixed assets such as warehouse, plants, and transportation vehicles in the supply chain. If supply chain experts can design strategy that decreases fixed assets that are utilised by companies, they can save costs.

- Increase cash flow – Supply chain improves product flow to customers. Supply chain improves the number of days the stock is delivered (LeMay et al., 2017).

2.9. Importance of logistics

The cost of logistics is the essential indicator of the supply chain that must be monitored and managed to allow supply chain to compete effectively. Research that was conducted at the CSIR in 2014 indicates that logistics costs in South Africa are around 12% of GDP which is significantly higher than the 8% of the United States of America (USA). The breakdown of South African logistics in 2014 is presented in Table 2.3, below:

Table 2.3 Logistics costs in South Africa

• Transport	58%
• Inventory carrying stock	13.5%
• Management and administration	12.4%
• Warehousing	12.3%
• Fuel inflation	3%
Total	100.0%

Source: CSIR (2014)

Transport costs in South Africa are the single most important contributor and are much higher than the global average of 40%. One of the reasons is that of the geographic location of Gauteng, which is the industrial heartland of South Africa. It is responsible for 34% of South Africa's GDP, hosts 34% of the population, and is located 570 kilometres from Durban and 1400 kilometres from Cape Town, two of South Africa's major ports. This means that imports and exports need to be moved over a long distance at higher costs.

Rail transport is supposed to be more cost-effective than road transport, but it is not able to attract the appropriate market. Operational efficiency of the rail service (Transnet freight rail) can be improved; however, rail transport is losing customers to road transport globally. Road transport has the benefit of door-to-door delivery and overnight transport from Gauteng to Durban and it has competitive pricing due to reliability, flexible services and backhaul possibilities.

2.10. State of logistics in South Africa

The World Bank has been doing comparative logistics performance studies since 2007. The following indicators were analysed in the latest survey. The indicators are also called logistics performance index:

- Efficiency of customs and border management clearance
- Quality of transport and trade infrastructure
- Ability to track consignment
- The frequency with which consignment is reaching consignee in time and in full.

South Africa is improving in this ranking because they are currently placed number 20 out of 160 countries, from number 34 in 2014. All six measurement indicators recorded improvement.

2.11. Supply chain foresight report

This survey was introduced in 2003 and has grown in size and stature; surveys are preferred by businesspeople, in academia and public enterprise. This report provides a measure of performance and identification of opportunities and trends for South African businesses, their logistics and supply chain. The growth of this report includes specialised studies on matters such as Africa and the Middle East and it also includes changes taking place in supply chain management in the Gulf Corporation Council states. Barloworld suggested that supply chain must be aligned with the supply chain strategy to drive success. The report also shows that supply chain being viewed as an integral strategic and tactical component in the business.

2.12. South African logistics barometer

Understanding the state of logistics plays an important role as a catalyst for unpacking the specific supply logistics challenges in the South African context. South Africa's logistic barometer, a platform with a deeper focus on logistics costs and their drivers, assists with this. In 2013, the cost of logistics in South Africa was 11.1% of the GDP, a higher percentage than that of developed countries, but competitive compared to other developing countries. The 2013 figure is 0.5 percentage points less than that of 2012 because of efficient last mile distribution. The diesel price increase experienced in 2013 spurred a drive towards more efficient supply chain management, which reduced the number of kilometres spent on last mile distribution (Havenga et al., 2016). It was estimated that the cost of logistics as a percentage of GDP would rise to 11.4% in 2014 and a further 11.7% in 2015 (Havenga et al., 2016). Logistics services in South Africa in 2012 cost South Africa R393 billion which was 3.5% more than the previous year, but less than the R423 billion in 2013. If inflation is considered, logistics services costs in South Africa in 2013 were lower than that of 2012. A deeper understanding of the logistics costs entails examination of the logistic challenges in South Africa.

2.13. Logistics challenges facing supply chain in South Africa

Logistics plays an important role in meeting place and time utility, i.e., ensuring that the goods are at the right place and at the right time. However, due to various challenges, described below, logistics in some instances is unable to achieve its main objectives in the South African context.

2.13.1. The talent gaps

South Africa has a skills gap that has been documented over the years. In 2014, the annual Supply Chain Foresight Report identified the lack of skills and talent as key business constraints. Scarce skills that are important for supply chain were identified, indicating the extent of supply chain skills shortages which remains critical. In 2013-2014, the World Economic Forum identified an inadequate workforce as the problematic factor in conducting business in South Africa. Companies are still experiencing difficulties at a tactical and strategic level. The skills shortage is due to

the insufficient number of people entering the industry. Moreover, there is a discrepancy between the skills provided by universities and those required by the supply chain sector. In addition, South Africa is unable to retain supply chain talent. Two industry surveys were conducted in 2011 and 2012. In 2013 a student perception survey was conducted. The following skills were identified as being lacking:

- Customer focus
- Ability to plan and prioritise
- Business ethic
- Ability to see bigger picture
- Teamwork
- Problem-solving skills
- Ability to think out of the box
- Communication skills
- Business process improvement
- Decision making

2.13.2. Fuel costs

Transport costs are the biggest component of logistics costs. A study by CSIR (2012) revealed that transport costs were 61% in 2012, which was higher than the global average and the highest in 9 years. Fuel costs are the biggest component of transport cost; this volatile cost driver is beyond the control of the South African logistics industry. Fuel prices include the cost of crude oil and the cost of refining it into a finished product. The price of diesel includes a fuel levy and contributes to the Road Accident Fund (Scientific and Research, 2014). The increase in logistics costs has a negative impact on the logistics and supply chain industry as it is reducing profit margins. These high costs of transportation are forcing companies to fight for survival as they increase the costs of operating business. Transportation costs remain a high portion of logistics costs.

2.13.3. Poor road conditions and infrastructure

The movement of goods by road has significantly increased over the past years because of inefficiencies experienced in rail service. The percentage of cargo tonnage transported by road has increased by 80% (Barloworld logistics, 2013). This has exerted immense pressure on the road infrastructure, which needs repair, and results in increased traffic and high vehicle maintenance costs.

In South Africa, the road network is managed at three levels, with primary intercity roads of national economic importance managed by South African National Roads Agency Limited (SANRAL) on behalf of the department of transport (DoT). The secondary and tertiary intercity network of mobility roads is managed by provincial departments, and urban roads are managed by municipalities (Wall and Rust, 2018). Some roads are more developed than others due to being managed by different stakeholders; this segregation has led to the disconnect in the road infrastructure. In addition, rural areas are underdeveloped and poorly maintained compared to urban roads.

Road infrastructure and conditions play an important role in road freight business because they contribute towards road freight efficiencies. Poor road conditions have an impact on operating costs of business. Transport experts argue that the average maintenance costs of a vehicle travelling on a poor road is double that of a truck travelling on good roads. Furthermore, fuel consumption is increased by 15 % if a vehicle travels on poor roads.

2.13.4. Increasing logistics and transport costs

The increase in operating costs is one of the dominant challenges facing the road freight transport industry. These costs negatively affect the price of finished goods. Increasing logistics costs impact imports and exports, and the GDP of the country. Transport and logistics costs may force international buyers to buy material from countries with cheaper transport costs. Concerning imports, South African buyers may

decrease their spending on imported goods, which may reduce the country's GDP. Global sourcing of products has increased as companies are looking for suppliers that can offer better pricing, better delivery lead times, quality and better local suppliers (Havenga et al., 2016).

South Africa's logistics costs have been decreasing over the years. In 2003 logistics costs were 13.6% of the GDP, and decreased to 11% in 2011. Logistics have increased slightly during 2011 and 2016, from 11% to 11.8%. These numbers show that there is a need for logistics and supply chain experts and regulators to work together to identify cost drivers, with the aim to decrease logistics costs (Havenga et al., 2016).

2.13.5. Truck hijacking and theft

Truck hijacking is defined as the taking of a truck by force, or threat to the driver, while theft means taking another person's property without their permission or consent. Theft and hijacking are some of the challenges faced by logistics and freight companies. Truck hijacking remains a major concern for logistics and freight companies. Technological innovation is increasing but the level of criminal sophistication is also increasing. Criminals are now using signal jammers and diversion tactics to hijack or steal trucks. Criminals target trucks to steal the cargo due to its resell value, and to dismantle the truck for used parts (Di Marco et al., 2017). Vehicle theft is a significant challenge for the country as it takes time to investigate the crime and the cost of the unavailability of the vehicle and trauma of victimisation is not readily apparent (Mao et al., 2018).

2.14. Impact of transport crime on supply chain efficiency

South Africa is among countries with the highest crime rate in the world and four of the most dangerous cities in Africa are in South Africa. Crime affects the economy and society at large. Crime in South Africa has had an impact on the transport and logistics

sector. It is estimated that in 2014 the logistics sector lost R1.2 billion due to 991 hijacking incidents (Luke, Hlungwani, Jika, Mavuma and Sekgobela, 2019).

Transport crime is on the rise globally. Transport crime was recognised as a serious crime and a growing problem by the European conference of Ministers of Transport in Europe. Transport crime is discussed in the board meetings of organisations to find solutions to address it because of its seriousness. The South African government has recognised transport crime as a critical problem at a national level, and attempted to address it by government initiative, such as the 'Arrive Alive' campaign. Billions of rands are lost in South Africa due to cargo theft and South Africa is regarded as a high-risk nation due to this problem. In South Africa, cargo theft involves company employees who give information regarding the routes, loads and schedules of trucks to outsiders targeting trucks (Luke et al., 2019). The extent of transport crime is likely to have a major impact on companies and their supply chain efficiency which includes minimising costs for the company and ensuring that customers' expectations are met (Burinskiene and Sciences, 2018).

Crime has a negative impact on customer service, causing stock shortages, delays, and increased costs. Crime also impacts the competitiveness of a company, lowers profit levels and damages the company's reputation. Impacts of transport crimes are listed below:

- Increase in costs due to damaged equipment that requires replacement, insurance costs increase and increase in security costs.
- Delays in delivery days due to schedule interruption.
- Poor customer service due to late deliveries, short deliveries and out of stock.
- Increase in costs which leads to profit reduction.
- Stolen goods will be sold at lower prices which will lead to unfair competition.
- Damage to reputation of the company (Luke et al., 2019).

Supply chain is managed with a focus on key performance indicators, for example, quality, cost, time, customer value and customer satisfaction, all of which are harmed by transport crime.

2.15. The impact of Covid-19 restrictions in supply chain

The coronavirus pandemic is a global pandemic of coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Medical News Today, 2020). According to Medical News Today (2020), the novel virus was first identified from an outbreak in Wuhan, China, in December 2019. Attempts to contain it there failed, allowing the virus to spread to other areas of China and later worldwide. Covid-19 became a serious pandemic globally, which led to major social and economic disruptions due to restrictions that were imposed by governments to curtail the spread of the disease.

According to a survey conducted by the Bank of England (2020), Covid-19 had a negative impact on business in the United Kingdom. According to the survey, sales in 2020 Quarter 2 were 30% lower than the previous year, due to Covid-19. Employment was reported to have been 5% lower and investment 33% lower. The unit costs were estimated to have increased by around 6%. From the survey conducted in the UK, it is evident that Covid-19 had a negative impact on the business operations, because of trading restrictions that were imposed to restrict the spread of the virus.

Research conducted in the United States by McKinsey (2020) reported that in manufacturing, retail, and restaurants the added cost of complying with new hygiene and safety protocols could be onerous, while sales would decrease due to lower capacity and changing consumer behaviour. As a result, overall gross profit was expected to be lower.

Discovery (2020) reported that some of the impacts of Covid-19 on South African businesses include:

- No turnover at all for businesses that rely on people visiting their premises, due to complete shutdown under level 5 restrictions.
- In the manufacturing sector, orders and sales of non-essential products came to a halt, negatively impacting most businesses' supply of products.
- Inevitable interruptions to the supply chain and reduced sales.
- Increased costs to comply with Covid-19 regulation.

In view of the above supply chain challenges, it was important for management to mitigate supply chain risk as far as possible by taking necessary actions to implement control mechanisms and contingency plans aimed at circumventing the impact of the supply chain challenges.

2.16. Chapter Summary

The purpose of this chapter was to explore and summarise the existing body of knowledge in line with supply chain management. The chapter also examined various supply chain challenges. Some of the best practices as well as the latest improvements in supply chain were discussed. A funnel approach was used to understand supply chain from the broader international environment in the African context, and within the South African market in particular.

Chapter Three

RESEARCH METHODOLOGY

3.1. Introduction

This chapter discusses the research methodology adopted in this study. The study was focused on evaluating DNLD as a supplier and the level of service it provides to its customers. This chapter also aims to provide a framework of the methodology employed in this research; the research design, research approach, and data collection strategy are discussed. The chapter further describes the population, sample, and sampling methods. In addition, data collection instruments including interviews and data quality control, are explained. The chapter deals lastly with the reliability, validity, data analysis, data reduction and data display, also explaining the ethical considerations and limitations of the study.

3.2. Research Philosophy

Research philosophy is the term used to denote the school of thought underpinning the development of knowledge and the nature of that knowledge in relation to the research (Winit-Watjana, 2016). There are four types of research approaches, namely: positivism, constructivism, critical realism, and pragmatism (Sekaran and Bougie, 2016). Positivism uses science and scientific research to get to the truth and upholds an objective truth. Positivists believe that the world operates by law, and use a scientific approach to research phenomena, as this approach is replicable. Constructivism is the opposite of positivism in that it believes that the world is fundamentally mental and mentally constructed. This approach, as Sekaran and Bougie (2016) hold, aims to understand how people get to these mentally-constructed positions. The aim of constructivist research is to understand particular situations or phenomena. Rich data is gathered from which ideas can be formed. The interaction of a number of people is researched, mostly to solve social problems of the target group. According to O'Mahoney (2016), critical realism is a combination of objective truth and failure to admit the fact that external reality can be objectively measured, and observations are the subject of understanding. Critical realists also believe that researchers are biased. The focus of pragmatism is on practical, applied research where different opinions on a research topic under study are helpful to resolve

problems. Pragmatism views truths as tentative and changing over time. Pragmatism stresses the relationship between practice and theory (Sekaran and Bougie, 2016)..

This study adopted constructivism because it is appropriate to address the problem identified at DNLD. Constructivism allows collection of rich data; to obtain this the researcher chose to conduct research through interviews because interviews enable respondents to openly share their feelings. Constructivism also enables interaction with people – the researcher was able to engage with respondents face-to-face to collect data during the interviews. As a result, the researcher was able to concisely identify themes from the research, which culminated in recommendations.

3.3. Research approach

There are three types of research approaches, namely: Qualitative, Quantitative and Mixed methods. Quantitative data are used in measuring numerical scales that reflect a quantity such as heights, temperature, age, cost, percentage, and so on (Baggio and Klobas, 2017). Quantitative research entails employing statistics and numerical data to conduct a systematic and empirical analysis of phenomena. In quantitative research, estimating numbers provides a crucial link between empirical observation and mathematical articulation of quantitative relationships. Quantitative research analyses and selects data using numerical forms (Basias et al., 2018).

Qualitative research aims to understand people's experiences. It also helps researchers understand what is important for people (Silverman, 2020). Qualitative research allows a researcher to examine people's experiences by using a set of research methods such as interviews, observations, content analysis, bibliographies, and visual methods. These allow the researcher to identify issues with the participants and understand the meaning that they give to the behaviour. Qualitative research also provides the researcher the opportunity to study participants in natural settings. This study used a qualitative research design as it was suitable to address the research question. Qualitative research was chosen because the study sought to 'investigate'. In order to conduct an investigation, it is necessary to interview respondents openly, without setting numerical parameters which may hinder respondents sharing their experience and feelings regarding the phenomenon under study.

3.4. Research setting

The research setting is related to the environment in which research and experience take place. It includes the physical environment, social environment and cultural environment (Hartogsohn and Law, 2017). This research is focused on the eThekweni Metropolitan Municipality in South Africa's KwaZulu-Natal province, which is located in the country's south-eastern region, and includes significant cities such as eThekweni Metro, Pietermaritzburg, Richards Bay, Port Shepstone, Ladysmith, and Margate, to mention a few. The study was based in Durban, the largest city in KwaZulu Natal province.

3.5. Target population

Population is defined as an entire group of people or events which are of interest to the researcher (Sekaran and Bougie, 2019). DNLD delivers to over 150 different establishments, including bars, counter service outlets, self-service outlets, night clubs, and grocery stores. DNLD makes weekly deliveries to these customers. Because they engage with DNLD, the study focused on retail managers and owners.

3.6. Sampling strategy

Sampling is defined as the process of choosing enough of the right elements from the population. There are two types of sampling: probability and nonprobability sampling. To achieve a smaller and manageable population group that aligns to available resources, a sampling technique is employed (Adams, Khan, Raeside and White 2007). The possibility of a respondent being chosen to participate in the study is unclear when non-probability sampling is used. Not every sample item has the same chance of being chosen for the research. Convenience sampling, judgement sampling, and quota sampling are the three types of non-probability sampling (Adams et al., 2007).

Convenience sampling is undertaken where members of the target population meet certain criteria such as easy accessibility, availability at a given time, geographical proximity, and willingness to participate in the study. Convenience sampling is also called accidental sampling because elements may be selected nearer to the location where the research is conducted (Etikan et al., 2016). Quota sampling aims to end up

with a sample where a group being studied is proportional to the population being studied. Convenience sampling was utilised in this research to identify respondents who are often busy due to work schedules. Also, this sampling technique is less costly as the researcher selects respondents depending on their availability (Adam et al., 2007).

3.7. Sample and sample size

Sampling is defined as the process of selecting the right objects or individuals as representative of the total population (Taherdoost and Systems, 2017). The researcher used a purposive sampling strategy and selected owners and store managers who interact daily with DNLD as participants. The group was selected because of their exposure and understanding of DNLD operations as they deal with the distributor on a daily basis. Owners and managers are the people with the required information that is useful to the researcher (Sekaran and Bougie, 2016).

There are two types of purposive sampling, namely, judgement sampling and quota sampling. The researcher used judgement sampling because it involves managers who are advantageously placed to give the required information. For example, if the researcher wants to find out about the deliveries from DNLD and the effectiveness of their supply chain, store managers can supply such information. Store managers are expected to have expert knowledge by virtue of dealing with DNLD and other suppliers daily (Sekaran and Bougie, 2016). The researcher used judgement sampling because it enables the researcher to gain access to individuals who have the requisite information that is helpful to the study (Sekaran and Bougie, 2016).

A sample of 15 DNLD customers was selected from the eThekweni Metro as the area of this study. Annexure D shows a list of the research sample. The sample included customers across different areas of the eThekweni Metro; for example, Phoenix, KwaMashu, eThekweni Metro and surrounding areas of Inanda, Ntuzuma, Chatsworth, Mobeni, Pinetown, and Durban. The survey only included customers who had recently purchased and received delivery from DNLD. This guaranteed that the right people were chosen for the research.

3.8. Data collection

Data collection is the selection and production of material for analysing and understanding phenomena, collective experiences, social fields, and related meanings-making processes (Flick, 2017). The researcher utilised interviews as they enabled the researcher to collect the relevant data from liquor traders.

3.9. Interviews

Interviews are fundamental for obtaining qualitative data as the researcher poses questions to participants directly and can probe further to acquire detailed information on the views and experiences of participants. Forms of interviews include structured, unstructured, semi-structured, unstructured or informal interviews (Roulston and Choi, 2018). For this study, the researcher used semi-structured interviews focusing on liquor traders' issues. The reason for choosing the semi-structured interviews was to allow the researcher to have a set of topics that needed to be covered, while allowing room for respondents to express themselves beyond the set questions, without being restructured by a structured questionnaire. Participants provided their perceptions in response to questions posed by the researcher. This resulted in good comparable data as the research questions were the same for all the interviewees.

3.10. Data analysis

Data analysis is defined as the process of evaluating data using analytical, logical thinking to examine each component of the information provided. Data analysis is a pivotal step to be completed when conducting research (Bell et al., 2018). Data analysis is an integral part of the qualitative research method used to understand the views of the participants and experiences, and to answer research questions.

The process of identifying, coding, and categorizing patterns and themes in data is known as qualitative data analysis. To find and extract themes and patterns from data, thematic analysis was utilized. The themes were identified by transcribing and

grouping data according to common themes as per research objectives. According to Daily Logistics (2021), an efficient logistics system should fulfil the Seven Rights, namely:

- Right product
- Right quality
- Right quantity
- Right price
- Right customer
- Right time
- Right place

The responses were placed alongside the above-listed rights in order to organize feedback from respondents, with an intention to develop themes that culminated from research. The following chapter (Chapter 4) covers the presentation and discussion of research results in detail.

3.11. Ethical considerations

The ethical protocol to be considered included seeking permission from the three stakeholders. Before carrying out this study, the researcher obtained a letter of approval and permission to conduct the study from DNLD. The researcher also sought ethical clearance from the University of Kwa-Zulu Natal. Permission was also sought from the interviewees to conduct the interviews. Only questions pertaining to the study's purpose topic were included in the study. To safeguard the participants' dignity and defend their rights, the researcher requested their informed consent and voluntary involvement in the study. All of the information gathered from responders was kept private and confidential. Furthermore, all respondents were kept anonymous. The concept of validity and reliability was a second ethical consideration. Validity refers to how well a notion can be measured in a quantitative investigation. In a quantitative investigation, reliability is a quality indicator and measures the accuracy of the instrument. Reliability is used to measure the consistency of the research instruments (Heale and Twycross, 2015). In qualitative research, the researcher considers the data's stability, consistency, and dependability when determining validity and

reliability. In qualitative research, validity refers to the relationship between data and the construct, as well as the research findings and conclusions. It also includes the concepts of reality and representation.

Specialists and store managers provided their opinions on the supply chain for DNLD. The researcher recorded and transcribed all the interviews to compare data with other research findings discussed in the literature review. Interviews were also conducted using the interview guide to create consistency. The responses were not biased as they were the responses of the interviewees. The data were also compared with existing literature to establish consistency and reliability.

3.12. Chapter Summary

Chapter three presented the methodology of the study. The study aimed to evaluate the supply chain processes of DNLD. The participants targeted by the study are liquor traders, store managers, tavern owners and liquor store owners who deal with Durban North liquor wholesalers within the eThekweni Metro. These liquor traders were targeted because of their experience. This research adopted a qualitative approach and used interviews to gain insight into the questions under investigation. The research results aimed to produce a richly descriptive text which highlights the themes of the research topic and provides a clear picture of the liquor traders and their experiences. Convenience sampling was used as a suitable sampling strategy. Semi-structured interviews were used to guide the interview process. Chapter four will provide discussion on the data collected and comprehensive presentation.

Chapter 4

PRESENTATION AND DISCUSSION OF THE RESEARCH RESULTS

4.1. Introduction

The purpose of this chapter is to present the research findings. During the interviews, the discussion with the respondents culminated in themes that are discussed in this chapter. Study results are also discussed in this chapter.

4.1.1 Outline of the Participants

Of the 15 interviewees who were purposively selected to participate in the study, 6 are employed in leadership positions as managers, and 4 of these leaders hold senior management positions as managing directors. The other interviewed participants (5) are Directors and 4 are Bottle store owners. The selected participants in the study contributed by ensuring that their views on the studied topic are considered to offer a broader perspective on the issue.

4.2 Presentation of Data

The researcher recorded all the interviews, later transcribing them in order to identify recurring themes. The transcription process entailed typing the interviews and converting spoken words into written words. The researcher manually sorted data into specific themes. The themes uncovered by the researcher include customer experience when dealing with DNLD, supply chain challenges at DNLD, the impact of those challenges on the business performance of DNLD's customers, and the interventions needed to improve DNLD's supply chain.

4.3. Overview of the related themes

Figure 4.1. Main themes emerging from the research interviews.



Source: *The Researcher, summary of research themes (2021)*

The main themes that emerged from the research are presented in Figure 4.1 above. According to Figure 4.1. above, five themes emerged from the research interviews, including customer experience, supply chain challenges, the impact of supply chain challenges, and the interventions needed to improve the supply chain.

4.3.1. Theme 1 - Customer experience

The first objective of the research project was to understand how DNLD's clients feel about DNLD's supply chain services. Theme 1 is aligned with the first research objective, which was concerned with the overall customer experience. DNLD runs a customer-centric supply chain; the customers are happy with the service from DNLD.

4.3.2. Theme 2 – Supply Chain Challenges

The second objective of the research project was to understand the supply chain challenges that the customers tend to encounter when dealing with DNLD. Theme 2 relates to supply chain challenges identified by the customers. Although DNLD runs a customer-centric supply chain there are challenges, especially around issues like communication, receipting of funds, unpredictable delivery times and an inconsistent

ordering process. Covid 19 was a major supply chain challenge although it is a macro-environmental factor.

4.3.3. Theme 3 – Impact of supply chain challenges

The third objective of the research project was to establish the impact of supply chain challenges on the business performance of DNLD’s customers, which found that the supply chain challenges have a negative impact on customers, which ultimately leads to financial losses and reputational damage.

4.3.4. Theme 4 – Interventions to improve the supply chain

The fourth objective of the research project focuses on investigating possible interventions to improve DNLD’s supply chain. Theme 4, which deals with the interventions to improve the supply chain, arose from the fourth research objective. The customers feel that DNLD needs to improve on communications, proper planning of deliveries and communication of delivery times. DNLD should also receive funds much quicker to avoid delays due to unallocated payments.

4.4. Customer experience

The first objective of the research project was concerned with understanding how DNLD’s clients feel about DNLD’s supply chain services. The main categories linked with customer experience, as they emerged during the interviews, is presented in Figure 4.2.

Figure 4.2. Main elements of Customer experience



Source: *The Researcher, main elements of customer experience (2021)*

As per Figure 4.2. customer experience is a multi-faceted phenomenon that includes sales, marketing, product and related support – pre-purchase, during purchase and post purchase. Customer experience is an important aspect of supply chain management because it is responsible for the overall customer satisfaction. The main elements of customer experience include sales, marketing, product, and related support, each of which is discussed below.

4.4.1. Sales

The interviewer asked the respondents about their experience with DNLD service. It became clear that DNLD runs a well-orchestrated and a 'well-coordinated' sales department that is geared to meet and exceed customer needs. A manager from Tops Chatsworth Centre stated that *"I always hold them in high regard, they always help, sometimes the suppliers are out of stock, we phone them, good delivery, good prices"*. The same point was supported by a manager from Todd Street Liquor Store, Verulam, who stated that *"With DBN North I have not had any problem with pricing, delivery and communication with the staff, they have been friendly, especially Dino and Keegan, when dealing with them"*. Another respondent from Rosedale Liquor Store, Pietermaritzburg, highly complimented DNLD for their pleasant customer experience; they stated that DNLD offers *"Excellent customer service, staff friendly, if we are busy, they wait for us, they always have uniforms, they are very polite."*

The sales function is an important department within the company because it is through sales that the business can grow its market share. Sales encompass the activities that lead to the selling of goods or services. The sales function includes building relationships and providing solutions to clients. In some organisations, sales are broken down into two areas, i.e., hunting sales and servicing sales, where 'hunting sales' is responsible for bringing in new business, while 'servicing sales' is responsible for servicing the existing client. Overall, DNLD operates a sales department that is focused on meeting and exceeding customer needs and expectations.

4.4.2. Marketing

The marketing function is responsible for getting people interested in the company's products and services. Figure 4.3, which follows, shows the vital elements of the marketing mix include the product, price, promotions, and distribution

Figure 4.3. The main elements of the marketing mix



Source: *The Researcher (2021)*

As per figure 4.2., the main elements of the marketing mix include product, pricing, promotions, and distribution. These important aspects of marketing management are discussed individually, below.

4.4.2.1. Product

During the interviews, the respondents expressed their views regarding product availability. Product availability is part of customer experience when dealing with DNLD. One of the respondents raised the issue of non-availability of some of the specialty products, hence the customer had to source these products from other suppliers. A manager from 1904 Restaurants stated that, *“we had some products like whiskeys and brandys from overseas we could not get from them. But we will get from other suppliers. But DNLD is a good supplier. Special items like Hennesey VSOP we will get from boutique suppliers who do not supply a lot of people. So, they usually have stock sitting around. It’s just a matter of looking at whose got what we need”*.

A physical product is an object made available for consumer use, to satisfy customer’s needs. In addition to physical product, the related service forms part of the overall product perception. The liquor products fall under four types, fermented beverages, distilled beverages (spirits), wines and liqueurs and creams. The availability of a

product can serve as a competitive advantage because clients tend to favour suppliers that can provide items that are required by the final consumers. Product variety also plays a pivotal role, in developing a 'one-stop solution' for clients. Suppliers that are usually out of stock and lack variety are usually perceived negatively by the customers. DNLD stocks a variety of liquor products they supply to their customer base. Thus, DNLD contributes towards a pleasant customer experience, as a one-stock shop in providing a variety of products.

4.4.2.2. Pricing

According to most respondents, DNLD's pricing is competitive, which is one of the reasons for a pleasant customer experience. A manager from Marine Drive Liquor store stated that "*they do not charge a delivery fee if they buy stock somewhere else, we also have to pay for transport. Therefore, we save financially on transport costs*". Another respondent from Marianhill Bottle Store also praised DNLD for their competitive pricing, stating that "*I would say with the pricing, they are very good*". A manager from Todd Street Liquor Store also agreed that DNLD's prices are competitive, the respondent mentioned that "*With DBN North I have not had any problem regarding the pricing*".

One of the important decisions in business is setting the prices for the business's products and services. The prices should cover all related costs and consider margins which will go towards the business profitability. The main pricing strategies include competition-based pricing, customer-value-based pricing and cost-based pricing. Competition-based pricing aims to set pricing at a level that is in line with other suppliers. Customer-value-based pricing is based on the value that supplier adds enhancing the overall customer experience. Cost-based pricing is based on adding-up the total cost of ownership and adding mark-up percentage, as per company norm or policy to derive selling price.

Overall, DNLD offers competitive pricing to their client base. However, there are other instances in which other distributors are cheaper than DNLD. The products that can be sourced directly from the suppliers are also a bit cheaper, due to the cost-benefit associated with buying directly from the source, as a result of saving on channel marketing-related costs.

4.4.2.3. Promotions

According to feedback from the respondents, DNLD does not seem to communicate promotions to their client base. A manager from Café La Plague, Umhlanga, stated that he never had any specials from DNLD or, “maybe I have not been informed about them”. A manager from Super Hotel echoed almost similar sentiment by stating that DNLD does not proactively offer him specials unless he asks for prices to be reviewed.

Marketing promotions involve communication to the client base to spread knowledge about the product, create demand and establish customer loyalty. The promotional mixes elements including sales promotion, advertising, personal selling, direct marketing, public relations, corporate image, and exhibition.

DNLD rarely engages clients on promotions. Thus, DNLD is missing the opportunity on additional ad-hoc sales that could be generated through special promotions. It is a common phenomenon in the retail industry that on special occasions like weekends, month-ends, etc, retails run specials to encourage customers to purchase products that are on special. Failure to effectively run or communicate specials means that the customers would instead take their business to the competing suppliers who consistently communicate promotions, hence DNLD would lose potential revenue.

4.4.2.4. Distribution

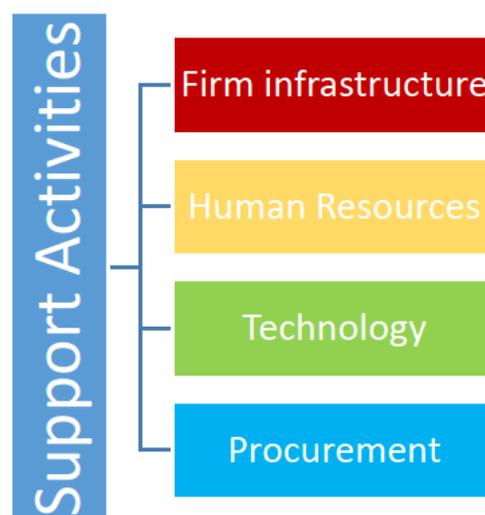
DNLD previously had two distribution centres, one in Durban North and another warehouse in Phoenix. However, after the July looting in 2021, they closed down the Durban North facility and now distribute solely from Phoenix. The decision enabled DNLD to save costs by centralising their distribution although the decision had a negative impact on the clients based in Durban North and Umhlanga area that used to benefit from the proximity of the Durban North Branch. As a result, deliveries to these clients are arriving late after disruptions to the business flow. A manager from Café La Plague, Umhlanga stated that “*I have not had issues with the deliveries, but sometimes it comes through later in the day. Sometimes they are here around 4-5, but I understand since they closed the Durban North Branch, and they operate solely from the Phoenix Warehouse. I understand, but it has a hamper on me because 5 o'clock is closing time for me*”. A manager from Rack and Roll Pub echoed a similar concern that supplying his Umhlanga Pub from Phoenix has led to some delays.

The function of distribution is making a product available for the consumer who needs it and ensuring that the product is available at the right time and at the right place. Due to centralised distribution, on one hand DNLD would be able to save costs, due to economies of scale. Nevertheless, on the other hand, it would be a bit challenging to service clients that used to be serviced by the Durban North Depot due to the distance from the central depot at Phoenix to those particular clients. As a result, delivery to those clients may be delayed and the number of deliveries per day may be reduced due to longer kilometres to be travelled by trucks to cover the wide geographical area.

4.4.3. Business Support Activities

Business support activities play an important role in supporting the primary activities in the production and subsequent delivery of goods and services to the consumers. Support services serve as catalysts for the effective and efficient flow of goods and services in the supply chain. According to Porter's value chain analysis in Figure 4.4, the support activities include the firm's infrastructure, human resources, technology, and procurement.

Figure 4.4. Porter's Value Chain Support Activities



Source: *The Researcher, Porter's value chain support activities (2021)*

According to figure 4.4., value chain support activities in business include the firm's infrastructure, human resources, technology, and procurement.

4.4.3.1. Firm's infrastructure

The respondents stated that DNLD business is sound, due to strong support services like strong leadership under Mr Strini, who sets the tone for the organisational culture that is based on customer service and professionalism. A manager from Rack & Roll stated that DNLD is a *"Good company, ethical people"*. A manager from Café La Plague, Umhlanga stated that *"the owner is very strict if there is a glitch or something wrong, he is not the kind of a person who tolerates sideways things"*.

The firm's primary activities such as inbound logistics, operations, outbound logistics, marketing, and sales and service are responsible for the direct production of goods and related services. However, without robust business support activities, it would be impossible to run effective and efficient services.

The firm's infrastructure includes all functions that allow the business to maintain daily operations. These functions include areas like finance, legal, management and other support roles. Support services are pillars of effective and efficient service delivery. If support services were weak, DNLD would not be able to service their client base because, although clients may be happy with products and delivery thereof, client dissatisfaction regarding inadequate support structures may lead to complaints. Unhappy clients are less likely to continue supporting DNLD; instead, they may opt to purchase products from suppliers that can offer sound support services. It is, however, a positive development to note that feedback from respondents indicates that DNLD has managed to create a support base structure that supports the overall customer experience.

4.4.3.2. Human Resources

The respondents stated that DNLD has a good calibre of people who are focused on customer services. Their staff is very helpful over the phone as well. A manager from Rosedale Liquors also expressed her gratitude about DNLD's staff; she stated that *"their driver and people who work there, who come here are very polite"*. A manager from Tops, Chatsworth Centre described DNLD staff as *"always helpful"*.

Human resources (HR) as a business support function includes all activities like job advertisements, hiring, training, remunerations, and staff development. HR is an important resource in the business because it is through people that the business can establish relationships with consumers.

People are the most crucial resource in business because they are the only resource that can offer a human touch to clients. They can share emotions and feelings with clients, especially when things do not occur as expected. This is why DNLD needs to continue investing in HR development, so that staff can continue to service the clients in a professional and friendly manner.

Demotivated staff members are destructive for the business, because they are unable to attend to clients' requirements; instead, they tend to focus on their own agendas that may not necessarily serve the best interest of the client. Staff that lack motivation do not go the extra mile for the client, but perform only as expected and, in some cases, below expectation. Feedback from the respondents was positive concerning DNLD's human resources. DNLD staff is friendly, professional and helpful towards clients, which is a positive contribution towards the business.

4.4.3.3. Technology

The respondents mentioned that they use different modes of communication when dealing with DNLD. Some customers place their orders telephonically, while others send orders via WhatsApp and some clients place orders via email. Technology plays a vital role in business because it has the potential to improve efficiencies and competitive advantage. Technological development is also playing an important role in improving supply chains, by facilitating the flow of materials, money, and information. Technology provides a faster, more convenient, and more efficient way of performing business transactions (Oklahoma Small Business Development Centre, n.d.).

DNLD relies on technology to manage communication with customers. Technology is also used in the ordering process i.e., receiving orders, picking, packing, delivery and tracking. Through information systems, DNLD can provide a quick turn-around with

regards to order management, picking, planning, and scheduling and tracking deliveries, as well as in other areas like financial management.

4.4.3.4. Procurement

The respondents expressed their dissatisfaction with DNLD's inability to supply some of the mainstream products. It emerged during the interviews that Covid 19, coupled with the July 2021 looting, led to major shortages of liquor products. In some cases, bottlers had to shut down plants. As a result, the overall industry experienced major shortages for fast sellers like Savanna, which is a product by the Distell Group Limited. A manager from Todd Street Bottle Store stated that "everywhere there is no stock. Look at SAB, we make a plan, we call around Makro, Panjivans, we make our way out. Customers come in and they expect you to have the product".

The procurement function in the value chain is responsible for finding suppliers and negotiating terms of sale with them. Procurement is also responsible for ensuring the business has the "right products" in stock, "at the right time" and at the "right prices". As a distributor of various liquor products to the wholesale and retail market, DNLD sources products from different suppliers like South African Breweries (SAB), Heineken, Distell, Edward Snell. Due to a variety of reasons, including Covid 19 restrictions, suppliers have been unable to meet demand from wholesalers and distributors. As a result, wholesales have been unable to fulfil demand from the final consumers. The consumers, consequently, had to shop around for products. The distributors who are able to supply products can enjoy support from the market and grow the market share. Although the issue of inability to supply is beyond distributors' control, distributors should plan for shortages and explore alternative sources of supply and pro-actively communicate to the market regarding the shortages.

4.5. Supply chain Challenges

The second objective of the research project was to understand the supply chain challenges that the customers tend to encounter when dealing with DNLD. The researcher asked the respondents to share details of challenges that the customers experience when dealing with DNLD. The following section unpacks their feedback. Figure 4.5 is a summary of the categories in which challenges have been identified and expressed by the respondents.

Figure 4.5. Summary of supply chain challenges



Source: *The Researcher, summary of supply chain challenges (2021)*

4.5.1. Receiving orders

As part of understanding supply chain challenges, one of the questions posed by the researcher was concerning how clients place their orders. It emerged that different clients prefer different methods to place orders, for instance, one respondent (a manager from La Plague Café) stated that they usually receive incorrect orders if they place orders telephonically. As a result, they decided to use the WhatsApp Messaging system. A manager from Oakland Liquor Store advised that they use a combination of WhatsApp and telephone. She mentioned that “We used to call them, but now we WhatsApp them and call to confirm”.

DNLD deals with several clients who order in different quantities. Clients in the retail sector usually order in small quantities, especially pubs. However, resellers like wholesales order in bulk. To facilitate the order management process, customers place orders through the following communication channels:

- Telephone
- Whatsapp Messaging
- Email
- A combination of methods

Receiving orders is an important area in supply chain because orders represent sales for the business, without which the business would collapse. As a result, the business should have an efficient method for customers to place orders. Order receipt and processing should be fast yet accurate, to avoid errors. The errors in order processing

are costly, due to rework that is required, in the form of collecting incorrect products that have been dispatched. Processing orders incorrectly may also lead to customer complaints, which is detrimental for the business due to high competition in the liquor industry. A quality control system may assist to alleviate order processing errors.

4.5.2. Picking

Order picking refers to the process where items are picked from the warehouse to fulfil customer orders. After receiving orders from clients, a picking slip is issued to the warehouse to sort the order according to the goods on order. The respondents expressed their concern regarding how DNLD handles order picking, because of the lack of communication regarding non-availability of products on the initial order list and incorrect products being picked and dispatched.

4.5.2.1. Lack of communication regarding non-availability of products

The researcher asked respondents about the receipt of communication from DNLD regarding the availability of products when placing an order. The feedback indicated that participants had different views. A few clients advised that DNLD does communicate to them if the products are out of stock while most of the clients advised that they only discover at the time of receiving a delivery that some items are missing. A manager from Tops, Chatsworth Centre, stated that they do not receive communication about out-of-stock products, but they only realise when they receive goods. A manager from Marine Drive Bottle Store advised that *“There aren’t a lot of challenges, they do most things properly. The thing is sometimes they do not communicate if there is no stock”*.

The Manager at Asoka Hotel also expressed his dissatisfaction with regards to the lack of communication on the non-availability of products either from DNLD or from DNLD’s suppliers, like SAB. He stated that *“Generally I do not even know if something is out of stock if delivery comes through and it’s not on the invoice. I rarely do not go out of stock prior to receiving my actual delivery”*.

Poor communication can have a negative effect on business, but effective communication can provide a major advantage. Integrating effective communication styles can help develop strong supplier relationships by developing trust, reducing risk

management, and supporting long-term goals between suppliers and customers (ISS Group, 2021). Effective communication is, therefore, a catalyst for customer service.

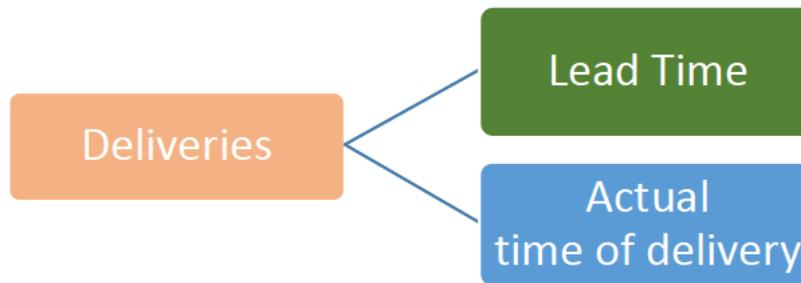
4.5.2.2. Picking and dispatch of incorrect products

During the interviews, some respondents expressed their concerns with incorrect picking, where products that are not included in the initial order are mistakenly delivered to the customer. As a result, DNLD must do credits to rectify such errors. A manager from Café La Plague mentioned that *“9/10 times there will always be something wrong with the order, as a result, we have had a lot of credit notes.”* Once an order has been processed, a picking slip is issued to the warehouse to pick products and prepare goods for dispatching. However, it appears that in some cases the warehouse staff makes mistakes by picking the incorrect products items or quantities. If the incorrect items or quantities are packed for delivery, time is wasted at the order verification stage where an error can possibly be noticed and rectified. However, if the error is not identified, the wrong items are despatched to the customer which then requires a refund and replacement. Therefore, incorrect picking can negatively impact customer service because the client is required to wait for DNLD to rectify the matter while final consumers are awaiting stock.

4.5.3. Delivering

The researcher asked respondents to share their feelings regarding the state of deliveries from DNLD. Transport is responsible for ensuring that the product is delivered in good condition, at the right place and at the right time. DNLD transport delivers to its clients using a company fleet of eight trucks. The deliveries are dispatched from the central distribution centre at Phoenix. As illustrated in Figure 4.6 below, two issues were identified as relevant to the deliveries i.e., lead time and actual time of delivery.

Figure 4.6. Issues emanating from deliveries



Source: *The Researcher, issues emanating from deliveries (2021)*

Overall, the respondents were happy with lead time, which is the time it takes to deliver goods after receiving the order. However, there were some concerns regarding the actual delivery time.

4.5.3.1. Delivery lead-time

The researcher asked respondents how they feel about DNLD's lead time. There was an overwhelming consensus from respondents that the lead time from DNLD is excellent. Some interviewees advised that they receive their goods on the same day of placing an order, while some receive them a day after placing an order. A manager from Oakland Liquor advised that *"once we place an order with them, we get delivery the very next day"*. Another respondent, a General Manager from 1904 Restaurants stated that *"they are good at delivering on time, you call them in the morning, and they deliver same day."*

Lead time in supply chain refers to the amount of time that passes from the start of the process (like placing an order), until its conclusion. Reducing lead time can provide benefits to the business, due to:

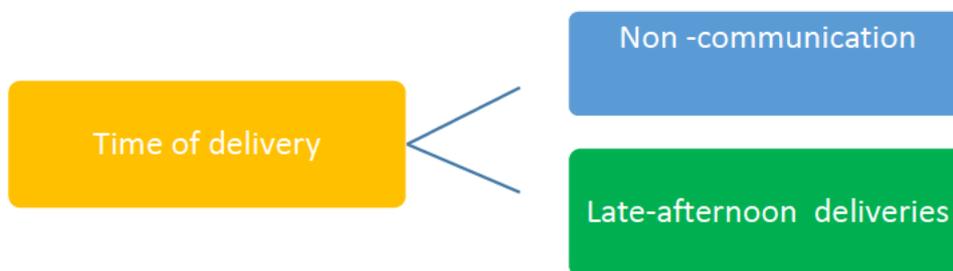
- Competitive advantage in providing faster and more efficient output
- Quicker replenishment, which will avoid stockouts, lost sales, and lost customers
- Increase in cash flow, because of increased order fulfilment.

Overall, the respondents expressed great happiness with DNLD's short lead time of approximately 24-48 hours after receiving an order.

4.5.3.2. The actual time of delivery

Although the respondents complimented DNLD for short lead times, there was a huge concern about delivery time. There were three issues raised under delivery time i.e., non-communication of the actual time of delivery, time of delivery at an inconvenient time and late delivery.

Figure 4.7 Concerns with the actual time of delivery



Source: *The Researcher, issues emanating from time of delivery (2021)*

As illustrated in figure 4.7. the concerns with the actual time of delivery included the non-communication of the actual time of delivery as well late-afternoon deliveries.

Non-communication of the actual time of delivery

During the interview, it became clear that the arrival of DNLD's trucks for delivery without prior communication creates inconvenience for the receivers because the client needs to stop what they are doing to attend to the driver and receive stock into the storeroom. A manager from Café La Plague stated that "We start trading at 12, I cannot accept orders when I have customers".

The communication of the actual time of delivery is important to clients to assist them to prepare their inbound logistics. Liquor wholesalers and retailers have several activities that they undertake on-site, thus, planning inbound logistics is necessary. Some clients close their receiving much earlier to focus on other activities at the warehouse, like picking and processing outbound shipments. Therefore, it is essential

for clients to know the anticipated delivery window period, expressed in hours, so that they can plan their resources accordingly, to ensure that there are sufficient resources available to receive stock into the storeroom. Hence, communication regarding the anticipated time of delivery is key for planning purposes.

Late-afternoon Deliveries

Some respondents suggested that late deliveries have a major impact on their operations. In some cases, DNLD trucks arrive late, just before clients close receiving or close for the day. A manager from Tops bottlestore, Verulam, stated that DNLD should *“stick to customer’s receiving rimes (Deliver within allocated slots). My receiving closes at 14h30, my delivery must be here before 14h00. But I understand where they come from because they have other customers”*.

A manager from Asoka Hotel expressed his concern regarding late afternoon deliveries. He stated that *“I have not had issues with the deliveries, but sometimes it arrives later in the day. Sometimes they are here around 4-5pm, but I understand since they closed the Durban North Branch, and they operate solely from the Phoenix Warehouse. I understand, but it has a hamper on me because 5 o’clock is closing time for me”*.

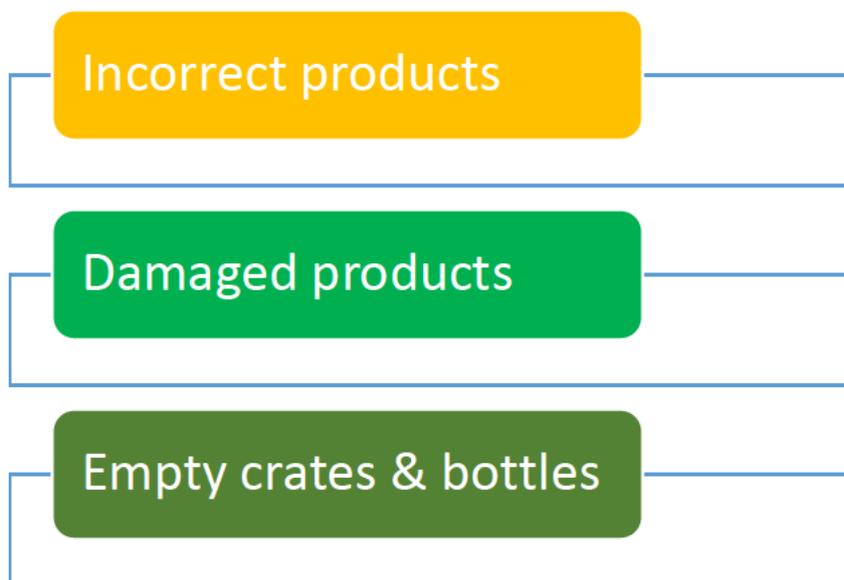
Another interviewee, a manager from Rack & Roll Pub, mentioned that *“They cannot deliver to a pub where there is no parking and trying to carry 100 quarts down the stairs at 7oclock..., that’s out”*.

Late deliveries can be detrimental for the business due to various reasons like lost sales, reputational damage and eventually a loss of clients. The client may opt to cancel the order if goods do not arrive on time and order elsewhere which would cause the business to suffer due to lost sales. The client may eventually decide to buy from suppliers who can deliver on time, which may eventually lead to losing the client. Thus, on-time delivery is a major aspect of customer service and customer retention.

4.4.2. Returns

Reverse logistics is an important aspect of supply chain because there is always a need for items to be returned from customers to the supplier. In the case of DNLD's business, as indicated in Figure 4.8, reverse logistics includes returning of empty crates, incorrect products, and damaged products.

Figure 4.8. Reverse logistics in the liquor industry



Source: *The Researcher, reverse logistics in liquor business (2021)*

Figure 4.8. indicates that reverse logistics in the liquor industry includes incorrect products, damaged products, empty crates, and bottles.

4.4.2.1. Incorrect products

In some cases, DNLD dispatches incorrect products to clients due to errors that occur at the picking stage. Those products need to be returned to DNLD for credit to be passed back to the client for the amount charged for the incorrect product. A manager from Café La Plague complained that 9 out of 10 times they receive incorrect products, and they will need to return them and apply for credit to be passed.

4.4.2.2. Damaged products

In some cases, goods get damaged enroute from DNLD to the customer. The clients do not accept damaged products that cannot be sold to the final consumers. Hence, those products need to be returned to DNLD for replacement. According to a manager from Rosedale Liquor Store, *“if they send a wrong order, they take it back or if something is broken, they always exchange it.”*

4.4.2.3. Empty crates

Some liquor products, like beers, are delivered in crates which need to be returned to the supplier after delivery. Some empty bottles are also returnable to suppliers for recycling. There was a complaint from the Rack & Roll Pub manager that due to late afternoon deliveries by DNLD, there is no time available to load crates that need to be returned to the suppliers. Therefore, DNLD needs to plan the pick-up of crates for another day. Failure to collect the empty crates on time leads to space for stock being occupied.

4.4.2. Financial Management

Challenges relating to financial management also emerged during the research. Figure 4.9 (below) indicates financial management issues related to invoicing, credit notes and statements.

Figure 4.9. Financial management challenges



Source: *The Researcher, financial management challenges (2021)*

Figure 4.9 shows the financial challenges that were identified by the respondents include invoices, credit notes and financial statements.

4.4.2.1. Statement and Invoices

An invoice itemises and records a transaction between buyer and seller and includes important information like product, quantity, and prices. DNLD issues an invoice for each order to accompany delivery so that the client can reconcile the goods. The respondents advised that they receive invoices all the time together with each order. However, the challenge is that the invoices are incorrect if DNLD has picked and dispatched incorrect goods that are not supposed to be part of the delivery. As a result, a credit note is required to address the issue by crediting the account for the incorrect items that have been supplied in error.

4.4.2.2. Credit Notes

During the interview, the respondents advised that the issue of credit notes is prevalent when they deal with DNLD because of wrong products being delivered. Some clients advised that they prefer credit notes to be used to reduce their balance, rather than having them issued physically as refunds into their bank account.

A manager from Asoka Hotels stated that *“they send credit notes the following day or we offset against the account.”* Another manager from Rack & Roll Pub advised that they *“Put credit notes into my account to bring my account down.”* A credit note is a receipt issued by the seller to the buyer for returned goods. The amount can be offset against future purchases, and it can be paid back into the client’s account. Although a credit note is an important tool in accounting to rectify financial errors that may occur due to incorrect billing, it must be a reactive tool to correct mistakes. Such mistakes lead to additional work and possibly unhappy clients, hence it is imperative to have preventative measures in place, such as quality control checks, when dispatching goods, to ensure that credit notes are minimised and should only be issued as an exception rather than the norm.

4.4.2.3. Financial statements

During the interviews, the respondents advised that sometimes they receive statements and sometimes they do not. However, the main concern was around the allocation of payment. It seems DNLD is not consistent in allocating payments and clearing accounts. In some cases, payments are allocated once the client raises a query with them.

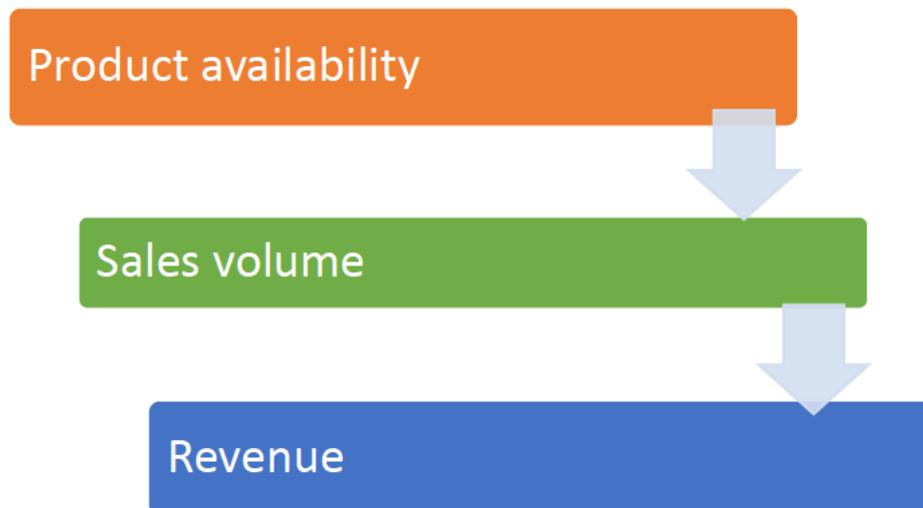
A manager from Todd Street Liquor Store advised that *“You are bound to have some problems at certain times. Like if we did not inform you that we have made payment. What we used to do after we make a payment, we inform them. But if we forget the lady in accounts will call us”*. A statement of account is a document that reflects all transactions that have taken place, between buyer and seller, including purchases, payments, and refunds.

A statement of account is an important tool because it is a reliable way to provide customers with a recap of all products and transactions that have taken place over a period. The statement shows transactions such as purchases, charges for extra charges, refunds, discounts, and payments. It is pivotal for DNLD to ensure the statement of account is issued to all clients on an on-ongoing basis, to enable transparency between the suppliers and clients. The clients should be aware of the payments that are due to DNLD, so that payments can be issued on time in line with agreed payment terms. Without the statement of account, it will be impossible for clients to have a view of their financial obligations towards DNLD.

4.5. Impact of the supply chain challenges

The following section unpacks the impact of supply chain challenges on the business performance of DNLD. The researcher asked the respondents to share their experiences regarding the supply chain challenges. The respondents advised that due to supply challenges they suffered a shortage of products, which leads to lost sales and lost sales and in turn, loss of revenue. The supply chain challenges have a negative impact on the clients' bottom line. According to Figure 4.10 below, supply chain challenges impact on product availability, sales volume, and revenue.

Figure 4.10. The main areas impacted by the supply chain challenges



Source: *The Researcher, the main areas impacted by the supply chain challenges (2021)*

According to figure 4.10, the respondents suggested that product availability, sales volume and revenue are the main areas impacted by the supply chain challenges.

4.4.1. Non-availability of products

The logistics function is responsible for ensuring that the '7 Rights' are achieved, i.e., the right product reaches the right customer, in the right quantities, in the right condition, at the right place, at the right time and at the right price.

During the interviews, the researchers asked respondent's views on how the supply chain challenges impacted their business. It became clear that various supply chain challenges, like stock-out at the producer and distributor level, led to the shortage of the products at the place of consumption. Shortage of products leads to customer complaints and reputational damage because the consumers tend to lose trust if the retail is continuously out of stock. In some cases, consumers tend to go and look elsewhere for the availability of products.

4.4.2. Lost sales

The respondents advised that the shortage of products has a negative impact on sales because if a retailer does not have a product, the customer may cancel the whole order and buy instead from other suppliers where they will get all their products from. A manager from Marianhill Bottle Store advised that *“if a customer comes here and we do not have the product, they leave and go to other places to buy it. Like if we do not have Castle beer, so they not going to buy all the stock, they will go into a place where they are going to get the Castle, there is a lot of competition around us”*. She further stated that, *“Customers go and look somewhere. It’s a problem if people who distribute to you do not have the product. Customers will end up going to buy somewhere.”* A manager from Todd Street Liquor Store advised that if DNLD does not have products, they will shop around from other suppliers like Panjivans and Makro for products.

Therefore, the availability of products plays a crucial role in supporting sales, because the liquor business is a fragmented market with various formats of resellers, hence, customers have an option to buy elsewhere. The resellers in the liquor industry vary in structure and size and include wholesalers, distributors, and retailers like bottle stores, pubs, and taverns. Due to market fragmentation and different trading terms, the customers have a wide range of suppliers to consider when planning to purchase products; as a result, product availability plays a significant role to mitigate lost sales.

4.4.3. Revenue

During the interviews, the respondents complained that supply chain challenges had a negative impact on revenue. A manager from Todd Street Liquor Store advised that if a customer comes to the bottle store and the store is out of stock, the customer will go elsewhere and the store will lose revenue. A manager from Tops Verulam shared the same sentiments, stating that *“Lack of sales, customers want stuff that we do not have. Loss of business, because clients will go buy somewhere else.”*, which impact revenue negatively.

The mandate of a private company is to maximise profit for the shareholders. The profits are generated by subtracting operating costs from revenue, hence maximising revenue may lead to improved profitability, provided the cost base is well managed.

4.5. The impact of Covid 19 in Liquor Supply Chain

The first Covid 19 case was reported in South Africa in March 2020 (News, 2020). The government then implemented various measures to curtail the spread of the virus. Some of the measures included social distancing, limited and controlled gathering, curfew, and limited business hours for non-essential products like alcohol. The views of respondents indicated that Covid-19 had a negative impact on the performance of liquor traders, due to increased operating costs as well as lost sales and revenue. Areas impacted by Covid-19 are represented in Figure 4.11, below.

Figure 4.11. The impact of COVID in liquor supply chain



Source: *The Researcher, the impact of COVID in liquor supply chain (2021)*

Figure 4.11, highlights that operating costs and sales were the main areas in the liquor supply chain that were impacted by Covid-19.

4.5.1. Operating costs.

Operating costs refer to the costs incurred to maintain the day-to-day operations of the business. Due to Covid-19, the businesses implemented various compliance costs such as necessary policies and procedures, implementing compliance practices, and employing relevant personnel to implement Covid-19 protocols. During the interviews, the respondents clearly suggested that Covid-19 led to an increase in operating costs. A manager from Marianhill stated that *“this guy (referring to the additional staff member), we did not have this guy before covid. Now we must pay him to control people. You know drunk people. He must control them, they see there is a social distance sign, but people do not follow instructions. He must control them. People do not want to sanitise, even if they see it (the sanitizer)”*.

In the liquor trade, it became necessary for companies to put a sanitizing station on the entrance and employing extra security guards to enforce customers' adherence to Covid-19 protocols like social distancing and mandatory wearing of face masks, to minimise the spread of the virus. These extra measures led to an increase in operating costs, but on the other hand the sales were constrained due to limitations imposed to curtail the spread of the virus.

4.5.2. Lost Sales

The views of participants clearly indicated that the liquor industry was badly impacted by the Covid-19 regulations. A manager from Rack and Roll Pubs stated that *“Now we are closing at 11 pm, we are calling last round 3 hours early and those are the last three busy hours”*. Due to curfew hours, the traders had to close much earlier, at the time when sales begin to pick in the evening.

A manager from Marianhill Bottle Store advised that *“even when we are open 5 days, it's a problem for us, only the Traders come to buy. We have lost customers who used to drink on weekends. We do not make money anymore. When it is 5 days, it's even worse when it's completely closed. When we work 7 days, you start to see sales picking up. For 4 days we usually send to Traders not to individuals. The Covid thing has been bad.”*

The President first introduced level 5 lockdown regulations in March 2020 (Fourie, 2020). During level 5 lockdown, the economy was in total shutdown, with only essential services allowed to operate. After that, the country has been through various lower levels i.e., levels 4, 3, and 2, where slightly relaxed trading regulations and curfew hours were imposed. The South African government eased the regulations further in October 2021, by placing the country under level 1 regulations (South African Government, 2021).

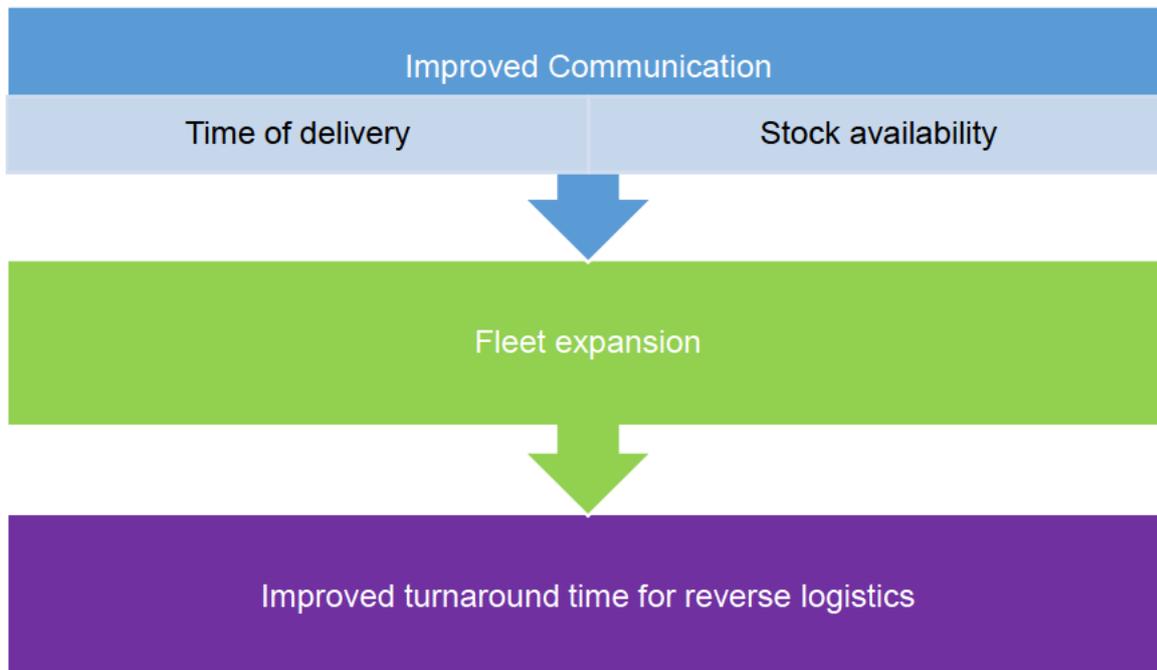
Due to Covid-19 regulations, liquor sales were negatively impacted. The worst case was when the total ban on alcohol sales was imposed, which was later eased to limited trading days, which excluded weekends. Alcohol sales tend to increase during the weekends because most consumers are off from work. Leisure activities and sporting events during weekends also support liquor sales. However, due to Covid restrictions, the industry suffered immensely. The alcohol industry estimates that revenue losses is R36bn, with 200 000 jobs being at risk due to liquor bans (Mashego, 2021). As a result, alcohol bans negatively impacted the revenue financial performance of the liquor traders.

5.6. Interventions to address challenges in supply chain

The last objective of the research was to investigate the possible supply chain interventions that DNLD should consider, partly to address supply challenges and partly to facilitate continuous improvement.

Respondents were asked to share their opinions about interventions that DNLD should consider and pursue to streamline their supply chain challenges. The following section discusses the feedback that was received from the interviewees.

Figure 4.12. Interventions to improve supply chain challenges (2021)



Source: *The Researcher, interventions to improve challenges (2021)*

Figure 4.12 shows the interventions to improved DNLD's supply chain, based on the interviewees' views. The interventions that emerged include improved communication with regards to the time of delivery and stock availability, fleet expansion, and improved planning and turnaround time for reverse logistics.

4.6.1. Consistent communication

In addition to the movement of physical products, information, and money flows from suppliers to customers and vice versa, good communication is crucial for planning purposes. Information flow plays a pivotal role in ensuring that both suppliers and customers have a mutual understanding regarding the orders. During the interviews, DNLD customers suggested that DNLD should consider improvements in the way the company communicates with its clients on issues pertaining to placing orders, availability of stock and anticipated time of delivery.

4.6.2. Stock availability

There is a shortage of products across all industry, due to various reasons, especially Covid-19. As a result of Covid-19 constraints, the shortage of products is particularly

prevalent in the liquor industry. Some of the underlying reasons are beyond the scope or control of distributors like DNLD, because issues like non-availability of materials like bottles are issues that emanate from the suppliers.

The respondents advised that although they understand the industry constraint on product shortages, it is, however, crucial for DNLD to communicate consistently and instantly with clients. Because some clients only learn about non-availability of products when they receive deliveries, communication on non-available items will play a vital role in ensuring that customers are able to explore alternative supply sources to avoid lost sales.

4.6.3. Communicating the actual time of delivery

The respondents commended DNLD for their short lead-time. DNLD can deliver most orders one day after order placement, which shows efficiency. However, some respondents expressed their concern regarding the communication of the actual delivery time. They stated that they are unable to receive goods anytime during the day because they have other activities they need to attend to, like managing their own outbound logistics. Some clients operate as pubs, where food and drinks are consumed on the premises, which means that some of their time is devoted to serving clients at the pub. As a result, they are unable to receive stock and attend to clients simultaneously. Thus, they suggested that DNLD should communicate the anticipated approximate time of arrival, so that the client can make necessary plans to receive stock into the storeroom.

4.6.4. Fleet expansion

Transport is responsible for ensuring time utility, i.e., ensuring that the product is at the right place, at the right time. Transportation is also responsible for the safety of cargo enroute from suppliers to customers. To address the issue of late afternoon deliveries, some respondents suggested that DNLD should consider expanding its fleet so that deliveries can be executed a bit earlier during the operating hours. DNLD recently centralised their warehouse at Phoenix, which has led to a longer distance between the distribution centre and some of the clients, especially those that are in suburbs outside Durban's CBD. The kilometres travelled by each truck will be longer, which will affect the number of deliveries per truck. Some respondents felt that DNLD

should consider expanding their fleets so that the requisite deliveries per day can be completed on time, because clients close their premises for the day.

4.6.5. Improved planning and turnaround time for reverse logistics

Reverse Logistics is the process where a product moves back up the supply chain to be repaired, recycled, refurbished, returned, refunded, or replaced (Rowlands-Pearse Management Services, 2014). Returning goods and materials from customers to the supplier is an important aspect of supply chain because it contributes towards customer service.

The important area of reverse logistics in the liquor industry relates to the return of empty bottles and crates from retailers to suppliers. Crates and bottles are recycled by bottlers in the supply of new stock. Recycling plays an important role in the supply chain because it reduces waste and it preserves the depletion of scarce natural resources, that are required to manufacture crates and bottles. During the interviews, some of the respondents advised that DNLD should improve on the turnaround time for the collection of empty bottles and crates.

Furthermore, empty crates and bottles need to be collected on time from clients because they occupy space that is needed by clients to store finished goods. Moreover, empty crates and bottles do not generate revenue for the business. Thus, using finished goods space to store empty crates and bottles is an opportunity cost for the business.

4.5. Summary

The main purpose of this chapter was to present the findings of the study. The chapter also discussed the research results, concerning their relevance for DNLD's supply chain.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This study was undertaken to investigate and understand the supply chain challenges faced by clients when doing business with DNLD. This chapter draws conclusions to confirm if the research objectives and questions were successfully addressed by the research. The significance of this study is also discussed, and the limitations of the study highlighted. Most importantly, recommendations to overcome supply chain challenges at DNLD are also presented. In conclusion, the study offers recommendations and direction for further research.

5.2. Conclusion

The rationale behind choosing the topic was based on the fact that the liquor industry is an important sector in the South African economy, yet the industry performance is constrained by various supply chain challenges. Hence, the researcher undertook to investigate the challenges faced by clients when doing business with a liquor distributor, DNLD, in eThekweni Metro. In Chapter Four, the responses and discussion clearly reflected the main challenges faced by customers in the liquor industry.

The various key supply chain challenges were linked to a lack of communication, inadequate planning, inadequate transport resources and lack of standardisation in business procedures. The challenges identified above have a negative impact on customer satisfaction, which leads to reduced sales and revenue losses, because clients find other suppliers. Since the findings point to supply challenges as well as their associated impact on business performance, the problem statement was addressed.

5.3. Implications and benefits of understanding the supply chain challenges in the liquor industry

The study has contributed to the body of knowledge by uncovering various supply chain challenges in the liquor industry. The results show that some of the challenges are internal in nature, which means they are controllable, while others are external and beyond the company's control. Linchpin SEO, LLC (2021) states that online presence, increased competition and dealing with regulations are some of the key challenges facing the liquor industry in the present moment. Therefore, understanding these challenges are key towards unlocking the industry's potential to contribute to the economy. This study will benefit the following key stakeholders: the supplier, the clients, and the legislative authorities.

5.3.1. Benefits of the study for the supplier

The understanding of supply chain industry and its related impact will have a positive contribution for the supplier. The supplier will be in a better position to understand its internal weaknesses that are creating challenges for the customers. As a result, the supplier should be able to implement preventative measures to address its challenges. The issue of communication was repeatedly raised during the interviews. According to Arulkumar (2020), effective communication skills are among the primary areas required to increase the company's revenue and ensure that the business continues to thrive. This research will, enable suppliers to improve on communication with customers, in areas like stock-outs, deliveries, and promotions, to maintain and grow their client base. The research further enables the supplier to improve supply chain planning and operational excellence.

5.3.2. Benefits of the study for the clients

The understanding of supply chain industry and its challenges have a positive contribution for customers. Customers will be able to learn the possible interventions that are aimed at addressing liquor supply chain challenges, thus enabling them to improve their planning. Supply planning assists in understanding how best to fulfil the client's requirements as created from the demand plan (Anaplan Inc, 2022). One of the challenges facing the liquor industry customers is the shortage of products, due to

supply bottleneck from the producers. With better marketing intelligence, the customers will be able to explore alternative supply sources in order to avoid customers going 'dry'. Product availability is a major source of competitive advantage in the liquor industry.

5.3.3. Benefits of the study for the legislative authorities

The government has been challenged by some in the liquor industry, due to questionable Covid-19 restrictions they imposed. The industry has challenged the government to adopt a science-based approach when imposing Covid-19 restrictions on the liquor industry. This research study, will, therefore, provide input towards the government's understanding of how the restrictions like curtailing operating hours and curfew have negatively impacted the liquor industry, which is one of the major contributors to the country's economy. Due to government restrictions, the industry is estimated to have lost R36.3 billion in revenue and 200 000 jobs are at risk in the formal and informal sectors, according to a report by FTI Consulting (Mashego, 2021). Covid-19 regulations had a negative impact on the industry in terms of revenue losses and increased costs associated with compliance.

5.4. Limitations of the study

Research limitations are restrictions and constraints which are encountered during the research study (Pro Academic writers, n.d.); managing the research limitations is part of the research process. The researcher encountered the following research limitations:

- I) The quality of the overall research process was dependent on the researcher's skill, that may trigger biases.
- II) To address personal biases, the researcher studied widely regarding a credible research process and methodology to understand possible biases that needed to be addressed to improve the quality of research.
- III) Conducting research under Covid-19 regulations proved to be a challenge, because of the regulations, especially on setting up meetings and conducting interviews. The researcher conducted interviews while adhering to Covid-19 protocols like social distancing.

- IV) Qualitative research is mostly based on spoken words and transferring spoken words into written words is challenging, due to a large amount of information. To address this limitation, the researcher transcribed spoken words into written words according to themes identified by the research.
- V) Data presentation is one of the challenges in qualitative research, because of the large amount of information as well as the challenge of presenting the information visually. To address the limitation, the researcher used Microsoft Smart-Art to summarize and present the information in a visually appealing manner.

5.5. Recommendations to solve the research problem

Research recommendations highlight specific solutions and measures to be considered for implementation, based on research findings. The following are suggested recommendations to address the supply chain challenges that emerged during the interviews:

- i) The respondents advised that they submit their orders to DNLD using different platforms like WhatsApp, phone calls and email. To create a standardised professional platform and avoid possible loss of information, DNLD should consider implementing an online ordering system used by all clients when placing orders.
- ii) The respondents advised that the issue of receiving incorrect products is prevalent. To address this matter, DNLD should implement a quality control system, where goods are checked against the order before dispatching trucks, and the issue of dispatching incorrect goods and credit notes will be minimised.
- iii) It emerged that there is a lack of communication regarding out-of-stock products. DNLD should consider issuing proforma invoices to customers after processing orders, which will assist to communicate goods that the supplier will be able to fulfil on the order.
- iv) It emerged that there is a lack of communication regarding the anticipated time of delivery. DNLD should consider creating a delivery window for customers and communicating the anticipated time of delivery so that

customers can make the necessary arrangements to receive goods, which will allow customers to shift delivery to a suitable time.

- v) It emerged during the interviews that due to a large client base and centralised distribution centre, some of the deliveries arrive very late in the afternoon. DNLD should therefore consider expanding its fleet, by appointing third-party service providers which will assist to expand the available pool of trucks.

5.6. Recommendations for Future Studies

The researcher undertook a study to investigate supply chain challenges at DNLD. However, there are several focus areas this study was unable to examine in detail. Hence, the researcher proposed the following topics which could be studied for future research.

- i) The impact of Covid-19 restrictions in the Liquor industry.
- ii) How are supplier bottlenecks impacting the liquor supply chain?
- iii) The role of macro-environmental factors in the performance of the liquor industry.
- iv) Distribution strategies to streamline liquor logistics.
- v) The role of TQM (Total Quality Management) in the liquor distribution industry.
- vi) Factors to consider when studying customer satisfaction in the liquor distribution sector.

5.7. Summary

The liquor industry is a major contributor to the economy due to the high taxes that the industry pays to the government. In addition, the industry is a major provider of economic opportunities in different areas in the supply chain, such as raw materials, blending, bottling, transport, wholesale, distribution, and retail. Hence, understanding and addressing the liquor supply chain has the potential to unlock the industry's potential to become more efficient.

The research questions, set in Chapter one, included understanding supply chain challenges, how those challenges are impacting business performance as well as interventions to address them. Several challenges emerged during the interviews with DNLD's customers, the customers also shared their proposed interventions to the challenges. As a result, it can be concluded that the researcher conducted a successful research project because the research objectives outlined in Chapter one were fully achieved.

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APPENDIX A: ETHICAL CLEARANCE



Protocol reference number : HSSREC/00003603/2021

Project title : An investigation into supply chain challenges at Durban North Liquor Distributors in eThekwin Metro, KwaZulu-Natal

ACKNOWLEDGEMENT: BREACH OF ETHICAL PROCESSES AT UKZN

I, the undersigned,

Staff/Student name (number) : Mavundla, Sandile (217076840)

School : Grad School Of Bus & Leadership

Campus : WESTVILLE CAMPUS

as the Principal Investigator ("the Applicant") in the above stated project, do hereby acknowledge that:

1. The University of KwaZulu-Natal's (hereinafter "UKZN") Research Ethics Policy (V) does not make provision for Retrospective Ethics Approval;
2. All researchers (both students and staff) at UKZN are obliged to be familiar with this policy;
3. I have been informed that research cannot be done without obtaining full ethical clearance as per the policy and guidelines of the University;
4. **Research for the above project was undertaken by myself without final ethical clearance being obtained;**
5. The University reserves its right to, at any stage and time, withdraw the relevant degree obtained by myself if:
 - 5.1 It becomes known to UKZN that there was an additional ethical breach during any field work or whilst collection data for the above stated project, and / or
 - 5.2 I fail to apply for ethical clearance for any future research projects.
6. In addition to point 5 above, the appropriate disciplinary processes will follow should this occur again.

I further acknowledge that should there be any legal implications/actions emanating from the research in terms of any ethical violations, I will be personally liable and hereby indemnify UKZN against any legal action that may arise from my failure to adhere to the University Research Ethics Policy (V).

Signed at on the 15 day of December 2021

Signature of applicant: [Redacted]

Signed at WESTVILLE on the 17 day of December 2021

Signature of Chair (HSSREC): [Redacted]

Date: 17/12/2021

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587

Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

APPENDIX B: GATEKEEPER'S LETTER

ELLICIDOR 52 CC
t/a DURBAN NORTH LIQUOR DISTRIBUTORS
14 ACUTT AVENUE
ROSEHILL, DURBAN
4051

Phone:0315791308

email : deshni@dndliquors.co.za

Dear Mr Sandile Mavundla
University of Kwazulu Natal

Approval of research

1. The research proposal titled an investigation into supply chain challenges at Durban North Liquor Distributors in Ethekwini metro, was reviewed by Durban North Liquors.

The proposal is hereby approved for research to be undertaken at Durban North Liquor Distributors.

2. You are requested to take note of the following:
 - a. Kindly liaise with the store manager Dheven Sathiah before you start your research in order to ensure the conduciveness of your research to be conducted.
 - b. Please provide final report with recommendations electronically and a hard copy when your research is complete to Dan Moodley.

For any additional information please don't hesitate to contact me at 031 579 1308.

Yours Sincerely

Dan Moodley

Member



03/03/2021

ELLICIDOR 52 CC
(Reg No: 2008/22484(2.2))
P.O. BOX 149811, EAST END
DURBAN, 4018
Telephone: 031 579 1308/6
Fax: 031 222 7427

APPENDIX C: EDITOR'S LETTER

Robinsons Editing Services

G and S Robinson
10 Westcliffe Avenue
Westville
3629

Mr Sandile Mavundla
Student Number: 217076840
Graduate School of Business and Leadership
College of Law and Management Studies
University of KwaZulu-Natal, Westville

30 July 2022

Dear Mr Mavundla,

Editing Services

Thank you for the opportunity to edit your Master of Business Administration dissertation:

An investigation into supply chain challenges at Durban North Liquor Distributors in eThekweni Metro, KwaZulu-Natal

We are pleased to advise you that we have undertaken the language editing on your dissertation in preparation for submission; as per our agreement this work did not include formatting or referencing. We confirm that the English language usage is of an acceptable academic standard.

Should you have any queries, or require us to do any further work, please do not hesitate to contact us.

Yours sincerely,

Gail & Shaun Robinson

G. S. Robinson MA PopStudies (cum laude) (UKZN)
071 352 8912/ gailsusanrobinson@gmail.com

S. P. Robinson MA SA Lit (University of Natal)
083 389 1822/ srobinson@wbhs.co.za

APPENDIX D: INFORMED CONSENT LETTER

Informed Consent Letter

UNIVERSITY OF KWAZULU-NATAL GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

MBA Research Project

Researcher: Sandile Mavundla (0788006208)

Supervisor: Dr. Basela Yalezo (0312607429)

Research Office: hsrrec@ukzn.ac.za (031 260 4557/3587/8350)

Dear Participant,

I, Sandile Mavundla am a Master of Business Administration (MBA) student, at the Graduate School of Business and Leadership, of the University of KwaZulu-Natal. You are invited to participate in a research project entitled: "An evaluation of the effectiveness of Durban north liquor distributors supply chain in eThekweni Metro". The aim of this study is to examine the effectiveness of Durban north liquor distributors' supply chain and the challenges faced by these distributors and their customers.

Through your participation, I hope to understand the role of Durban North distributors in the supply chain of liquor in eThekweni metro as well as its effectiveness and how to address challenges facing them. The results of the interview are intended to contribute to strengthening the supply chain effectiveness within this industry more especially within Durban North distributors in eThekweni Metro.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this interview. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business and Leadership, UKZN.

If you have any questions or concerns about participating in the interview or about

participating in this study, you may contact me or my supervisor at the numbers listed above.

The interview should take about 45 minutes to an hour. I hope you will take the time to participate.

Sincerely

Investigator's signature _____ Date _____

UNIVERSITY OF KWAZULU-NATAL

GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

MBA Research Project

Researcher: Sandile Mavundla (0788006208)

Supervisor: Dr. Basela Yalezo (0312607429)

Research Office: hsrrec@ukzn.ac.za (031 260 4557/3587/8350)

CONSENT

I.....(full names of participant)
hereby confirm that I understand the contents of this document and the nature of the
research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I
so desire.

I hereby consent/do not consent to record the interview.

SIGNATURE OF PARTICIPANT

DATE

.....

APPENDIX E: INTERVIEW SCHEDULE

Interview Schedule

“An investigation into supply chain challenges at Durban North Liquor Distributors in eThekwni Metro, KwaZulu-Natal”

Opening

Establish Rapoort	My Name is Sandile Mavundla, MBA Student No XXX from UKZN GSB&L.
Purpose	I would like to ask you some questions about your background and some experiences you have had with DNLD’s supply chain challenges, the purpose of this interview is to learn more about supply chain challenges in the liquor industry.
Motivation	I hope to use this information to contribute towards the industry’s intelligence by making recommendations that may assist to improve DNLD’s supply chain.
Time Line	The interview should take about 45 minutes. Are you available to respond to some questions at this time?

Body

Background	<ul style="list-style-type: none"> ▪ Interviewee’s name? ▪ Interviewee’s position? ▪ Interviewee’s longevity in the position? ▪ Interviewee’s career background? ▪ For how long has your company been in liquor business? ▪ Where is the business located? ▪ What is the nature and size of the business?
Theme	<p>Experience with DNLD’s supply chain Challenges</p> <ol style="list-style-type: none"> 1. What has been your supply chain experience, since you started dealing with DNLD? 2. Have you experienced any supply chain challenges with DNLD? Please explain further.
	Impact of these challenges on your business performance

	<p>3. What would you say is the impact of these challenges on your business performance?</p> <p>4. In which area/or areas of business are you most impacted?</p> <p>5. How do you measure the impact of these challenges on your business?</p>
	<p>Interventions needed to fix road freight challenges</p> <p>6. What do you think are the interventions needed to fix the supply chain challenges at DNLD?</p>

Closing

Maintain Rapoort	I appreciate the time you took for this interview. Is there anything else you think would be helpful for me to know before we close-off this interview?
Action to be Taken	I should have all the information I need. Would it be alright to contact you at your office if I have any more questions? Thanks again for your participation on this interview, it is very much appreciated. Thanks for your time.

Date/Time

Date	
Time started	
Time finished	

Interviewer	Sandile Mavundla
--------------------	-------------------------

APPENDIX F: TURNITIN REPORT

Document Viewer

Turnitin Originality Report

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Sandile By Sandile Mavundla

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