

**THE ROLE OF SUPPLY CHAIN PERFORMANCE ON CUSTOMER  
SATISFACTION :A CASE STUDY OF CENTURY BOTTLING COMPANY  
NAMANVE BRANCH**

**ENOS GUMOSHABE**

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT  
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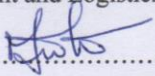
## DECLARATION

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Signature.....*Jmshabe*  
Gumoshabe Enos  
Date.....*11/09/2024*

## APPROVAL

This Research titled the Role of Supply Chain Performance (A Case study of Century Bottling Company-Namanve branch) has been submitted by Gumoshabe Enos for examination with my approval and is ready for presentation to the School of Business for Award of Bachelors Degree in Procurement and Logistics management of Uganda Christian University.

Signed.....  ..... Date..... 11/09/2024

Duncan Tumuhame

Supervisor

## **DEDICATION**

This research proposal is dedicated to my family, whose support and encouragement has been my driving force. To my friends and colleagues, thank you for your guidance and wisdom. Lastly, I dedicate this work to all those who inspired me to strive for excellence in my academic journey

## **ACKNOWLEDGEMENT**

I would like to appreciate the endless support of my supervisor Mr. Duncan Tumuhamy. Through his guidance, I managed to move to the very end of my research.

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Above all I thank God for guiding and giving me the strength to complete my dissertation.

## **ABSTRACT**

The study investigated the role of supply chain performance on customer satisfaction (A case of Century Bottling Company Limited-Namanve Branch). The general objective of the study was to examine the role of supply chain performance on customer satisfaction at Century Bottling Company Limited which was guided by three objectives. To evaluate the role of supply chain performance and its impact on customer satisfaction, to identify the key challenges affecting supply chain performance and propose strategies for improving supply chain performance to enhance customer satisfaction.

A population of 45 employees from Century Bottling Company Limited was targeted, and a sample of 40 respondents was used. The study employed a cross-sectional research design, using both quantitative and qualitative approaches. Quantitative data was analyzed using the Statistical Package for the Social Sciences (SPSS) to develop findings, whereas qualitative data was analyzed qualitatively. A simple random sampling method was employed.

The findings from the study indicated that Century bottling is increasingly focusing on optimizing inventory turnover so as to be in position to balance demand and supply. It was also found out that customer satisfaction metrics are increasingly tied to supply chain performance and that agile supply chains that can easily adapt to fluctuations in demand or supply disruptions are increasingly seen as a competitive advantage and can contribute to customer satisfaction. The findings further indicated that century bottling company has faced challenges in their supply chains like rising fuel prices and transportation costs, seasonality, difficulties in meeting environmental regulations and price fluctuations. The study revealed that optimizing inventory, enhancing supply chain visibility, route optimization and strengthening risk management and resilience have been a key factor in enhancing supply chain performance.

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## **CHAPTER ONE.**

### **1.0 Introduction**

In this chapter, the researcher presents the background of the study, objectives of the study, research questions, Scope of the study, significance of the study, justification, conceptual framework, definition of key terms, limitations and delimitations.

### **1.1 Background of the Study.**

Supply chain management has grown many folds in the last couple of decades, especially with the advent of globalization and the digital economy. Supply chain management has become a much more important strategic and competitive variable; it affects all of the shareholder value levers-cost, customer service, asset productivity, and revenue generation. Leading supply chain performers apply new technologies, innovations, and new process thinking to perform great. (Atadoga Mark Ojoajogu, 2021). Effective supply chain management (SC) is essential for improving operational efficiency and enhancing customer satisfaction. According to a report by Deloitte (2021), companies with superior supply chain capabilities achieve 50% higher customer satisfaction and are 50% more likely to have above-average profitability within their industries.

Supply chain performance is a critical determinant of customer satisfaction in today's competitive market. Efficient supply chain operations ensure timely delivery, reduced costs, and high-quality products, directly influencing customer perceptions and loyalty. This research will analyze how supply chain performance affects customer satisfaction to show ways in which supply chain practices can be improved to better the customers' experience. Supply chain management plays a very important role in Uganda on account of the country's unique economic environment, characterized by a growing middle class and increasing consumer expectations. The World Bank (2022) reports that Uganda's e-commerce sector has grown by 25% annually, driven by increased internet penetration and mobile phone usage. However, this growth has also brought challenges, such as logistical inefficiencies and inadequate infrastructure, which hamper effective supply chain operations. Supply chain performance directly impacts customer satisfaction through factors like delivery speed, product availability, and service quality.

According to Kotler and Keller, 2007, satisfaction will be associated with some product or service performance perceived to deliver value in comparison with what the buyer expects. Generally, a very satisfied customer who is buying is loyal, buys more of the company's product upgrades to existing products, speaks positively about the company and its products pays less attention to competitive brands and is less sensitive to price provides product or service ideas to the company and are less costly to serve than new customers because transactions are routine. Customer satisfaction has dual effects: a defensive effect on retention by reducing customer defection, and an offensive effect through positive word of mouth or referrals from satisfied customers. (Natarajan, 2018)

According to (Jochen, 2003) customer loyalty results from customer satisfaction. When this occurs, the customers are willing to return again to buy products or services; thereby generating customer loyalty, and they also introduce the product to other people around them. The end result will be an increase in the long-term profitability of the company.

According to (Atadoga Mark Ojoajogu, 2021), The commitment of the supplier to ensure a timely response without delay in material supply will enable the firm to maintain adequate inventory size, which in turn facilitates production and distribution of goods through appropriate channel members to the final consumers. Firms adopting logistics information technology might have a great chance to influence their performance through customer satisfaction (Yaw Agybeng-Munsah, 2019). Organizations may identify customer satisfaction in terms of on time delivery as well as customer specification needs (Atadoga Mark Ojoajogu, 2021). A study by McKinsey (2020) found that 73% of Ugandan consumers prioritize timely delivery over cost, highlighting the importance of efficient logistics. Additionally, research by the Uganda Bureau of Statistics (UBOS) indicates that delays in supply chains can lead to a 20% decrease in customer satisfaction, underlining the critical need for robust supply chain systems. Despite significant investments in technologies like AI, IoT, and block chain, many Ugandan companies still face challenges in their supply chain operations. For instance, only 30% of businesses have fully integrated these technologies into their supply chain processes, according to a report by PwC (2021). This gap underscores the necessity for further research and practical solutions to enhance supply chain performance and customer satisfaction in Uganda.

Hence, a more holistic approach is needed for the efficient and effective management of supply chains of firms' products. It is of vital importance to establish the level of importance customers

attach to the different elements of customer satisfaction and performance of key competitors on these elements. This is the major reason this study tries to determine the extent to which supply affects customer satisfaction (Atadoga Mark Ojoajogu, 2021).

## **1.2 Statement of the Problem**

Despite significant advancements and investments in supply chain technologies and processes, many organizations in Uganda continue to face issues that negatively impact customer satisfaction. These issues include delivery delays, inventory shortages, and a lack of supply chain transparency. Existing research indicates a direct correlation between supply chain performance and customer satisfaction, with companies that have efficient supply chains achieving up to 95% customer satisfaction rates (Accenture, 2019). However, common challenges such as inadequate demand forecasting, poor inventory management, and supply chain disruptions due to unforeseen events persist (Christopher, 2016). Various measures, including Just-In-Time (JIT) inventory systems and big data analytics for better demand forecasting, have been implemented to address these issues (Ivanov, 2020). Despite these efforts, gaps remain, particularly in the seamless integration of these solutions into existing supply chain operations. This study aims to identify best practices and develop a framework that organizations can use to enhance their supply chain performance and, consequently, customer satisfaction.

## **1.3 General Objective**

The general objective of this study was to examine the role of supply chain performance on customer satisfaction and propose strategies to optimize supply chain operations to enhance customer satisfaction.

### **1.3.1 Specific Objectives of the Study**

To evaluate the current state of supply chain performance and its impact on customer satisfaction.

To identify the key challenges affecting supply chain performance.

To propose strategies for improving supply chain performance to enhance customer satisfaction.

## **1.4 Research Questions**

What is the current state of supply chain performance, and how does it impact customer satisfaction?

What are the key challenges affecting supply chain performance?

What strategies can be proposed to improve supply chain performance and enhance customer satisfaction?

## **1.5 Scope of the Study**

### **1.5.1 Geographical Scope**

This study focussed on companies operating within Uganda, covering various sectors such as retail, manufacturing, and e-commerce. Uganda's diverse economic landscape provides a comprehensive setting to examine the relationship between supply chain performance and customer satisfaction.

### **1.5.2 Time Scope**

The research covered a five-year period from 2019 to 2024, providing a detailed analysis of recent trends and developments in supply chain performance and customer satisfaction. This timeframe allows for the examination of both pre- and post-COVID-19 pandemic impacts on supply chains, offering insights into how disruptions and subsequent recovery efforts have shaped current practices.

### **1.5.3 Content Scope**

The study examined the relationship between performance in the supply chain and customers' satisfaction about the reliability of delivery, inventory management, and supply chain transparency. The study explored how modern technologies such as Artificial Intelligence, the Internet of Things, and block chain have influenced supply chain operations in Uganda.

## **1.6 Significance of the Study**

This study provided valuable insights for business leaders and supply chain managers aiming to enhance their supply chain operations. Understanding the factors that influence customer satisfaction enabled organizations to develop more effective strategies to meet customer

expectations and gain a competitive edge. Furthermore, the study contributed to academic literature by providing empirical evidence on the relationship between supply chain performance and customer satisfaction in the Ugandan context.

### **1.7 Justification**

Given the increasing importance of customer satisfaction in achieving business success, this study was justified in its aim to explore how supply chain performance can be optimized. With the growing complexity of supply chains and rising customer expectations in Uganda, there is a pressing need for research that provides practical solutions to these challenges.

### **1.8 Limitations and Delimitations**

#### **Limitations**

The study was limited by the availability and reliability of data.

It may also face challenges related to the generalizability of findings.

#### **Delimitations**

The study focused on companies within Uganda, which may limit the applicability of findings to other regions.

It concentrated on the period from 2019 to 2024, providing a contemporary but potentially narrow view of trends and developments.

### **1.9 Definition of key terms.**

Supply chain performance refers to the extended supply chain activities in meeting the end customers' requirements including product availability, on time delivery, and all the necessary inventory and capacity in the supply chain to deliver that performance in a responsive manner. (Hausman, 2004).

If the performance is above or below expectation, customer satisfaction or dissatisfaction respectively sets in. That is, satisfaction results from experiencing performance better than expected, while dissatisfaction results from experiencing performance worse than expected. (Nararaajan, 2018).

Customer satisfaction represents a post-purchase evaluation of a service offering. A traditional definition of customer satisfaction followed the disconfirmation paradigm of consumer satisfaction/dissatisfaction, suggesting that CS/D is the result of interaction between the consumer's pre-purchase expectations and post purchase evaluation. Anton (1996) gave a more current approach when he defined. He defined customer satisfaction as a state of mind in which the customer's needs, wants, and expectations throughout the product of service life haven been met or exceeded, resulting in future repurchase and loyalty. Some researchers support that satisfaction can be measured from a performance evaluation perspective hence the inclusion of the Supply Chain information process is needless. Besides, satisfaction is not only consisting of a cognitive element but have to include an emotional element in determining customer satisfaction. (Muhannad M.A Abdallat, 2001)

## 1.10 Conceptual Framework

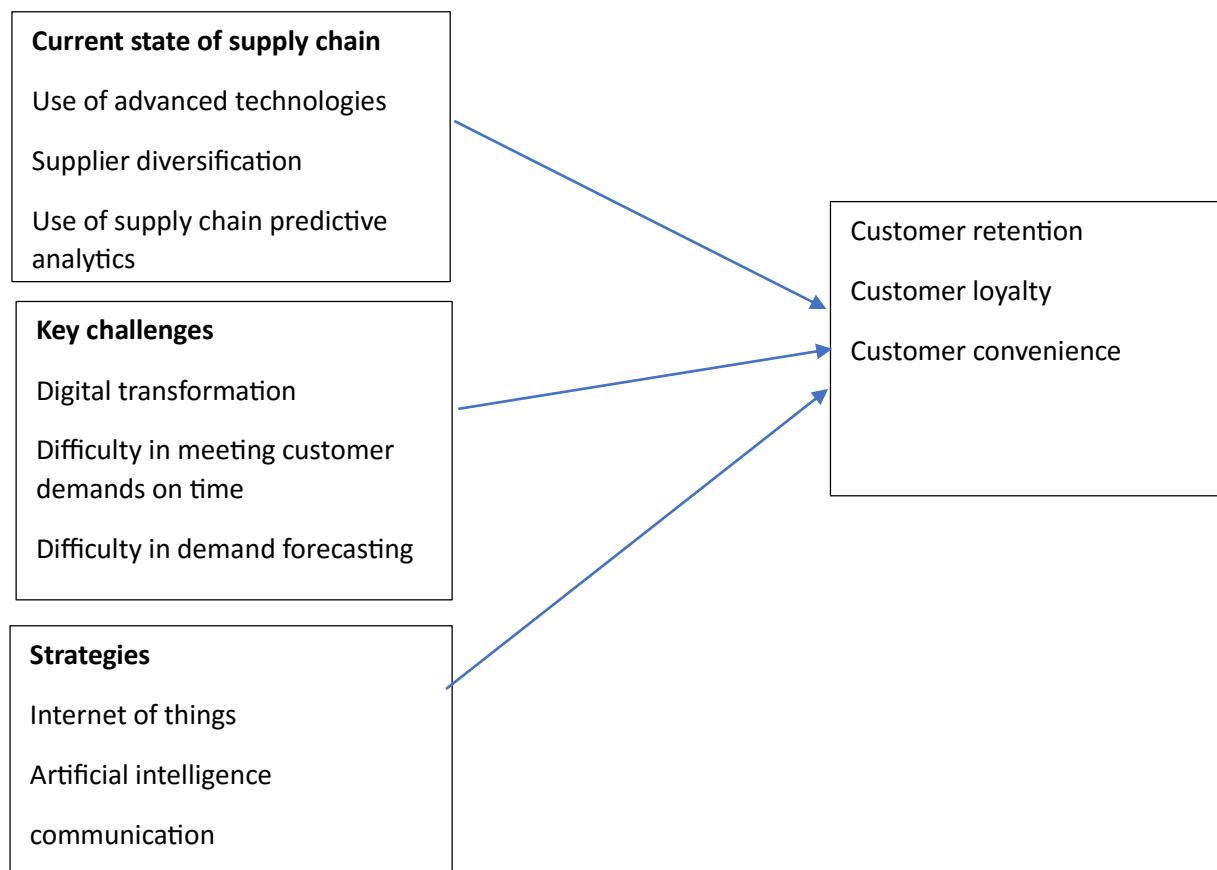
This study's conceptual framework was based on the idea that customer happiness is positively impacted by an effective supply chain.

Aspects of supply chain performance that are important to consider include inventory control, delivery reliability, and transparency. These aspects were examined along with the direct and indirect effects that these elements have on customer satisfaction.

We investigated the potential moderating effects of cutting-edge technologies, like as blockchain, artificial intelligence, and the internet of things, on improvements in customer happiness and supply chain performance.

Independent variable  
Supply chain performance

Dependent variable  
customer satisfaction



## **CHAPTER 2: LITERATURE REVIEW.**

### **2.0 Introduction**

The researcher examined the body of research on the relationship between employee happiness and supply chain performance in this chapter. The review's main goal was to give readers a thorough grasp of how supply chain efficiency and worker satisfaction are doing right now. These were also formulated into study objectives, which served as the study's cornerstones. Given that supply chain performance is the foundation of any organization's economy and is essential to the satisfaction of both its customers and employees, this study is crucial.

### **2.1 Current state of supply chain performance and customer satisfaction.**

The phrase 'supply chain management' was initially used in the early 1980s by an American industry consultant. However, long before then, in the early 20th century, as a supply chain idea in management, it was completely pointless, especially with the invention of the assembly line. The period of integration in supply chain management studies began with the creation of EDI systems in the 1960s and continued with the advent of ERP systems in the 1990s. This includes the "Globalization Era," which refers to the globalization of supply chain management in businesses with the goal of gaining a competitive edge, increasing added value, and cutting costs through international sourcing. Industries began to focus on "core competencies" and adopted a specialization model in the 1990s. By selling, the businesses abandoned vertical integration, off-boarding non-core operations and hiring outside companies to do certain tasks. The 1980s saw the beginning of supply chain specialization with the introduction of transportation brokerages, warehouse management, and non-asset-based carriers during Phase Two of the supply chain. Since then, supply chain specialization has expanded beyond logistics and transportation to include aspects of supply planning, cooperation, execution, and performance. According to definitions, supply chain refers to a Web trend that aims to foster collaboration, creativity, and information sharing among users. (Bala, 2014).

Companies typically use financial accounting metrics, many of which are from the 19th century or earlier, to track and measure supply chain performance. These days, performance metrics take the form of cost per yard, cost per metric turn, and so on. Then, at the beginning of the 20th century, diversification encouraged the revival of performance metrics, and the DuPont corporation had begun using the rate of return on investment in 1903 to assess the effectiveness of different departments and projects. The DuPont system Supply Chain was also introduced,

and it later gained widespread adoption. Parker, 2002. Early in the Nineties, The Balanced Supply Chain Records (BSC) technique was created by Kaplan and Norton in 1992, and it was this that initially introduced the mixed systems concept. They made it clear in their approach how important it is to keep an eye on and assess non-financial aspects as well. Additionally, in the past ten years, the idea of integrated online systems and e-commerce has spread widely in an effort to promote information sharing and streamline the entire process of measuring from many supply chain viewpoints.

With the development and maturation of the idea of business organization in the late 1990s, the performance measurement systems underwent a complete transformation to this balanced integrated approach. Parker (2000) says. It is necessary to make the supply chain lean, cut lead times, eliminate unnecessary operations, and develop the system as a whole so that new, efficient processes can be created.

For many supply chain software programs that purport to orchestrate supply chains, the claim was unsupported. Supply chains nowadays are too complicated to improve, digitize, and synchronize. This is where this paper's issue arises (Crane, 2020). For the following reasons, supply chains are becoming more and more complicated: First, client expectations: customers anticipate faster delivery times and better visibility into the timing and mode of delivery. Second, larger supply chains due to globalization have the potential to be more complex. Businesses have additional markets, cultures, legal, and regulatory concerns to handle. Thirdly, there have been shifts in the tendencies of the supply chain: decisions made inside divisions, specialized suppliers, multichannel delivery, and customized procedures—all contributing to the overall complexity. Connected individuals, empowered consumers, and nimble companies make up the new digital concept. People use platforms and apps extensively for information exchange, and they are constantly linked. The modern customer is empowered and expects immediate gratification and the highest level of personal connection. It identifies the two essential components of success: pioneering spirit and agility. Agile, digital innovators will be the most inventive businesses in 2020. According to Fast Company, Tesla, Microsoft, and Snap are the three most inventive businesses (Fisk, 2020). The following three reasons for supply chain complexity were also looked at by (O'Handley, 2020): Among the reasons are internal pressures, supply chain developments, globalization, and customer accommodations. Keeping innovation at the forefront combined with all the aspects of coordinated and integrated supply chain management is undoubtedly a major problem to be solved. Comprised of many elements-sourcing, manufacturing, transportation and logistics, warehousing, and distribution-all of

these are increasingly dispersed today through a shifting global production landscape and Supply chain, fueled by locations nearer to consumer markets, advantageous laws and regulations, and the availability of inexpensive Labor. In an effort to streamline the process, Maersk enhanced its position in integrated logistics by providing end-to-end supply chain management to its clients (Princes, 2020).

The Supply Chains will be fully digitalized in the future thanks to technology and standardized procedures.

From the mechanical production of the first industrial revolution in 1750 to the mass production, labor division, and electricity of the second industrial revolution in 1850.

1950 saw the start of the third industrial revolution, which improved the usage of IT, electronics, and automated manufacturing.

Human communications have driven the expansion of the Internet during the last 25 years.

Utilizing cutting edge technologies in production processes also enhances and improves supply networks. (Jawad, 2019)

## **2.2 Key challenges affecting supply chain performance.**

Current supply chains are difficult to optimize, digitize, and synchronize because of the following factors: globalization, shifting supply trends, and customer expectations. Consumers want quick delivery of goods and more visibility into the timing and method of delivery (Princes, 2020). They judge a product's quality by comparing its performance to their expectations.

The changing supply chain trends-omnichannel deliveries, customized processes, specialized suppliers, intra-division decisions-all these call for more complications. The new digital concept comprises connected people, empowered consumers, and agile Companies. People connected 24/7, wide usage of platforms and apps for information and exchange. The age of the customer: Empowered consumers demanding utmost customer intimacy and instant satisfaction. (Princes, 2020)

The executives of supply chain management face unique challenges with respect to integrating supply chain-specific strategies with the overall corporate business strategy. In recent years, given changing business realities related to globalization, supply chain has moved up the chief executive officers' list of priorities but always not for the right reasons in many cases. Since

supply chain is actually pumping lifeblood to and from the organization, process efficiency of a global supply chain is not optional to ensure optimized business operations. (Bala, 2014)

One of the rarely considered aspects is that of integrated supply chain planning concerns postponement decisions, which refers to the capability of not being able to fill customer demands on time. Due to this, backorders are generated with associated penalties. costs. (Bala, 2014). Customers are increasingly frustrated with long lead times when their expectation is quick delivery. Delays can also come at the final assembly or during the distribution process, leading to longer lead times. This strategy dictates very high flexibility and responsiveness of manufacturing and logistics systems, which bears the risks of being very expensive and of complex implementation. The increase in operation complexities and costs breeds inefficiencies and errors leading to stock-outs and low-quality products. Moreover, the coordination of delayed processes over interlinked global supply chains is problematic due to regional differences in demand and production capacity. The result may be a lack of consistency in their service levels.

### **2.3 Strategies for improving supply chain performance to enhance customer satisfaction.**

Supply chain management has a significant impact on the performance of the organization (H. Haddoch, 2019). According to A. Nagarajsubbarao (2019), supply chain management is essential for improving an organization's performance, profitability, and competitiveness as well as for providing customer service in the face of uncertainty and disruptions. Accordingly, business development requires an appropriate supply chain strategy (Teichert, 2003). Supply chain strategies have a favourable effect on market orientation (L. Gird Wichai, 2019).

According to earlier research, supply chain integration influences performance (Teichert, 2003). To preserve sustainability and competitiveness, it is essential to take into account a methodical and integrated approach (al, 2012)– (Rasti-Barzoki, 2018, 2019). This includes properly analysing the supply chain (Bose, 2012), examining trends, such as visibility and innovation, leadership roles, collaboration and supply networks (S. Bhattacharya, 2014), supplier selection (Patnaik, 2013) through the creation of trajectories data warehouse (Z. Nakhla and J. Akaichi, 2010). The entire supply chain network is affected by changes in mobility (Engel, 2014). Some strategies for responding to shifts include reducing inventory levels, evaluating supply chain uncertainty using a fuzzy analytical framework, cannibalizing

new items with remanufactured ones (W. Zhang and Y. He, 2019), and lead times (M.R. Malte Brettel, 2019)

Everything might be connected to the internet through the Internet of Things, which would speed up data-driven logistics even further. Modern objects can send, receive, analyses, and store data, enabling them to take an active role in logistical processes that are event-driven and self-steering. Logistics providers stand to gain greatly from the Internet of Things (IoT) since they can leverage linked object data to produce actionable insights that spur innovation and change solutions. (Princes, 2020). Although IoT greatly improves operational efficiency due to its superior data collection capability, the technology has come into emergence in recent years to cause a new industrial revolution that will eventually change the way of living in the world (Li, 2021).

Artificial Intelligence (AI) is the fusion of cuttingedge technology like natural language processing, chatbots, and machine learning to automate and customize customer support for quicker, more efficient service.As of 2019 (Mehrotra).It involves analyzing customer data to comprehend their past, present, and preferences.The data aids in customizing offers, recommendations, and interactions, making the user experience far more interesting and personalized in 2021, Dwivedi et al.By ensuring that customers can get help whenever they need it, this approach raises their degree of happiness and builds confidence (George & George, 2023).In essence, the system is designed to cope with a lot of customer queries and other frequently asked questions in such a way that human resources remain free for higher-order issues and more complex problems. It leverages the power of historical data and behavior to anticipate customer needs. Since it automates repetitive processes, AI-powered customer service drastically reduces costs of operation. This cost-effectiveness enables the business to apportion resources judiciously and invest in the improvement of overall customer happiness. Modern artificial intelligence will probably make consumers happy with speedy, efficient, and creative goods and services as technology develops. As so, it effectively reduces, if not completely eliminates, human error. Less errors or blunders would result in more seamless operations, faster service, and happier, more contented clients and suppliers. (Ang Lizette, 2023).

Numerous empirical investigations have concentrated on how supply chain connections affect company and operational effectiveness. A variety of supply chain definitions, metrics, and procedures have been engaged in these. For instance, Carter and Ell ram (1994) used a case study approach to find that supplier involvement in product style wrapping has a beneficial

impact on product quality. The relationship between sourcing choices, manufacturing goals, customer response, and delivery performance exploitation auxiliary condition showing was investigated by Narasimhan and Jay Aram in 1998. They came to the conclusion that sourcing selections are made as part of integrated activity supply chain exercises in order to meet delivery targets for cost, quality, flexibility, and responsiveness. Comparably, Car and Pearson (1999) found that, in contrast to manufacturing, carefully maintained long-term relationships with important suppliers will positively affect economic performance. Through the use of erratic external displays, Kaynak and Paga (2003) discovered that internal company attributes such as executive delegation and strong administration accountability for purchasing had a beneficial impact on profitable efficiency. Similar findings are made by Central American et al. (2001), who find that there are notable short-term effects on delivery timing and speed when customers and suppliers follow up on concerns pertaining to material streams and quality extra as of late, Tan et al. (2002) developed an all-encompassing set of supply chain practice and supply chain performance measures and discovered that though several practices had a positive impact on performance, others had a partner degree inimical effect. the recurring theme overall of those studies is that the role of supply chain management in improving supply chain performance. Nevertheless, the fundamental dimensions of supply chain relationship quality have received limited attention in these studies. Regular communication is established as Therefore, effective communication is necessary for effective teamwork (Monck et al., 1995). According to Mohr and Sparkman (1994), correspondence conduct consists of three parts: urgently meeting someone. First and foremost, the benchmark for the communication that takes into account metrics such as accuracy, usefulness, sufficiency, and reliability. Furthermore, how much or how little of that important—and usually confidential—information is shared changes. Thirdly, investment, or the degree to which all parties involved formed a shared stake in strategies and objective choices. Effective supply chain partnerships can be measured by factors such as investment, knowledge exchange, and communication quality (Mohr and Sparkman, 1994). One of the main reasons disagreements between partners in a relationship are thought to be communication problems (Lages et al,2005). "The formal still as casual transmission of purposeful and timely information between firms" is how Anderson and Narus defined correspondence. Organizational communication encompasses knowledge and communication of shared goals as well as dispute resolution strategies. Conflicting behaviours might arise from ineffective communication because of miscommunication and supply chain dissatisfaction. Convenient and visit correspondence can, contrary to expectations, answer queries and provide accurate perspectives on acceptable activities. According to Large's (2005)

research on the quality of relationships between middle-class and businesspeople, conservative correspondence has a positive impact on productive give-and-take across the board. In light of this, wise communication is the foundation of effective relationships, and communication is crucial for enabling chain partners to grow their connections (Luc, 2006).

Adaptation adapts to the requirements of certain, significant clients, who in turn adapt to the capabilities of specific providers. This kind of adjustment is frequently brought about by techniques for interest in managing explicit resources, such as HR and item/process innovation (Hokinson, 1982s). Modifications are essential for the variety of details. They will discuss significant investments made by one or more parties right away. Furthermore, they may be really significant for the organization head. Thirdly, it's frequently not possible to move the investments to other supply chain connections. Fourthly, the investments may have a significant impact on the historically established aggressiveness of businesses: adjusting to a single relationship may improve a supplier's or customer's abilities and appeal. Shahbaz, Muhammad Saeed, 2020. According to Williamson's 1981 assessment, particularity is the most important aspect of management since, after partner speculation is formed, the vendor and the advertiser are sufficiently engaged in a highly reciprocal trade connection for a significant amount of time afterward. According to Ford and Hakansson (2006), adaptation refers to the extent to which the advertiser and client create meaningful ventures inside the relationship. As a result, the exchange of explicit ventures is the adjustment of each party. Another introduction to a connection that has existed for a while is adjustment. As said earlier, in the outset, adjustment of gatherings shows that each gathering has made a specific contribution with benefits to the relationship.

## CHAPTER THREE

### METHODOLOGY

#### 3.0 Introduction

A method and strategy for gathering and analysing data was covered in this chapter. It included the population under study, sample size, sampling strategy, data sources, data collection method, data quality assurance, data analysis, and ethical considerations.

#### 3.1 Research Design

The research design for this study was cross-sectional, incorporating both qualitative and quantitative methods. The goal of this study was to collect data from a wide range of people at one time. Thomas (2023). The quantitative approach, which is about gathering numerical data, and the exploratory quantitative approach, which provides in-depth understanding of real-world issues, was used by the researcher. Tenny, Steven (2022)

#### 3.2 Study Population

The population is the entire collection of all the components that are relevant to a given study. The researcher intended to focus on 45 individuals from the Century Company's Namanve division as a target demographic. Respondents chosen from the Procurement department 7, the logistics department 18, the administrative staff 13, and the Financial Department 7 were included in this perspective. Information gathering from the respondents was sought. As a result, the responders who provided information were to be 45 in number.

#### 3.3 Sample Size

This study's sample was limited to the data needed, and its sample size was established using Slovene's Formula to get a reasonable sample size for the investigation. According to Slovenes formula from 1961, the minimum sample size for a given population can be found by: The following formula was used to compute the sample size mathematically;

$$n = \frac{N}{1 + Ne \times e}$$

Where; n = the sample size

N = total population of respondents.

e = the level of significance, that is 0.05

$$n = N / (1 + Ne \times e)$$

Therefore

$$n = \frac{45}{1 + (45 * 0.0025)} \quad n = 40$$

Therefore n = 40

A sample size of 40 respondents was selected to participate in the study.

### **3.4 Sampling Procedure**

Purposive sampling, which represents non-probability sampling, and the basic random sampling approach, which represents probabilistic sampling design, was used in this study. This technique is preferred because, according to Mugenda & Mugenda (2003), it reduces bias.

### **3.5 Sources of Data**

Both primary and secondary sources of data were used for the study.

#### **3.5.1 Primary Data**

These are first-hand accounts selected directly from the field. Through the use of questionnaires and organized interviews, the respondents were the source of the primary data. The primary data was a guarantee that this study gathers pertinent, trustworthy, and accurate first-hand information on fleet management and logistics control systems in this way. The surveys were used to gather information from the relevant respondents in order to achieve this goal.

#### **3.5.2 Secondary Data**

Attuja (2020) asserts that secondary data either validates or refutes the main data. The library, the internet, journal articles, newspaper articles, and research reports are the sources of secondary information. The idea of secondary data was used to collect pertinent information that could help with the research study's execution.

### **3.6 Data Collection methods**

A questionnaire was used for data collection. The purpose of the questionnaire was to gather data about the branch's anticipated future trends, customer happiness, and the state of the supply chain's performance as it stands right now.

Primary and secondary sources both provided data for the collection. Both qualitative and quantitative techniques were used to gather information. The method of original data collection was self-administered questionnaires.

#### **3.6.1 Questionnaire Survey method**

A questionnaire survey is a type of data collection that consists of a set of brief questions with both open-ended and closed-ended options to encourage respondents to provide quick responses. Amin, 2005. This was used to obtain original data from Century Bottling's lower-level authorities within the organization. In order to facilitate simple correlation and regression of the respondent's attitude disposition on the independent and dependent variables, closed-ended questionnaires are used in this process (Amin, 2005). Using the questionnaire enables time-pressed respondents to set aside enough time during convenient hours to complete the questions - Oso & Onen 2008.

#### **3.6.2 Interview method**

The interview method was also employed by the researcher. Using this approach, the researcher gathered information while posing several queries that enabled follow-up and prompting of respondents' responses. Ruane, 2015. More data regarding client satisfaction and the supply chain of Century Bottling Company was acquired by the researcher. Compared to survey methods, this strategy allowed the researcher to clearly acquire detailed information or replies from key informants and allowed clarification on any issues that arose. Interviewing administrative personnel, Century bottling Management executives, IT staff, and customers was the most effective use of this strategy.

#### **3.6.3 Documentary Review method**

Using the checklist for the documentary review as a guide, the researcher was able together secondary data. To gather data for the study, the researcher will go over documents. This approach was employed because it allows the researcher to locate data whenever it is most

convenient for him, collect thoughtful data that informants take the time to acquire, and allow the researcher to obtain data in the respondent's language Oso & Onen, (2008).

### **3.7 Data quality control**

This is concerned with validity and reliability of instruments or tools. Before the researcher declared a tool or instrument appropriate, he first determined if it was valid or reliable.

#### **3.7.1 Validity**

A validity test was conducted before the administration of research tools. This was done to establish whether the questionnaire was able to capture the intended data. The content validity index was used in determining validity.

Content validity index (CVI) = total number of items rated as relevant

Total number of items judged

The researcher got an introduction letter from the faculty to request permission from the relevant departments of Century Bottling Company to carry out the study. After approval, the researcher received a list of qualifying respondents from the responsible firm authorities. To determine the minimum sample size, these respondents were chosen by systematic random sampling.

#### **3.7.2 Reliability**

This is the degree to which a research instrument produces consistent results following repetition. The instrument's reliability was assessed in this study using the Cronbach's Alpha coefficient. or greater is adequate to demonstrate dependability. In order to ensure data consistency and completeness, the researcher conducted in-person interviews with respondents using a checklist of questions.

### **3.8 Data Analysis**

The analysis of the data gathered employed both quantitative and qualitative methodologies. Both descriptive and inferential statistics were used in the data analysis process. While inferential statistics were used to test hypotheses and draw conclusions, descriptive statistics were used to summarize and characterize the data. The investigator gathered and obtained data.

Data was coded, processed, and examined. Frequency and percentages were employed with tables and pies to help the researcher produce a better result.

### **3.9 Ethical considerations**

All respondents' informed consent was obtained, answers confidentially maintained, and the data was only used for academic research in order to resolve ethical concerns. Participants were made aware of the goals of the study, that their participation was voluntary, and that they can leave the study at any moment without facing any repercussions.

### **3.10 limitations**

Only a sample of the organization's population was interviewed by the researcher, which may have resulted in information that is skewed.

Some interviewers were difficult to reach, and some respondents did not complete the surveys, which restricted the researcher's available data.

Limited resources, including money and computers, caused a delay in the results by recording pertinent data.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF THE FINDINGS

#### 4.0 Introduction

This chapter consisted of data presentation, analysis and interpretation of the findings on the themes of the study.

#### 4.1 Descriptive analysis.

Response rate.

The study acquired a response rate of 75% percent out of the expected 100%. Of the 40 respondents 30 where able to fill the questionnaires

**Table 4.1 shows the gender of the respondents**

Gender	Frequency	Percentage
Male	18	60%
female	12	40%
Total	30	100

Source: field data (2024)

The findings from the study revealed that 60% of the respondents were male, 40% of the respondents were female. The findings from the study show that there are more men respondents to this study in century bottling company

**Table 4. 2 shows the age bracket of the respondents**

Gender	Frequency	Percentage
20-30 years	12	40%
31-40 years	10	33.3%
41 years and above	08	26.6%
Total	30	100%

Source: field data (2024)

Results indicate that 40% of the respondents were in the bracket age of 31-40 years, 33.3% of the respondents in the age bracket 20-30 years, while 26.6% of the respondents were 41 years and above. The findings from the study imply that the average age of respondents in Century bottling company is 36 years.

**Table 4.3 shows the education level of the respondents**

Education level	Frequency	Percentage
Postgraduate	08	26.6%
Degree	10	33.3%
Diploma	12	40%
Total	30	100%

Source: field data (2024)

The findings from the study showed that 33.3% of the respondents were degree holders, 26.6% of the respondents were postgraduate holders, 40% of the respondents were diploma holders, the findings from the study imply that the respondents from century bottling company are educated.

#### **4.2 To evaluate the current state of supply chain performance and its impact on customer satisfaction.**

Table 4.6 evaluates the current state of supply chain performance and its impact on customer satisfaction.

	Statement	SA	A	N	D	SD	St De	Mean
1	on-time delivery generally enhances logistics and transportation management	51.9%	48.1 %	0%	0%	0%	.505	1.48
2	The Company is increasingly focusing on optimizing inventory turnover rates to balance supply with demand.	34.6%	50%	15.4%	0%	0%	.687	1.81
3	sustainability metrics, such as reduced carbon emissions and lower waste levels	53.8%	0%	0%	46.2 %	0%	.503	1.54

4	Customer satisfaction metrics are increasingly tied to supply chain performance	38.5%	46.2%	15.4%	0%	0%	1.007	1.92
5	Agile supply chains that can swiftly adjust to fluctuations in demand or supply disruptions are increasingly seen as a competitive advantage.	69.2%	30.8%	0%	0%	0%	.466	1.31

Source: field data (2024)

The results from the survey indicated that 51.9% strongly agreed to the statement that on-time delivery generally improves logistics and transportation management, while 48.1% of the participants agreed to the statement. However, the same statement and the table above indicated that the standard deviation is 0.05 and the mean is 1.48.

The findings from the study showed that 50% of the respondents agreed that the Company was increasingly focusing on optimizing inventory turnover rates so as to be in a position to balance supply with demand. 34.6% of the respondents strongly agreed to the statement, 5.4% of the respondents were not sure about the statement. The above table revealed that the standard deviation is 0.687 and the mean is 1.81.

The research findings also suggested that 53.8% strongly agreed that sustainability metrics such as reduced carbon emissions and lower levels of waste improved performance. 46.2% of the respondents disagreed with the statement and however, the same statement and the above table revealed that standard deviation is 0.503 and mean is 1.54.

The findings from the study further revealed that 46.2% of the respondents agreed to the fact that Customer satisfaction metrics are increasingly tied to supply chain performance. 15.4% of the respondents were not sure about the statement and however, the same statement and the above table revealed that the standard deviation is 1.007 and the mean is 1.92.

The survey further showed that 69.2% of the respondents strongly agreed that Agile supply chains that can quickly adapt to fluctuations in demand or supply disruptions are increasingly seen as a competitive advantage, while 30.8% agreed with the statement. However, the same statement and Table above showed that the standard deviation is 0.466 and the mean being 1.32.

### 4.3 To identify the key challenges affecting supply chain performance.

**Table 4.7 Assess the key challenges affecting supply chain performance.**

Source: field data (2024)

	Statement	SA	A	N	D	SD	St De	Mean
1	Rising fuel prices and transportation costs can impact overall logistics expenses.	57.7%	42.3 %	0%	0%	0%	.499	1.42
2	Seasonality: Managing seasonal variations in demand,	26.9%	46.2 %	3.8%	23.1 %	0%	1.096	2.23
3	Meeting environmental regulations, such as waste management and carbon footprint reduction	26.9%	65.4 %	0%	7.7%	0%	.758	1.88
4	Fluctuations in the prices of key raw materials such as sugar, aluminum for cans, and plastic for bottles	30.8%	69.2 %	0%	0%	0%	.471	1.68
5	Digital Transformation: Implementing advanced technologies such as AI, IoT	76.9%	23.1 %	0%	0%	0%	.425	1.23

The findings from the study revealed that 57.7% of the respondents strongly agreed that Rising fuel prices and transportation costs impacted overall logistics expenses, 43.3% of the respondents also agreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 0.499 and the *mean* is 1.42.

The study revealed that 46.2% of the respondents agreed that Seasonality: Managing seasonal variations in demand was a strong challenge to performance 26.9% of the respondents also agreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 1.096 and the *mean* is 2.23.

The findings of the study revealed that 65.4% of the respondents agreed that meeting environmental regulations, such as waste management and carbon footprint reduction was not ideally fully achievable. 26.9% of the respondents strongly agreed with the statement, 7.7% of the respondents disagreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 0.758 and the *mean* is 1.88.

The study further revealed that 69.2% of the respondents agreed that Fluctuations in the prices of key raw materials such as sugar, aluminum for cans, and plastic for bottles retarded performance 30.8% of the respondents also agreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 0.471 and the *mean* is 1.68.

The study further revealed that 76.9% of the respondents strongly agreed that Digital Transformation posed a great challenge Implementing advanced technologies such as AI, IoT 23.1% of the respondents agreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 0.425 and the *mean* is 1.23.

#### 4.4 To propose strategies for improving supply chain performance to enhance customer satisfaction.

**Table 4.8 shows the proposed strategies for improving supply chain performance**

Source: field data (2024)

	Statement	SA	A	N	D	SD	St De	Mean
1	Optimize Inventory Management	46.2 %	53.8 %	0%	0%	0%	.503	1.54
2	Enhance Supply Chain Visibility through Use predictive analytics to forecast demand more accurately and adjust inventory levels accordingly	57.7 %	42.3 %	0%	0%	0%	.499	1.42
3	Enhance Logistics and Distribution Through Use route optimization software to reduce transportation costs and delivery times.	50%	50%	0%	0%	0%	.505	1.50
4	Strengthen Risk Management and Resilience through Diversify Suppliers:	73.1 %	26.9 %	0%	0%	0%	.448	1.27
5	Invest in digital tools and technologies such as AI, machine learning, and block chain to improve supply chain transparency, efficiency, and decision-making.	61.5 %	38.5 %	0%	0%	0%	.491	1.38

The study revealed that 53.8% of the respondents agreed that Optimizing Inventory Management was a key strategy in enhancing supply chain performance 46.2% of the

respondents also strongly agreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 0.05 and the *mean* is 1.54,

The study also revealed that 57.7% of the respondents strongly agreed that Enhancing Supply Chain Visibility through Use predictive analytics to forecast demand more accurately and adjust inventory levels accordingly would improve supply chain performance. 42.3% of the respondents also agreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 0.499 and the *mean* is 1.42.

The study also revealed that 50% of the respondents strongly agreed and agreed that Enhancing Logistics and Distribution through using route optimization software to reduce transportation costs and delivery times would improve performance t and the above table revealed that the *standard deviation* is 0.505 and the *mean* is 1.50.

The study revealed that 73.1% of the respondents strongly agreed that Strengthening Risk Management and Resilience through Diversify Suppliers would avert performance.26.9% of the respondents also agreed with the statement and however, the same statement and the above table revealed that the *standard deviation* is 0.448 and the *mean* is 1.27.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents the summary of the findings, conclusion and recommendations.

##### **5.1.1 To evaluate the current state of supply chain performance and its impact on customer satisfaction.**

The findings of the study portrayed that Century bottling Namanve branch has made strides in optimizing its supply chain efficiency. The company has implemented advanced technologies and process improvements to enhance operational performance. For instance, Century bottling Uganda utilizes real-time data analytics and inventory management systems to streamline operations and minimize disruptions. The integration of these technologies allows for better demand forecasting, inventory control, and reduced lead times. The emphasis on operational efficiency is evident in Century bottling Uganda's ability to maintain a high level of product availability despite the inherent challenges of the region.

Supply chain resilience as per findings of the study was a crucial aspect of Century bottling's strategy, particularly given the region's susceptibility to disruptions. The company has diversified its supplier base and developed contingency plans to mitigate risks associated with supply shortages and logistical challenges. This was in line with the research by (Kagimu, 2024). For example, Century bottling has established multiple sourcing options for key raw materials, such as sugar and packaging materials, to ensure a steady supply despite fluctuations in the market. This diversification is vital for maintaining continuity and minimizing the impact

of potential disruptions on production and distribution hence improvement in supply chain performances

### **5.1.2 To identify the key challenges affecting supply chain performance.**

The findings of the study revealed that the volatility in raw material prices and availability was a significant challenge for Century bottling Namanve. The facility sources key ingredients such as sugar, high-fructose corn syrup, and packaging materials from various suppliers. Fluctuations in the prices of these raw materials, driven by factors such as global market trends and local supply conditions, can impact production costs and profitability. In addition to price volatility, the availability of raw materials can be inconsistent. Factors such as supply chain disruptions in supplier regions or geopolitical issues can lead to shortages, affecting production schedules and inventory levels at Century bottling Namanve. Managing these fluctuations requires robust supply chain management strategies and strong relationships with suppliers.

The findings of the study further portrayed that Sustainability and environmental concerns were increasingly influencing supply chain performance at Century bottling Namanve. The facility is part of Century bottling's broader commitment to environmental stewardship, which includes goals such as reducing carbon emissions, improving water usage efficiency, and increasing the use of recycled materials. Achieving these sustainability targets requires significant investments in new technologies and processes, as well as ongoing monitoring and reporting. Additionally, environmental regulations and consumer expectations for sustainable practices can impact supply chain operations. Century bottling Namanve must navigate these regulatory requirements while balancing operational efficiency and cost. This was in relation to the findings of (Mugisha, 2024). Implementing effective waste management systems and sourcing materials responsibly are key aspects of addressing these sustainability challenges.

### **5.1.3 To propose strategies for improving supply chain performance to enhance customer satisfaction.**

The findings of the study revealed that accurate demand forecasting is fundamental to effective supply chain management. Implementing advanced forecasting techniques, such as machine learning algorithms and predictive analytics, can help anticipate customer demand more precisely. By leveraging historical sales data and market trends, companies can better align production schedules with actual consumer needs, reducing instances of stock outs or overstock

situations. Coupled with improved forecasting, optimizing inventory management is essential. Employing just-in-time (JIT) inventory practices can minimize excess inventory and associated carrying costs, while ensuring that products are readily available to meet customer demand. Implementing inventory management systems that provide real-time visibility into stock levels can further enhance the ability to respond to fluctuations in demand effectively.

The findings of the study further revealed that efficient logistics and distribution are pivotal to ensuring timely delivery of products and maintaining high customer satisfaction. One strategy involves optimizing transportation routes and leveraging technology for route planning. Advanced route optimization software can help identify the most efficient paths for delivery, reducing transportation costs and delivery times. Investing in modern logistics technologies, such as warehouse management systems (WMS) and transportation management systems (TMS), can streamline operations and improve accuracy in order fulfillment (Century bottling Uganda, 2024). These systems facilitate better tracking of shipments, inventory management, and coordination across the supply chain, contributing to enhanced operational efficiency and customer satisfaction.

## **5.2 Conclusions**

Modern supply chains are characterized by their intricate networks and interdependencies, extending from raw material suppliers to end customers. The current state of supply chain performance is heavily influenced by advancements in technology, such as automation, artificial intelligence, and data analytics. These technologies have enabled more precise forecasting, enhanced inventory management, and improved operational efficiency. However, despite these advancements, many organizations still struggle with issues related to supply chain visibility, responsiveness, and agility.

Customer satisfaction is intricately linked to supply chain performance. Efficient supply chains enable companies to deliver products faster, maintain higher inventory accuracy, and offer reliable service. Conversely, inefficiencies such as delays, stock outs, and inaccuracies can lead to customer dissatisfaction, erode trust, and ultimately affect brand loyalty. In a competitive market, where customers have numerous choices, the ability to meet and exceed expectations can distinguish a company from its competitors.

In summary, the current state of supply chain performance significantly impacts customer satisfaction, and addressing the associated challenges requires a strategic approach. By

enhancing visibility, adopting agile practices, optimizing inventory management, strengthening supplier relationships, and investing in technology integration, organizations can improve their supply chain performance and, consequently, their ability to meet and exceed customer expectations. As the business landscape continues to evolve, ongoing adaptation and innovation will be key to maintaining a competitive edge and ensuring sustained customer satisfaction.

### **5.3 Recommendations.**

For Century bottling, enhancing supply chain visibility is crucial to managing its extensive global operations. Implementing advanced technologies such as Internet of Things (IoT) sensors and blockchain can provide real-time tracking of goods from production to distribution. By leveraging these technologies, Century bottling can gain better insights into inventory levels, production status, and shipment progress. This increased visibility allows for quicker identification of potential disruptions, such as delays or quality issues, enabling the company to take proactive measures to address them.

Century bottling's supply chain must be both agile and resilient to adapt to the dynamic market conditions and unforeseen disruptions. To achieve this, Century bottling should focus on diversifying its supplier base and incorporating flexible logistics solutions. By establishing relationships with multiple suppliers for key raw materials, Century bottling can reduce its dependence on any single source and mitigate the impact of supply disruptions.

Additionally, Century bottling can implement a more responsive supply chain model by utilizing demand forecasting tools and real-time analytics. This approach allows the company to adjust production and distribution plans based on changing consumer preferences and market conditions. For example, during peak demand periods or regional shortages, Century bottling can quickly reallocate resources and adjust inventory levels to ensure timely product availability.

Building strong and collaborative relationships with suppliers is crucial for Century bottling to ensure a reliable and efficient supply chain. The company should focus on developing long-term partnerships with key suppliers, engaging in regular performance evaluations, and establishing clear communication channels. Collaborative planning and joint problem-solving initiatives can help address issues such as quality control, delivery schedules, and cost management.

Century bottling can also invest in supplier development programs to enhance the capabilities of its suppliers. By providing training and resources, Century bottling can help suppliers improve their operational efficiency and quality standards, which in turn benefits the overall supply chain performance.

#### **5.4 Areas for further research.**

As The Century bottling Company continues to refine its supply chain strategies to enhance performance and customer satisfaction, there are several areas where further research could provide valuable insights and drive continued improvement. Identifying and exploring these areas will help the company address emerging challenges, leverage new opportunities, and maintain its competitive advantage in the global market.

Research into the impact of emerging technologies, such as blockchain, artificial intelligence (AI), and advanced analytics, on supply chain efficiency is crucial. While Century bottling has made strides in integrating technology, a deeper investigation into how these technologies can further enhance operational processes is needed. This research could explore:

**Blockchain for Enhanced Traceability:** Investigating how blockchain technology can improve end-to-end traceability, reduce fraud, and increase transparency in the supply chain.

**AI and Machine Learning for Demand Forecasting:** Analyzing how AI and machine learning algorithms can refine demand forecasting models and optimize inventory management.

**Automation in Warehousing and Distribution:** Evaluating the benefits and challenges of robotics and automation in warehousing and distribution centers.

## References

- A. Nagarajsubbarao, P. A.-K.-S. (2019). The new Paradigm of supply chain performance: "orchestrated structure". *Int J. Supply Chain management, vol 8, no g, 795-801.*
- al, N. A. (2012). "GREEN SUPPLY CHAIN MANAGEMENT: A REVIEW AND RESEARCH DIRECTION". 1-18.
- Ayag, Z. (2014). "An Intelligent approach to proiritise logistics requirements in food indusry". *int J. Manag, 29-38.*
- Bala, K. (2014). supply chain management: some issues of chaleenge-A Review. *international journal of current engineering and technology.*
- Bose, T. K. (2012). "Application of Fishbone Analysis for Evaluating Supply Chain and Business Process-". *Int. J. manag. value supply chain, 17-24.*
- Crane, A. (2020). Orchestrating the complex supply chain. *supply chain management review.*
- Fisk, P. (2020). Snap, Microsoft and Tesla are the world's most innovative companies of 2020, according to fast company....siemens, sprout world and Elvie lead in europe. *The Genius works.*
- H. Haddoch, Z. B. (2019). Supply Chain Management:" A review of approaches, practices and impact on performance:.. *Int. J. Supply Chain Manag vol.8, no 6, 45-46.*
- Hausman, W. (2004). supply chain performance metrics. *The practiceof supply chain management:where theory and application converge, 61-71.*
- L. Girdwichai, J. A. (2019). What drivesthe innovation inside, and integrated supply chhains of Thai based global traders: A strategic management perspective on supply chain performance". *International journal supply chain management, vol 8, no 6, 325-333.*
- Lizette Ang, N. B. (2023). THE RISE OF ARTIFICIAL INTELLIGENCE: A CORRELATIONAL STUDY ON AI-POWERED BOTS AND CUSTOMER SATISFACTION IN A PEOPLE-ORIENTED INDUSTRY. *Cosmos Journal &technology.*
- Microsoft and Tesla are the world's most innovative companies of 2020, according to east company...siemens, sprout world and elvie lead in europe. (2020). *The Genius works.*

- Muhammad Saeed Shahbaz, A. B. (2020). The Role of Supply Chain Relationships in Risk Management by Enhancing Customer Satisfaction. *international journal of disaster recovery and business continuity*.
- Nararajan, Y. Y. (2018). Customer Satisfaction in Asia. *psychology & marketing*, 387-391.
- O'Handley, C. (2020). The 3 Causes Fueling Supply Chain Complexity. *Thomas industry Update*.
- Pattnaik, M. (2013). Fuzzy supplier selection strategies in supply chain management. *int J. Management*, 30-39.
- Princes, E. (2020). Port Technology International Team, 'Maersk accelerates end-to-end strategy with performance team'. *Port Technology International*.
- Rasti-Barzoki, S. S. (2018, 2019). "A game theoretic for assessing residential energy-efficiency program considering rebound, consumer behaviour, and government policies". *Energy*, 233-234. 44-61.
- S. Bhattacharya, D. M. (2014). SUPPLY CHAIN MANAGEMENT IN INDIAN AUTOMOTIVE INDUSTRY: COMPLEXITIES, CHALLENGES AND WAY AHEAD. *Int. J. Manag, value supply chain*, 49-62.
- Teichert, T. (2003). strategic impulses for innovation in Supply Chains.
- Chopra, S., & Meindl, P. (2020). *Supply Chain Management: Strategy, Planning, and Operation* (7th ed.).
- Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.).
- Mentzer, J. T., & Gundlach, G. T. (2010). *Supply Chain Management: Strategy, Planning, and Operation*.
- Ivanov, D., Tsipoulanidis, A., & Schönberger, J. (2019). *Global Supply Chain and Operations Management: A Decision-Oriented Introduction to the Creation of Value* (2nd ed.).
- Christopher, M. (2016). *Logistics & Supply Chain Management* (5th ed.). Pearson.
- Natarajan, R. (2018). *Customer Satisfaction in Supply Chains: A Strategic Perspective*. *Journal of Business Logistics*, 39(2), 101-118.

- Atadoga, M. O. (2021). *Supply Chain Management in Emerging Economies: Challenges and Opportunities*. *International Journal of Supply Chain Management*, 10(3), 55-72.
- Oh, H. (2000). *The Effect of Brand Class, Brand Awareness, and Price on Customer Value and Satisfaction: A Study of the Hotel Industry*. *Journal of Hospitality & Tourism Research*, 24(2), 136-162.
- Anton, J. (1996). *Customer Relationship Management: Making Hard Decisions with Soft Numbers*.
- Deloitte. (2021). *The Future of Supply Chain: Thriving in Uncertainty*.
- McKinsey & Company. (2020). *Supply Chain 4.0 in Consumer Goods: How to Get Ahead of the Curve*.
- PwC. (2021). *Digital Supply Chains: The New Mandate for Resilience and Growth*. PwC Advisory Services.
- Uganda Bureau of Statistics (UBOS). (2022). *Annual Business Survey 2021/2022*. UBOS.
- World Bank. (2022). *Uganda Economic Update: Strengthening the Fundamentals for a Resilient Recovery*.
- Agybeng-Munah, Y., & Boateng, R. (2019). *The Role of Logistics Information Technology in Enhancing Supply Chain Performance: Evidence from Ghana*. *International Journal of Logistics Management*, 30(1), 115-132.
- Hausman, W. H. (2004). *Supply Chain Performance Metrics*. In *Handbook of Quantitative Supply Chain Analysis* (pp. 61-84).
- Abdallat, M. M. A., & Emam, H. (2001). *Customer Satisfaction and Supply Chain Performance in the Retail Sector*.
- Bolton, R. N., & Drew, J. H. (1991). *A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes*.

**Questionnaire.**

My name is Gumoshabe Enos, a student at Uganda Christian University pursuing bachelor 's degree in procurement and logistics management. This questionnaire is designed to study explore the role of supply chain performance on customer satisfaction. (a case study Century bottling company Namanve branch).

I am requesting you to respond to my questionnaire and I assure you that only the members of the research team will have access to the information provided. The information you provide will help us to understand the role of supply chain performance on customer satisfaction. Thank you so much for your time and cooperation.

Instruction.

Please answer in the spaces provided and tick where appropriate.

**SECTION A: Background information.**

1. Gender.

Male	Female

2. Age

20-30	31-40	41&above

3 education level.

Degree.

Diploma.

Post graduate.

Others.....

## SECTION B

Part A: current state of supply chain performance and its impact on customer satisfaction.

Note: in the subsequent sections, use the scale provided to tick in the box of the relevant answer that describes your opinion. **Nb: SA=Strongly Agree (1), A=Agree (2), SD=Strongly Disagree (3), D=disagree (4), and UD=Un Decided (5).**

S/no	STATEMENT	1	2	3	4	5
1	on-time delivery generally enhances logistics and transportation management					
2	The Company is increasingly focusing on optimizing inventory turnover rates to balance supply with demand					
3	sustainability metrics, such as reduced carbon emissions and lower waste levels					
4	Customer satisfaction metrics are increasingly tied to supply chain performance					
5	Agile supply chains that can swiftly adjust to fluctuations in demand or supply disruptions are increasingly seen as a competitive advantage.					

**Part B: Key challenges affecting supply chain performance.**

S/No	Questions	1	2	3	4	5
1	Rising fuel prices and transportation costs can impact overall logistics expenses.					
2	Seasonality: Managing seasonal variations in demand,					
3	Meeting environmental regulations, such as waste management and carbon footprint reduction					
4	Fluctuations in the prices of key raw materials such as sugar, aluminum for cans, and plastic for bottles					
5	Digital Transformation: Implementing advanced technologies such as AI, IoT					

**Part C: strategies for improving supply chain performance to enhance customer satisfaction.**

S/No	strategies	1	2	3	4	5
1	Optimize Inventory Management					
2	Enhance Supply Chain Visibility through Use of predictive analytics to forecast demand more accurately and adjust inventory levels accordingly					
3	Enhance Logistics and Distribution Through Use route optimization software to reduce transportation costs and delivery times					
4	Strengthen Risk Management and Resilience through Diversification of Suppliers					
5	Invest in digital tools and technologies such as AI, machine learning, and block chain to improve supply chain transparency, efficiency, and decision-making					

**SCHOOL OF BUSINESS**

19<sup>th</sup> Aug, 2024

**TO WHOM IT MAY CONCERN**

Name: **GUMOSHABE ENOS**

Reg. No J22B12/109

A bachelor's student who is seeking permission from your office to collect data for her dissertation titled

**The role of supply chain performance on customer satisfaction. (A Case study: Century Bottling Company-Namanve branch)**

We shall be grateful if you could render assistance to her in collecting the necessary data for her dissertation

The Uganda Christian University School of Business thanks you in advance



Mukisa Simon Peter

Research coordinator