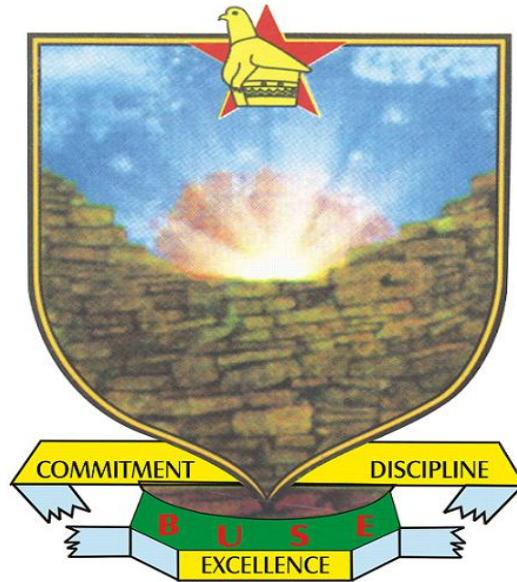


BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF ECONOMICS



**THE IMPACT OF SUPPLY CHAIN DISRUPTIONS ON BUSINESS PERFORMANCE: A
CASE STUDY ON DELTA BEVERAGES SUPPLY CHAIN**

BY

MICHELLE S MTEMA

(B212059B)

**A DISSERTATION/THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE BACHELOR OF COMMERCE HONORS DEGREE IM
PURCHASING AND SUPPLY OH BINDURA UNIVERSITY OF SCIENCE EDUCATION**

FACULTY OF COMMERCE

JUNE 2025

APPROVAL FORM

The signature of the student and supervisor below certify that they have supervised, read and recommend to Bindura University of Science Education for the acceptance of a dissertation titled "THE IMPACT OF SUPPLY CHAIN DISRUPTIONS ON BUSINESS PERFORMANCE: A CASE STUDY ON DELTA BEVERAGES SUPPLY CHAIN" submitted by MICHELLE S MTEMA. In a bid to partially fulfill the requirements of a Bachelor of Commerce Degree in Purchasing and Supply.

Signature of student M. Mtema Date 19/08/2025

Signature of supervisor M. Ncube Date 21/8/25

Signature of chairperson [Signature] Date 21/08/25



RELEASE FORM

NAME: MICHELLE S MTEMA

PROJECT TITLE: THE IMPACT OF SUPPLY CHAIN DISRUPTIONS ON BUSINESS
PERFORMANCE: A CASE STUDY ON DELTA BEVERAGES SUPPLY
CHAIN

PROGRAMME: BACHELOR OF COMMERCE HONOURS DEGREE IN
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DEDICATION

I dedicate my dissertation to my parents for the moral and financial support as well as lecturers and my supervisor for providing me with theoretical knowledge and motivation on how to complete this dissertation.

ABSTRACT

The research analyses the effect of supply chain disruption on Delta Beverages' business performance in Zimbabwe. It reveals major disruptions such as delays in transport, power failures, and untrustworthy suppliers, with negative consequences on operational performance as well as profitability. With a sample size of 81 employees, questionnaires were distributed using a quantitative approach, and Statistical Package for the Social Sciences (SPSS) were utilized to process data. Findings show measurable correlations between supply chain disruption and business performance measures. The study also suggests improving the risk management practice by diversifying suppliers, having good relationships, and adopting electronic technologies. Finally, this research supplies practical recommendations for Delta Beverages and similar companies to improve resilience and responsiveness in the volatile economic climate of Zimbabwe.

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ABBREVIATIONS

AfCFTA : African Continental Free Trade Area

CLM: Council of Logistics Management

ERP: Enterprise Resource Planning

FMCG: Fast-Moving Consumer Goods

ICT: Information and Communication Technology

SCRM: Supply Chain Risk Management

SPSS: Statistical Package for the Social Sciences

TCE: Transaction Cost Economics

RBV: Resource-Based View

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This is an introduction chapter that provides an orientation background to this research study on the impact of supply chain disruptions on business performance utilizing Delta Beverages as a case study. It covers the background of the study, purpose of the study statement of the problem, objectives of the study, research questions, significance of the study, assumptions of the study, limitations of the study, delimitations of the study and definitions of key terms.

1.1 Background of the Study

In the more interconnected global economy of today, supply chain flexibility, responsiveness, and resiliency are the most important determinants of firm competitiveness and performance (Christopher, 2016). The world is currently characterized by complex interdependencies between consumers, distributors, manufacturers, and suppliers that make existing supply chains today more susceptible to disruptions compared to earlier times (Ivanov & Dolgui, 2020). From transportation delays and raw material supply shortages to political conflicts and disasters wrought by climate change, interruptions threaten an organization's profitability and efficacy across industries at its very core.

International events of recent past have increased the imperative to manage risk in supply chains to ensure business continuity. The COVID-19 pandemic caused disruptions in supply chains globally, resulting in shortages of material, production halts, and failure of logistics in nearly every industry (Queiroz et al., 2020). Subsequently, various firms, including Ford in the United States, faced production loss following a worldwide shortage of semiconductors that amplified vulnerabilities of just-in-time stock systems (Ivanov, 2021). Likewise, German manufacturers suffered drastically from transport bottlenecks and raw materials shortages, as well as again exhibiting vulnerabilities of advanced economies to worldwide supply chain disruptions (Klaus & Müller, 2021).

Geopolitical tensions also expanded these challenges. For instance, the conflict between Russia and Ukraine interfered with vital global supply chains that consisted of energy, grains, and

fertilizers which had direct effects on European and African economies (Shih, 2022). Sanctions, trade embargoes, and infrastructure destruction severely restricted the flow of goods, an indication of how political instability in a specific area can send a ripple effect in global value webs (Handfield et al., 2023). In like manner, increased economic nationalism and protectionism in the majority of nations have resulted in more uncertainty, extended lead times, and rising supply chain costs (Gereffi, 2020).

In addition, natural disruptions are taking place more often and with greater intensity. Climate catastrophes like floods in the South Asian region, hurricanes in the Caribbean, and wildfires in North America have time and again resulted in inventory loss, closure of ports, and traffic congestion in transportation (Choi et al., 2021; Golan et al., 2020). These disturbances have necessitated incorporating climate resilience and sustainability into business supply chain planning. The traditional reactive risk management models, as Dolgui et al. (2020) observe, are not sufficient anymore; instead, firms ought to adopt predictive and anticipative models built on digital technologies and sophisticated analytics.

On the continent of Africa, exposure of the supply chain is further exacerbated by infrastructure deficits, political instability, and economic instability. The deteriorating road and rail infrastructure, developing information and communication technology (ICT) facilities, and weak border management systems are prevalent in most African countries (Adebayo & Muriithi, 2022; World Bank, 2021). These are the constraints that limit integration in trade in the area despite resolute efforts like the African Continental Free Trade Area (AfCFTA) that aims to integrate markets for 54 countries. Inadequacy of harmonized regimes in customs, fluctuating policy settings, and low adoption of digital platforms for trade have hampered the realization of this initiative's dividends (UNCTAD, 2022).

Countries such as Nigeria and South Africa are likely to suffer from supply chain disruptions caused by port congestion, unstable power supply, and erratic policy environments (Olumide & Kanyane, 2020). Mupangwa and Ncube (2021) say that most African companies use a reactive strategy of dealing with supply chain disruptions without formal frameworks of forecasting, monitoring, or responding to prospective disruptions. Non-existent proactive risk management leads to consistent operational shortfalls and financial losses.

Domestic structural challenges provide an additional layer of complexity to these continental and international issues confronting Zimbabwe. Chronic shortages of foreign currency, erratic exchange rates, unstable fuel supplies, and outdated transport infrastructure all severely interfere with the procurement, manufacturing, and distribution value chains of manufacturing firms (Makoni & Chirisa, 2022; Mupambireyi & Mlambo, 2021). Power outages or load shedding, customs delay, and corruption in border posts are among the other institutional concerns which drive inefficiencies in both foreign and domestic supply chain operations (Nyoni, 2022).

Delta Beverages, one of the leading Zimbabwean manufacturers of alcoholic and non-alcoholic beverages, has a three-tier supply chain that gets it from domestic and foreign suppliers to wholesalers and retailers. It is becoming more and more strained by internal inefficiencies as well as external shocks. Interruptions in the form of delayed raw material supply, unavailability of packaging materials, machine breakdowns due to unstable power supply, and fuel shortages have adversely affected the company's production timelines and customer service (Chikodzi, 2020; Ndhlovu & Sibanda, 2023).

Furthermore, the company's low use of digital monitoring platforms and predictive analytics software restricts its capability for advance anticipation and risk prevention. Therefore, Delta Beverages and similar companies would resort to reactive solutions such as emergency procurement or last-minute logistics realignment that are costly and cannot be sustained in the long run (Mugari & Madzvamuse, 2021). Although the company has made some advancement towards simplifying its supply chain, it still has some gaps in a few areas such as supplier diversification, inventory management, and integrated risk management planning.

Notwithstanding increased exposure of supply chain disruptions to operational and strategic performances, empirical studies within the Zimbabwean context linking supply chain risk management to tangible business performance measures like profitability, productivity, and customer satisfaction remain limited (Ndhlovu & Sibanda, 2023; Chikodzi, 2020). Most current studies are biased towards general economic limitations or macro-level trade barriers, and the knowledge gap concerning how firm-level strategies, decisions, and risk readiness affect results in turbulent environments.

Thus, this research aims to address this much-needed research void by investigating the nature and cause of supply chain disruptions in Delta Beverages, and how enhanced risk management practices can be used to promote supply chain resilience and business overall performance. Employing a company-level case study, this study seeks to provide pragmatic recommendations that are not only applicable to Delta Beverages but also to other companies conducting business in similarly volatile niches throughout Zimbabwe and the rest of Southern Africa..

1.1 Problem Statement

Delta Beverages, a leading firm in Zimbabwe's beverage industry, experience significant challenges resulting from persistent supply chain disruptions, which have negatively impacted business performance and economic contribution (Mhlanga & Chikweche, 2021). These disruptions are complex and include raw material shortages, unreliable logistics, inconsistent electricity supply and customs delays, which collectively result in production stoppages increased operational costs, and a decline in customer satisfaction (Ndlovu & Mpofu, 2022). One of the root causes of the current persistence of these issues is the company's poor risk management system in supply chain management (Gwaravanda & Dzimunya, 2020). The lack of sufficient and timely risk identification, analysis, and mitigation processes has exposed the company to a greater likelihood of internal and external shocks (Gwaravanda & Dzimunya, 2020). Additionally, poor risk management has also constrained the company to effectively respond to supply chain disruptions, thus creating inefficiency and lowered business profitability (Mukwende, 2021). Moreover, beverage companies lack the fully integrated supply chain risk management systems, and this constrains their resilience and adaptability in responding to disruptions (Chikodzi, 2020). While there has been research on aggregate supply chain inefficiencies in Zimbabwe, scarce scholarly work has engaged with how supply chain risk management failure specifically affects business performance in the beverage sector. With this background, the present study endeavors to assess the effect of supply chain disruption on business performance at Delta Beverages, more specifically in relation to how poor risk management practice erodes supply chain resilience and organizational meltdown.

1.3 Research Objectives

1. To identify the types of supply chain disruptions affecting the beverage industry.
2. To determine the causes of supply chain disruptions in the beverage industry.

3. To recommend methods for strengthening risk management in the beverage supply chain.

1.4 Research Questions

1. What types of supply chain disruptions are common in the beverage industry?
2. What are the major causes of these supply chain disruptions?
3. What methods can improve risk management in the beverage industry?

1.5 Statement of Hypothesis

H₀: Supply chain disruptions have no significant impact on the business performance of Delta Beverages.

H₁: Supply chain disruptions have a significant impact on the business performance of Delta Beverages.

1.6 Significance of the Study

1.6.1 To the Management

The study will provide Delta Beverages' management team with valuable, evidence-based insights into the types, sources, and consequences of supply chain disruptions. It will assist in pinpointing operational weaknesses and evaluating the success of existing mitigation approaches. Moreover, it will suggest strategies to enhance supply chain flexibility and resilience, thereby supporting improvements in cost efficiency, productivity, and customer satisfaction.

1.6.2 To the Employees

Staff members, particularly those working in areas such as logistics, procurement, and production coordination, will gain a clearer understanding of how disruptions affect their responsibilities and performance outcomes. The findings may also inform the creation of improved contingency frameworks and training initiatives, helping employees to better handle disruptions and actively support business continuity efforts.

1.6.3 To the University

This research will contribute to academic literature on supply chain management with a focus on emerging markets, especially Zimbabwe. It will also serve as a scholarly resource for future research, dissertations, and academic discussions within the fields of logistics, operations, and business management.

1.7 Delimitations of the Study

This research was delimited to the specific context of Delta Beverages in Zimbabwe and focused exclusively on the supply chain disruptions and their influence on the company's business performance other beverage companies or sectors outside of Delta Beverages. Furthermore, the study only involved employees and departments directly engaged in logistics, procurement, and production operation

1.8 Limitations of the Study

The research encountered certain limitations that were beyond the control of the researcher. Access to some internal company data was restricted due to confidentiality concerns, which limited the scope of analysis. Additionally, the study's focus on Delta Beverages within Zimbabwe may reduce the generalizability of the findings to other industries or geographical contexts. However, the researcher addressed this constraint by using purposive sampling to ensure that participants were directly involved in supply chain functions, thus enhancing the relevance and depth of the data collected. Time and financial resources were also limited, though support from personal networks helped ensure the study's completion.

1.9 Definition of terms

1.9.1 Supply Chain

A supply chain refers to the networks of organizations, people, activities, information and resources involved in supplying a product or service to the end customer. It encompasses every stage from raw material acquisition to final delivery (Ivanov and Dolgui, 2020)

1.9.2 Supply Chain Disruptions

Supply chain disruptions refer to unforeseen events that interfere with the regular movement of goods or services within the supply chain, causing delays, increased costs, or operational inefficiencies (Queiroz et al. (2020).

1.9.3 Business Performance

Business performance reflects how successfully a firm achieves its goals and is often measured using indicators such as financial growth, operational productivity, and customer satisfaction (Paul et al. (2021).

1.10. Summary

This chapter presented the background of the study, the problem statement, the aim of the research and the research questions. It also covered the study's limitations, delimitations and definitions of key terms used throughout the research. The next chapter is going to cover literature review of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter explores both theoretical and empirical literature related to the impact of supply chain disruptions on business performance. The review is structured around the research questions, emphasizing the nature of disruptions, their implications, and the mitigation strategies employed by businesses.

2.1 Theoretical Literature

2.1.1 Transaction Cost Economics (TCE) Theory

Transaction Cost Economics Theory (TCE) formulated by Coase in 1937 and further formulated by Williamson 1985 deals with the economic transaction costs of inter-agent interactions. They encompass search and information costs, bargaining costs, and agreement enforcement and maintenance (Resende et al., 2021). Firms, according to this theory, prefer minimizing these costs when they choose to manufacture goods or services in-house versus outsourcing.

In supply chain disruptions, the TCE theory can be used in organizational decision-making since they weigh the benefit and cost of in-house production against outsourcing. For instance, in the case of disruption in supply networks and reduced provider dependability, organizations may opt for in-house production to counter dependence on fickle external sources (Ghadge et al., 2020).

TCE also identifies opportunities for opportunism such as unwarranted price increases or tardiness susceptible to runaway escalation upon disruption. As a deterrent to such dangers, theory postulates that steps like securing long-term contracts, acquiring joint ventures and vertical integration should be undertaken, which are stable and safe sources of supply. (Moyo and Dube, 2021).

2.1.2 Resource Based View (RBV)

Resource Based View (RBV) described by Barney (1991) maintains that ultimate success of a firm largely relies on how it utilizes its internal abilities and assets fruitfully. The Resource Based View has been based on two ideas, resource heterogeneity, i.e., companies are able to benefit from different sets of resources and resource immobility, i.e., there exist some assets which are difficult for rival firms to replicate (Riahi et al., 2021). To ensure sustainable competitive advantage, RBV recommends that resources have to be valuable, rare, imperfectly imitable, and non-substitutable (VRIN criteria) (Zekhnini et al., 2023h). Such assets may be specialized human assets, proprietary technology, organizational culture, logistics capability, or having close relationships with suppliers. Leveraged strategically, the assets allow firms to overwhelm their competitors and stay profitable in the long term.

When there are supply chain disruptions, the Resource-Based View (RBV) stresses the build-up of firm internal capabilities to cushion the impact of disruptions from the outside. For instance, an organization that has a good purchasing system finds it simple to identify substitute suppliers in case of disruption of regular channels of supply. Likewise, possessing competent logistics personnel enables the company to reschedule deliveries and divert shipments during in-transit disruptions. A solid supply network also affects flexibility by allowing multiple supply sources. In combination, these internal forces solidify a company, sustain it, and recover faster when unforeseen challenges occur (Ahmed & Khan, 2022).

2.1.3 Supply Chain Risk Management (SCRM) Theory

Supply Chain Risk Management (SCRM) theory provides a structured methodology for finding, assessing, mitigation and ongoing monitoring of risks that may impact supply chain operations. Theory asserts that there should be anticipation of disruption and adoption of sophisticated strategies to make supply chains more resilient (Wieland and Wallenburg, 2020). SCRM starts with the identification of possible risk across the supply chain, such as suppliers' reliability problems, transportation breakdown, change in policy, hacking, and fluctuating demands (Ponis and Koronis, 2021). All these risks are broadly referred to as internal risks, which occur within the supply chain like planning, procurement, transport and warehousing and external risks, which

occur due to the general environment, like geopolitical unrest, pandemics, and natural calamities (Schlegel & Trent, 2014; Ivanov & Dolgui, 2020).

A single risk incident can also cause a chain of others. A disruption in production at the main supplier, say, may cause scarcity of critical materials to the purchasing organization, which closes its operations. Such disruptions create unplanned cost loss and uncertainty in provision of revenue and services across the supply chain. Effective risk management is thus required to ensure product flow and customer satisfaction. SCRM is defined by Ivanov (2021) as involving practices like scenario planning, diversification of supplies, stockout policy, digital visibility tools, and contingency planning. Such firms proactively promote their capacity to respond in a timely fashion, dampen shocks, and restore activities during disruption.

The applicability of SCRM has grown more impactful in the aftermath of recent high-impact events globally, including the COVID-19 pandemic, Russia–Ukraine war, Red Sea piracy on shipping, and the semiconductor chip shortage worldwide (Choi et al., 2022). All these incidents have shown how much global supply chain systems are exposed and how much more resilient supply chain designs need to be to turn responsive and resilient. The theory also advocates for the implementation of risk management practices like implementation of supplier diversification, double-sourcing, and creation of higher safety stock and investment in predictive analysis and real-time tracking programs (Ponis and Koronis, 2021). The strategies enhance supply chain transparency and enable rapid response during disruptions.

In supply chain disruptions, SCRM Theory is most appropriate for those enterprises that carry out activities in unstable environments with economic volatility, policy uncertainty, and logistical challenges because, via such a theory, they can impose flexible source strategies, improve inventory management, and establish close partnerships with core partners. Based on Ivanov and Dolgui (2020), resilient supply chains through risk management systems-enabled supply chains can maintain improved performance, recover from disruptions, and establish long-term competitiveness.

2.1.4 Contingency Theory

Contingency Theory was developed by Joan Woodward in 1958 and then by Lawrence and Lorsch in 1967 postulates that there is no best way of managing an organization. It postulates that the best way of organizing an organization varies with the environment in which it operates. Instead, the best course of action is based on internal and external environmental variables. In the current complicated and dynamic business environment, the theory is still applicable, particularly in supply chain management.

In a period of supply chain disruption, Contingency Theory can classify that businesses must innovate strategies appropriate to their specific operating environment. In the view of Chowdhury and Quaddus (2020), businesses that shift supply chain designs on environmental uncertainty and complexity dimensions are capable of responding to disruptions. Such might involve adjusting sourcing strategy, shifting logistics designs and re-scheduling production as a function of new risk exposures. In the highly volatile and low-resource environments like Zimbabwe, companies may not benefit from bureaucratic supply chain configurations. Instead, they are forced to continuously monitor and respond to economic patterns, changes in policy, and uncertainty in infrastructure. Mupani and Muzurura (2021) add that in such an environment, contingency-driven decision-making enables companies to mitigate fuel shortages, import delays and currency exchange rate changes through situation-specific strategies like stockpiling, supplier diversification, or initiatives that cut across regions.

Contingency Theory asserts that companies have to be flexible and align their risk-control strategies with prevailing business conditions. To the alcohol beverages industry, it translates into constant observation of internal strengths and external threats to craft timely, pertinent, and effective supply chain practices that can maintain business performance.

2.1.5 Network Theory

Network Theory explores how companies are related to each other in a huge number of interdependencies that govern the circulation of resources, information and power within supply chains. Developing out of social science, with the foundational theories best outlined by Granovetter (1973) for weak tie strength, the theory was subsequently formulated for business networks by Hakansson and Snehota (1995) as the Industrial Network Approach. They stressed

that firms are situated within a network of relationships, and the interdependencies and connections have profound effects on firm performance and behavior.

Trust and cooperation are inherent components in network relationships. Social capital established through long-term interactions strengthens the resilience of the network as a whole by enabling knowledge sharing, collective risk management and innovation (Caniëls and Gelderman, 2021). Network Theory also emphasizes network centrality, wherein the location of a company in the network dictates its level of access to core resources and whether it can shape decisions and coordinate actions or not. Central agents are also hubs, enabling faster decision-making and resource transfer during supply chain disruptions. With supply chain disruptions the importance of having a strong network is more critical.

If one supplier or region is disrupted it can ripple its way across the network with widespread implications for operations. Companies situated in interconnected diversified networks are able to absorb shocks and undertake contingency measures, like re-routing logistics and use of alternative partners, to ensure continuity (Touboulic and Walker, 2021). Through the use of Network Theory, it is also easier to understand how inter-firm relations can be leveraged for the anticipation, response, and recovery from supply chain disruption. Building relationships with distributors, logistics operators and suppliers and improving transparency in the network helps build more resilience and protection of business performance from increasingly uncertain global and local environment.

2.2.1 Empirical Literature Review

Research studies have always outlined that supply chain disruptions in the beverage sector are internally and externally triggered. Ivanov and Dolgui (2020), using simulation-based analysis of European FMCG supply chains, underscored that supply interruptions are caused by natural disasters, geopolitical tensions, cyber attacks and unexpected regulatory changes, which have a propensity to lead to demand volatility, production stoppages, and unreliable suppliers. These types of disruptions have a tendency to propagate across interdependent supply networks, also underscoring their impact on business performance.

Sharma and Bhat (2021) in a research on India's beverage industry had revealed that seasonal fluctuations, raw material quality defects, and reliance on imported packaging materials seriously

disrupt production timetables. Such foreign reliance creates vulnerabilities, particularly when foreign supply chains take time or trade policy changes.

Ahi, Sinha, and Grewal (2023) cited that disruptions in the supply chain are further worsened by deep-rooted infrastructural issues, such as inadequate road conditions, inefficient ports, and unreliable supply of power. Such issues not only add to increased lead times but also cause spoilage of products, particularly temperature-sensitive ones such as beverages.

In Zimbabwe, Ncube and Dube (2023) discovered that beverage industry manufacturing firms experience delayed deliveries, exchange rate instability, and unreliable availability of foreign exchange. Moyo and Sithole (2022) targeted Delta Beverages specifically and discovered that the firm is plagued with fuel shortages, port clearance delay, and unstable supply networks. The interruptions are not necessarily in the control of the organization at all times, but they have a potent effect on service delivery. Chikukwa, Mutambara, and Mugari (2021) similarly indicated that the absence of a cold chain system in Zimbabwe exacerbates such effects, especially for non-alcoholic drinks that should be refrigerated. Kamukama and Munene (2020) likewise identified the nation's persistent foreign currency shortage as the major cause of the delay in the importation of major inputs like concentrates, cans and glass bottles.

2.2.2 Supply Chain Disruptions Causes

Several studies have examined the root causes of supply chain disruption, particularly in emerging countries. The drivers have been categorized as operational, infrastructural, and macroeconomic. Ahi, Sinha, and Grewal (2023) observed that inadequate infrastructure especially transport, warehousing and power supply is a chronic issue in sub-Saharan Africa. Such infrastructural shortfalls have a tendency to cause variability in lead time, which undermines production planning and distributional efficiency.

Ncube and Dube (2023), with Zimbabwean manufacturers, reported that repeated delays in raw material supplies are motivated by supplier underperformance, inefficient borders, and transport unreliability. Their study reported that the majority of beverage firms in Zimbabwe have limited supplier options, often with single-source contracts, making them vulnerable to upstream shocks.

Moyo and Sithole (2022) indicated that Delta Beverages is confronted by inefficient supplier coordination and underpinned risk mapping infrastructure. These supply chain visibility and

predictive planning shortcomings prevent anticipation or avoidance of disruption. Furthermore, most companies have not yet embraced cutting-edge supply chain information systems, thus constraining data-driven decision-making.

Macroeconomic aspects also play a central role. Kamukama and Munene (2020) observed that Zimbabwean dollar unpredictability, fiscal policy volatility, and widespread foreign currency shortages make for an adverse procurement climate. This promotes long supplier payment lead times and stock replenishment complexity, which discourage production continuity in turn.

Other scholars, for instance, Makoni and Chirisa (2022), concur that government licenses in terms of trade barriers and policy uncertainty also create supply chain exposures. Coupled with exposures like climate change or pandemics from the external environment, these find their way into a complicated web of risks which cannot be identified and resolved using the conventional supply chain frameworks.

2.2.3 Methods for Strengthening Risk Management

To deal with the constant disruption of supply chains, scholars emphasize the need for pro-active risk management practices that expand visibility, flexibility, and responsiveness. Chong, Lo, and Weng (2022) noted that supplier diversification and regional sourcing were paramount strategies to counter dependence on certain suppliers or geographic locations. The research indicated that firms with decentralized inventory and domestic networks of suppliers were better positioned to maintain business amid disruptions.

Kaur and Singh (2023) noted the immense ability of digital technologies to enhance supply chain resilience. In their study, predictive analytics, blockchain, and intelligent inventory systems tremendously enhance responsiveness by way of early alerts of anomalies and real-time support for decision-making. Gunasekara et al. (2022) agreed, noting that cloud procurement platforms and mobile coordination technology allow companies to enhance visibility in geographically dispersed suppliers, especially low-infrastructure environments such as Zimbabwe.

Moyo and Sithole (2022) have noted that Delta Beverages has been starting different practices towards its resilience development, such as the institution of safety stock levels, employing long-term third-party logistics contracts, and equipping employees with crisis response programs.

However, the researchers cautioned that these practices are still not to be bolstered by an integrated digital risk management system whose potential is therefore being hampered.

Hallikas et al. (2021) emphasized the significance of long-term supplier development programs and contract management systems. From their findings, trust-based relationships help ensure better communication, prompt mutual risk-sharing, and more adaptive reactions to disruptions. Their finding is consistent with the fact that Boafo, Ahudey, and Darter (2020) concluded that mutual risk planning and transparent communication forums play a crucial role in co-developing supply chain crisis responses.

2.3. Conceptual Framework

The conceptual framework for this study provides a structured representation of the key variables influencing business performance in the beverage industry, with specific focus on Delta Beverages in Zimbabwe. Built on the assumption that supply chain performance is shaped by various interrelated components, the framework identifies independent variables, mediating variables, expected outputs, and dependent variables that collectively determine the resilience and competitiveness of firms in this sector (Ivanov and Dolgui, 2020; El Baz and Ruel, 2021), as illustrated in Figure 1 below

Fig 1 Conceptual Framework

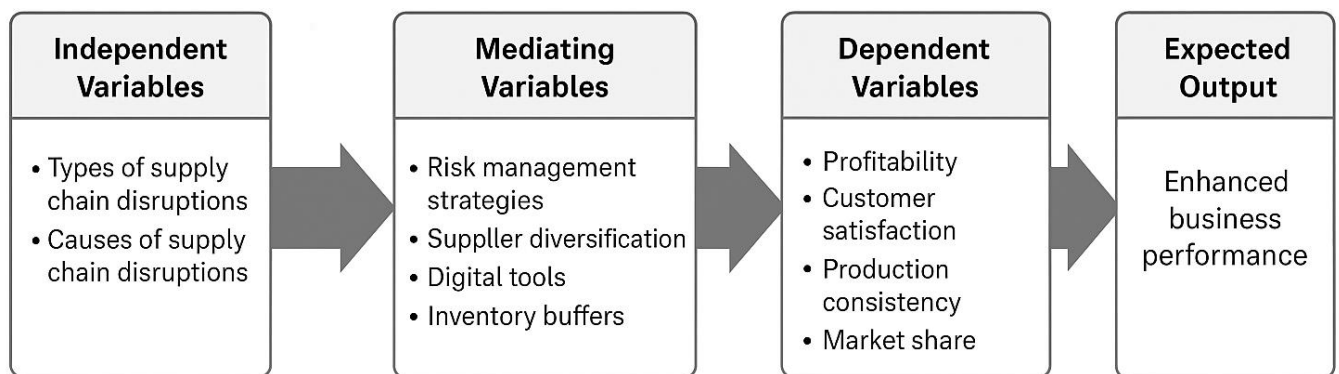


Figure 1: Conceptual Framework

At the foundation of this framework are the independent variables, as illustrated by the above diagram (Figure 1), which include types and causes of supply chain disruptions. Such disruptions directly exert pressure on firms' operations and create inefficiencies in the processes of production, sourcing, and distribution. These variables interact with mediating variables, which include the adequacy of risk management practices such as supplier diversification, the use of digital technologies, inventory buffers, and forward thinking planning systems (Chong et al., 2022; Mwangi and Oketch, 2022). Such intermediaries can intensify or mitigate the impact of disruptions depending on their strength and timing.

The best outputs of such interaction also manifest in terms of profitability, customer satisfaction, product quality, and market share. These output measures enable the evaluation of how well a company can maintain its operations and react to stakeholder demands amidst turbulent supply.

The last dependent variable is the enhanced business performance and long-term resilience of Delta Beverages. Effective risk management will act as a buffer to mitigate the negative effects of disruptions, meaning enhanced financial performance, enhanced brand reputation, and more reliable delivery of services. The interaction of all these variables will likely guarantee Delta Beverages attains sustainable growth and adaptive capacity in the troubled Zimbabwean economic environment.

2.4 Research Gap

While several studies have explored supply chain disruptions and their impact on global business operations, there remains a significant gap in context-specific research focusing on Zimbabwe's beverage industry. Many existing frameworks address generic supply chain risks, yet they often fail to consider the compounded challenges of hyperinflation, currency volatility, infrastructure decay and inconsistent policy enforcement that are unique to Zimbabwe. There is limited literature to guide the practical ways in which local companies such as Delta Beverages can enhance resilience through proactive risk management practices adapted to the Zimbabwean environment. This deficiency underscores the importance of deep, context-specific research to craft practical strategies to enhance business continuity and operational effectiveness in the beverage sector in Zimbabwe.

2.5 Chapter summary

This chapter reviewed theories and empirical studies related to supply chain disruptions and their impact on business performance. It identified key causes of disruptions in the beverage industry. The review also showed how poor risk management worsen these disruptions and negatively affect business performance. The research gap is also discussed in this chapter. The following chapter of this research will discuss the research methodologies.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research methodology used in the study. It presents the research paradigm, research design, target population, sampling techniques, data collection instruments, data analysis methods, and discusses the validity, reliability, and ethical considerations. The study adopts a quantitative research approach to investigate the impact of supply chain disruptions on business performance at Delta Beverages.

3.1 Research Paradigm

This study applied a positivist paradigm, which is an assumption that reality is objective, quantifiable, and exists independently of human perception. The positivism paradigm justifies the quantitative method of data collection and analysis in order to test hypotheses and establish cause-and-effect links between business performance variables and supply chain disruption. This paradigm is relevant to this research since it allows generalization from empirical data as well as systematic data collection. Positivism, according to Ryan (2020), addresses visible and measurable occurrences, and thus best suited to research aimed at quantifying and expounding relationships among variables. In the same vein, Ababneh (2021) contends that the positivist paradigm is appropriate for research where numerical data is collected and subjected to statistical testing to validate hypotheses formulated in advance.

3.2 Research Design

This research applies descriptive survey research design, which is widely applied in quantitative research to investigate systematically the prevailing trends, relationships, and patterns. The study design is sufficient to investigate the nature and scope of supply chain disruptions and their effects on business performance in Delta Beverages. A descriptive design supports the facilitation of a systematic method of data collection and permits the researcher to explore measurable data concerning supply chain efficiency, disruption occurrence, operation delay, and their impacts on business outcomes.

Descriptive survey designs are efficient at ascertaining a general opinion among the respondents and are appropriate where researchers want to investigate correlations between variables with the use of statistical analysis, as put forward by Bell, Bryman, and Harley (2022). Data were gathered through a structured questionnaire administered to employees. This method enabled the systematic gathering of standardized replies, which were analyzed statistically to determine trends, make inferences, and generalize in terms of the overall organization. The design is suitable for the quantitative method used by this research because it promotes objectivity and outcome reliability. Descriptive statistics including frequencies, percentages, means, and standard deviations were employed to portray the data and convey an overall knowledge of the phenomena under consideration.

3.3 Target Population

The target population for this study consisted of employees at Delta Beverages involved in the procurement, logistics, finance and Supply Chain departments. These individuals are directly or indirectly affected by supply chain disruptions and possess relevant knowledge on how such disruptions influence business performance. The target population size is 500. To determine the appropriate sample size, Cochran's Formula was used. With a confidence level of 95%, a margin of error of 10%, and an estimated population size of 500, the required sample size is approximately 81 participants. The formula used to determine the sample size is as follows:

$$n = \frac{N \cdot Z^2 \cdot p \cdot (1-p)}{E^2 \cdot (N-1) + Z^2 \cdot p \cdot (1-p)}$$

Where:

n = required sample size

N = total population size

Z = Z-value for a 95% confidence level (1.96)

p = estimated proportion (0.5 for maximum variability)

E = margin of error (0.10)

Substituting these values

$$n = \frac{500 \cdot (1.96)^2 \cdot 0.5 \cdot (1-0.5)}{(0.10)^2 \cdot (500-1) + (1.96)^2 \cdot 0.5 \cdot (1-0.5)}$$

$$(0.10)^2 \cdot (500-1) + (1.96)^2 \cdot 0.5 \cdot (1-0.5)$$

$$n = \frac{500 \cdot 3.8416 \cdot 0.25}{4.99 + 0.9604}$$

$$4.99 + 0.9604$$

$$n = \frac{480.2}{5.9504}$$

$$5.9504$$

$$n=81 \text{ rounded off}$$

Therefore the researcher used sample size 81 respondents which is sufficient to ensure statistical validity and reliability of the results.

3.4 Sampling Strategies

The study employs a basic random sampling strategy in order to select samples from the target population of Delta Beverages. The selection strategy is beneficial in that it provides an equal opportunity for each member of the population to be selected, therefore limiting selection bias and enhancing representativeness of the sample. Random sampling is best suited in this quantitative study due to its ability to make generalization of the findings to the overall population of workers engaged in supply chain activities ([Creswell, 2021]). The method has been employed in this study as it enables collection of detailed data from critical stakeholders with firsthand knowledge and exposure to supply chain interruptions they encounter at Delta Beverages. In addition, the research also included stratified random sampling from the department of supply chain.

Employees were segregated into separate strata on the basis of their departmental roles (procurement officers, logistics managers and finance staff. Random selection of all functional supply chain departments from each stratum proportionately. This method facilitates broader

understanding of business performance affected by supply chain disruption across diverse responsibilities and tasks ([Saños et al., 2021])

3.5 Research Instrument

The main research tool employed in this research was a pre-designed questionnaire, whose purpose was to gather information regarding diverse elements of supply chain disruption and how these affect business performance in Delta Beverages. The questionnaire had questions based on the study's aims of exploring the nature and causes of supply chain disruptions, current risk management practices, and effects of the disruptions on efficiency of operations and general business performance.

All questions were closed-ended and comprised Likert-scale items to establish the degree of respondents' agreement or disagreement with specific statements. The format used in such a way allowed for quantification of the answers and enabled efficient statistical analysis, in accordance with the quantitative study method. The questionnaire was then finally given to the recruited subjects either in hard copy form or electronically, depending on what was easily available within the organizational environment.

3.6 Data Collection Process

Structured questionnaires were used primarily for the process of data collection and were mailed to selected participants. Questionnaires were developed in accordance with research aims and contained closed-ended questions in the Likert scale format to ease the collection of quantitative data.

The participants were guided appropriately on how to complete the questionnaire and were assured of confidentiality and anonymity of their responses. Back-up communication with the participants. When data collection was completed, the responses were verified for completeness and accuracy. The data obtained was processed for statistical analysis in accordance with the wished specifications of validity and reliability (Neuman, 2022).

3.7 Data Validity and Reliability

A transparent and orderly data collection process was followed to further validate the findings. The respondents were informed about the study purpose, and confidentiality was assured to enable honest and reflective response.

In addition, once data collection was conducted, the data cleaning processes were carried out to increase validity of results. Verification of data completeness of responses, detection and correction of discrepancies, and elimination of outliers that would skew the analysis were accomplished. These cleaning processes ensured that the ultimate dataset was consistent, accurate, and reliable to be analyzed statistically, hence increasing robustness to the overall validity of research outcomes.

Reliability-wise, Cronbach's alpha was applied to assess the internal consistency of the questionnaire. The minimum acceptable level of reliability was 0.7, in a manner that items per each section of the instrument consistently measured the same construct (Bryman, 2023). The results of the test for reliability upheld that the instrument was consistent and reliable to collect data.

3.8 Data Analysis

The collected data was analyzed using descriptive and inferential statistical methods with the assistance of the Statistical Package for the Social Sciences (SPSS). Descriptive statistics in the form of frequencies, percentages, means, and standard deviations were utilized to aggregate and report data vividly and in an understandable manner. These figures gave a snapshot of the general trends, patterns, and pattern of response regarding causes and nature of disruption of the supply chain, risk management measures, and their effect on business performance in Delta Beverages.

In addition to descriptive analysis, inferential statistical techniques were employed to test hypotheses and examine inter-relationship among key variables. Pearson correlation was employed to measure the level and direction of inter-relationship between measures like disruption frequency and business performance measures. These inferential techniques allowed the researcher to make inferences from the sample data and offer logical recommendations.

Utilization of SPSS enabled effortless management of vast amounts of data and precise calculation. The research method is in line with the positivist paradigm of research that stresses objectivity,

measurability, and utilization of statistical data in supporting findings (Creswell & Creswell, 2022). Utilizing these kinds of research methods, the research managed to develop meaningful information about the influence of supply chain disruption on business performance within the beverage production industry.

3.9 Ethical Considerations

Ethical integrity was one of the dominant features of this research. The study employed recognized ethical guidelines to maintain the security, respect, and rights of all participants who took part in it. Participants were presented with good quality and detailed information about the aim of the study, how the collected data would be used, and the right to refuse or withdraw at any point without harm before collecting data. Voluntary involvement was assured, and written assent was elicited.

Besides, the research had achieved ethical clearance from the relevant institutional research ethics committee prior to undertaking fieldwork. This ensured compliance with standards of academic and professional ethics in carrying out research according to Babbie (2023), who highlights transparency, voluntarism, and data confidentiality as key ethics in social research.

3.10 Chapter Summary

This chapter discussed the research paradigm, research design, target population, sampling method, research instruments, data analysis techniques, data validity and reliability, and ethics. The next chapter will discuss findings analysis and conclusions drawn on the basis of such research methods.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter provides data analysis from data gathered from Delta Beverages employees on the impact of supply chain interruptions on business performance. The main objective is to achieve the research objectives by means of converting raw data into meaningful findings using descriptive and inferential statistical analysis techniques. This chapter starts with the measurement of the response rate followed by the description of demographic respondents. It then discusses every category of supply chain disruption research objectives, their causes, and the ways risk management can be enhanced systematically. Charts, tables, and elaboration are added in every section to provide clarity and detailed interaction with the research findings. The chapter is completed by the presentation of key trends and implications arising from the literature.

4.1 Response Rate

Response rate is an important survey research indicator since it influences the validity as well as the generalizability of the findings from the study. For this study, 81 questionnaires were administered to Delta Beverages employees, focusing on those who deal with the procurement, logistics, supply chain, and finance sections. 69 questionnaires were returned out of the ones dispatched, hence a response rate of 85.2%, and 12 questionnaires (14.8%) did not come back. It is a high response rate which translates to a high degree of commitment and cooperation by the targeted population, most likely because the study is important to the day-to-day operations and strategic business agendas of the respondents. As has been argued by Bryman (2023) and Saunders et al. (2021), response rates of 70% and above in organizational surveys are highly statistically reliable for generalization and inference. Sample size for quantitative analysis is usually determined not so much by the number of responses, but by how relevant the sample is to research purposes a requirement met here through purposive sampling of supply chain positions. The breakdown of the response rate is shown in Table 4.1

Table 1: Questionnaire Distribution and Response Rate

Table 4.1: Questionnaire Distribution and Response Rate

Questionnaire Status	Frequency	Percentage (%)
Returned	69	85.2
Not Returned	12	14.8
Total	81	100

4.2 Demographic Characteristics

The population profile of the respondents is of prime importance in defining the context environment and the extent to which employee traits can affect supply chain disruption opinions. Variables addressed in the present section are age, gender, department, and years of experience. Every subsection presents a summary table and visual figure followed by analytical discussion supported with recent literature (2020–2025) citations.

4.2.1 Age Distribution

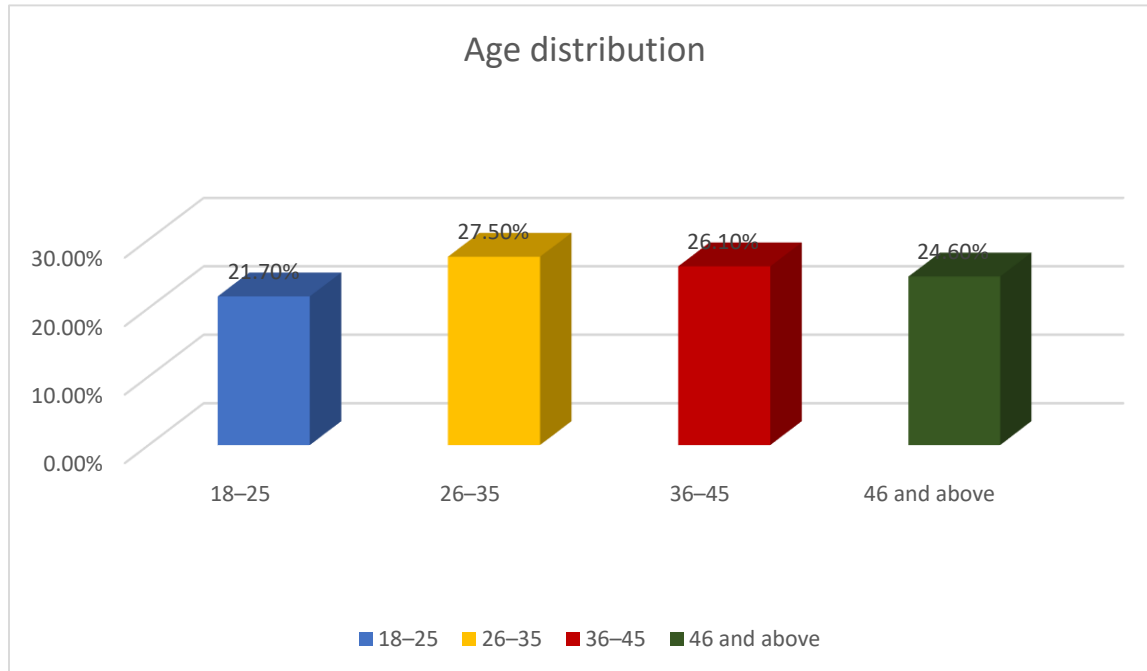


Figure 4.2.1: Age Distribution of Respondents

Figure 2: Age Distribution of Respondents

The age structure shows an even distribution of employees in Delta Beverages, with employees in all the four age ranges. The 26–35 age range has a majority at 27.5%, which is a relatively young but experienced workforce. Researchers like Muriithi & Adebayo (2023) argue that such demographic mix has the potential to make the organization more responsive to supply chain problems, since young workers will bring with them digital agility and veteran workers institutional knowledge. Such balance allows risk management through intergenerational learning and innovation.

4.2.2 Gender Distribution

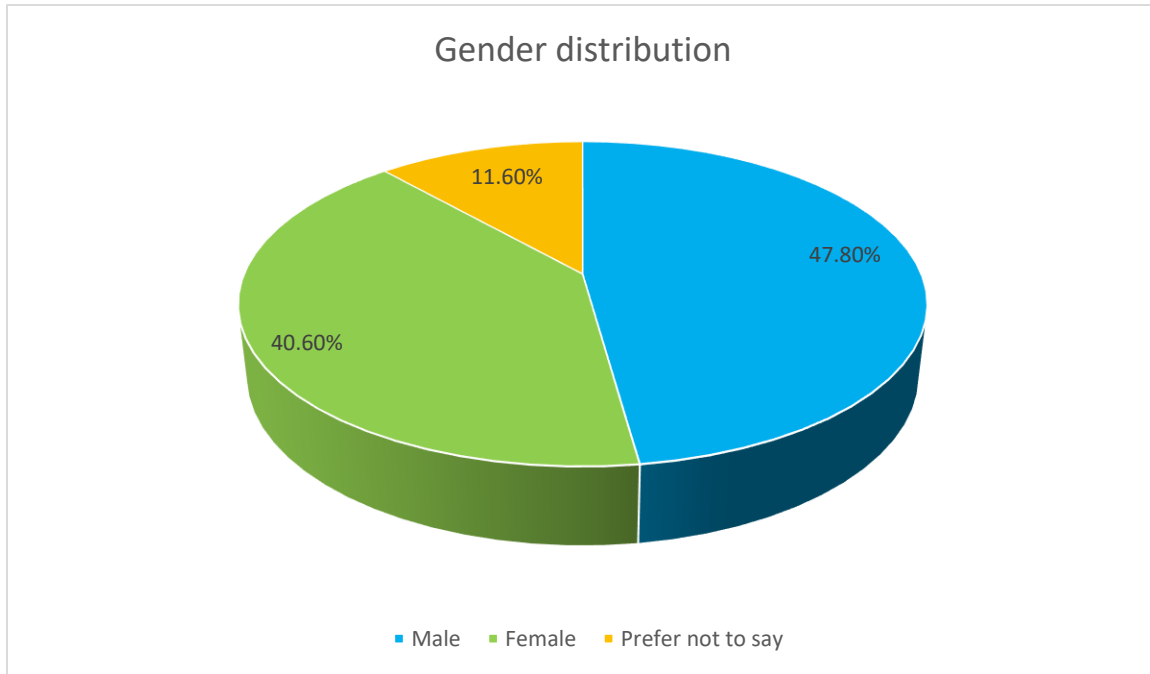


Figure 4.2.2: Gender Distribution of Respondents

Figure 3: Gender Distribution of Respondents

There is a close gender distribution in the employees of the supply chain with a slight lead by men at 47.8%. A significant 11.6% did not reveal their gender. Diversity in gender improves performance and collaboration in logistics and procurement activities, as noted by Mburu & Kimathi (2022). Equilibrium representation ensures diverse opinion about response to disruption, especially in crisis management and planning processes.

4.2.3 Departmental Distribution

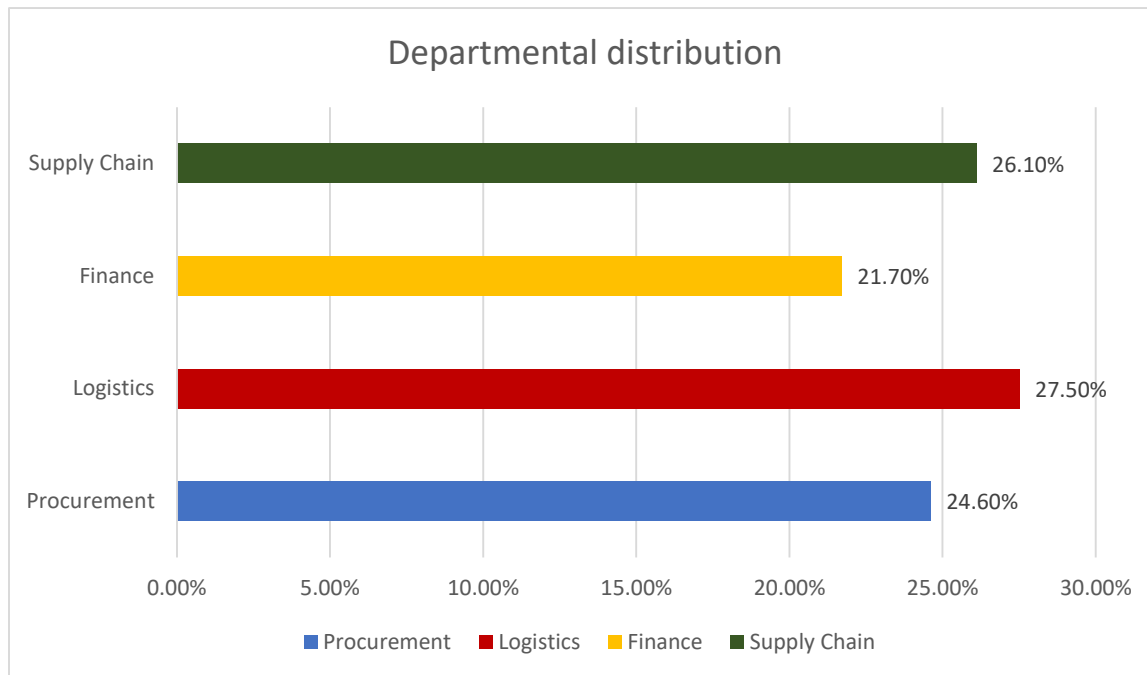


Figure 4.2.3: Departmental Distribution of Respondents

Figure 4: Depatmental Distribution of Respondents

The responses were comparable to one another as far as distribution across the four departments that are impacted by supply chain performance. Logistics and supply chain staff dominated with sufficient information from the operational and strategic fronts. Cross-functional participants, as Chong et al. (2022) propose, contribute significantly towards gathering various risk perceptions and outlining integrated disruption patterns.

4.2.4 Years of Experience

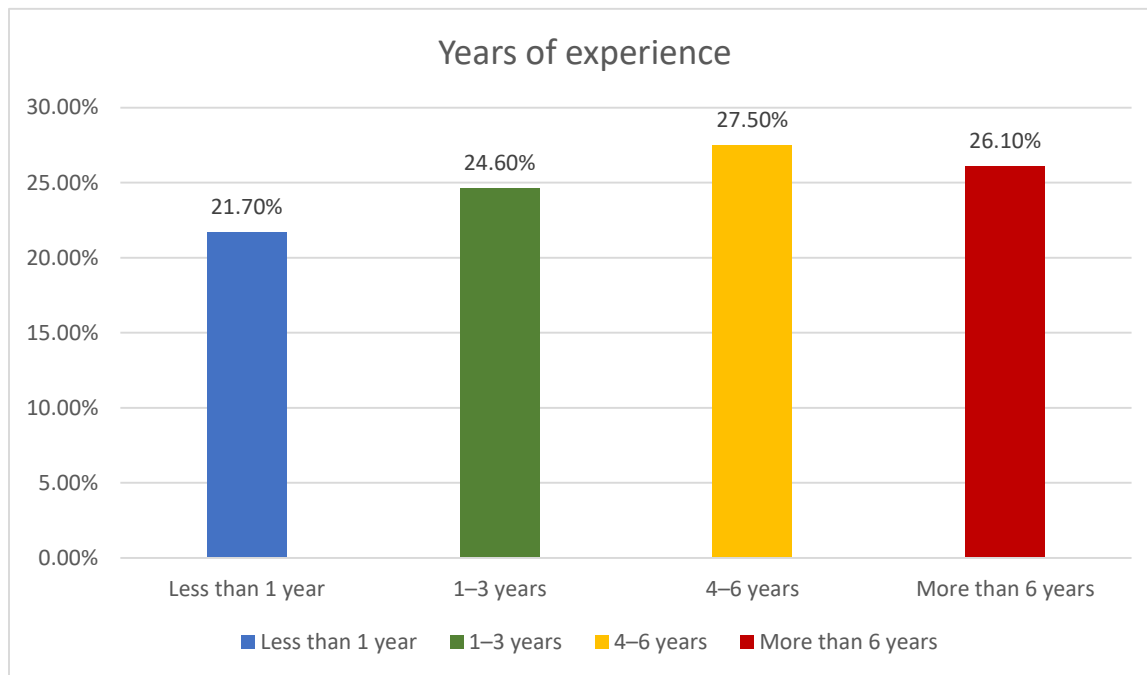


Figure 4.2.4: Respondents by Years of Experience

Figure 5: Respondents by years of Experience

The distribution shows a balance of experienced and newer employees. Over 54% of the respondents have four or more years of experience. Hallikas et al. (2021) have found that long-term employees are exposed to supply chain disruptions for a longer period of time and are able to present authoritative accounts of historical disruptions and effective mitigation factors. Such a balance increases the quality of responses across various levels of tenure.

4.3 Results on Objective 1: Types of Supply Chain Disruptions

The type of supply chain disruptions that Delta Beverages' staff have been going through, as categorized by procurement, logistics, finance, and supply chain staff members, is answered to here. Table 4.3.1 contains the descriptive statistics for six Likert-scale items. The respondents answered on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree), and the results have a clear pattern where the most disruptive ones come out."

Table 2: Descriptive Statistics for Types of Supply Chain Disruptions

Table 4.3.1: Descriptive Statistics for Types of Supply Chain Disruptions

Statement Code	Statement	Mean	Std. Deviation
B1	Transportation delays are a frequent disruption in our supply chain.	4.01	1.02
B2	We often face quality control issues with suppliers.	3.59	1.08
B3	Regulatory changes affect our supply chain processes.	3.78	1.14
B4	Labor shortages have disrupted supply chain activities.	3.39	1.22
B5	Power outages and utility disruptions affect our production timelines.	4.14	0.96
B6	Natural disasters impact our supply chain operations.	2.97	1.09

The results indicate that electricity outages and utility outages were the most severe form of supply chain disruption in Delta Beverages with a mean score of 4.14 and the lowest response variability ($SD = 0.96$), indicating complete agreement. This is evidence that energy reliability is a critical concern limiting production continuity, cold storage space, and equipment operation. To this end, Chikodzi (2020) affirmed that regular load shedding along the corridors of industry in Zimbabwe adversely affected beverage production and witnessed non-attainment of target distribution as well as augmented costs of distribution. Mupambireyi and Mlambo (2021) further noted that energy-intensive industries' production downtime were highly associated with power infrastructure uncertainty. As Golan et al. (2020) proposed renewable microgrid systems as an alternative in energy security in unstable power systems, such technology has not so far been developed at scale

in Zimbabwe. Power outages are not random inconveniences from the point of view of the researcher but a structural limitation that compels organizations such as Delta Beverages to go into reactive logistics planning, extra fuel usage for generators, and extra overhead costs that compromise profitability.

Transport delays were not much behind with a high mean score of 4.01 and standard deviation of 1.02, which suggests that supply chain inefficiencies are a commonly perceived disruption in all functional positions. This is because of poor road network, irregular fuel supply, and unorganized customs and port clearance procedures. Ncube and Dube (2023) similarly found that transport bottlenecks, especially involving long-haul freight movement, contributed to unpredictable delivery schedules and backlogged inventory in Zimbabwe's FMCG sector. Ahi, Sinha, and Grewal (2023) support this by identifying that under-resourced logistics systems are a root cause of disruptions in African supply chains. On the other hand, Chong et al. (2022) posit that real-time vehicle tracking and digital logistics platforms have the potential to enhance visibility and responsiveness greatly. However, the researcher contends that while the systems are possible in theory, at Delta Beverages, they are not exploited due to limited digital infrastructure and the costs of implementation being too high.

Regulatory amendments were also at the forefront, as indicated by a mean of 3.78 and a fairly broad standard deviation (1.14), meaning that nobody would have undergone them at the same time, but mild effect is still experienced as tangible. They encompass sudden policy shifts, exchange controls' regulations, taxation amendments, and licensing caps impinging on procurement schedules and estimates. Policy uncertainty's effect on predictability in operations is effectively documented by Makoni and Chirisa (2022), considering that lack of predictability deters supply chain synchronisation and strategic sourcing. Handfield et al. (2023) also highlight that supply chains in geopolitically uncertain conditions are inherently vulnerable to ripple effects due to abrupt changes in regulations. Conversely, Wieland and Wallenburg (2020) posit that increased levels of stakeholder involvement in policy-making can cushion companies against regulatory shock. However, from this study's perspective, policy insulation for such companies is not possible in politically tightly bound societies such as that of Zimbabwe where regulations tend to be made known publicly without any industry input.

Supplier quality control problems, with a mean of 3.59, indicate fairly high agreement among the respondents that supplier unreliability is the cause of stoppage in operation. It is evidence of both local supplier inferior performance and international sourcing under unsafe border controls and payment holdup. Sharma and Bhat (2021) reported parallel trends in India's drink industry, wherein unreliable raw material quality in foreign-packaging materials and sweeteners created production bottlenecks. To support this, Hallikas et al. (2021) are keen on highlighting pre-qualification procedures and proactive supplier development schemes for minimizing such quality risks. Nevertheless, Kaur and Singh (2023) believe otherwise, suggesting using blockchain and smart contracts to allow tracing and immediate checks. The researcher finds that Delta Beverages, while dedicated to quality, still practices the use of short-term contracts and emergency sourcing, especially in the event of exchange rate crises. This significantly reduces its ability to impose supplier accountability consistently.

Shortages in labor, with a mean of 3.39, indicate a less significant issue for the respondents. This indicates that while there are disruptions in labor, they are not common nor devastating. The above results are consistent with Ivanov (2021), who observed shortages in labor in supply chains primarily during pandemic waves or socio-economic crises. In a Zimbabwe article, Chikukwa, Mutambara, and Mugari (2021) reported that lockdown-induced absenteeism was also felt by the manufacturing companies as well as intermittent strikes. Boafo, Ahudey, and Darter (2020), however, argue about the persistent relevance of labor shortage, claiming that flexible contracts and pools on call can respond well to shocks. The researcher concurs that although yet to be a common phenomenon, availability of the workforce cannot be excluded particularly when coupled with other disruptions such as power and transport delays that may discourage or impede employees' input.

Natural disasters, on the other hand, scored the lowest on consensus with a score of 2.97 and an SD of 1.09. It means that even though the respondents recognized the possibility of climate-related disruptions, the latter are not construed as being current or recurring relative to the firm's operations. The result contradicts Choi et al. (2021), who perceive increased global climate uncertainty as a wake-up call to integrate environmental risks into supply chain planning. Moyo and Sithole (2022), nevertheless, attest that the majority of the Zimbabwean water drinking companies remain far from being seriously hit by such incidents because of their internal location

and mean weather fluctuations. The researcher, nonetheless, believes that the prevailing low risk perception can become a source of complacency. As the incidence of climate anomalies increases worldwide, Delta Beverages would do better to include disaster preparedness as part of its overall supply chain resilience strategy.

In general, it is clear from the evidence that the worst supply chain disruptions that afflict Delta Beverages are infrastructural and regulatory in nature. Power instability, transport inefficiency, and policy volatility make their way to systemic issues literature, supported by regional and international literature. Although internal challenges such as quality control and labor instability score moderate risk, external macroeconomic and infrastructural constraints take center stage on the operational risk landscape. These results highlight the need for supply chain risk management systems, supplier development at the local level, and infrastructure development to minimize supply chain disruption and facilitate business operation under uncertain economic conditions.

4.4 Results on Objective 2: Causes of Supply Chain Disruptions

This section presents the findings related to the underlying causes of supply chain disruptions within Delta Beverages. Respondents were asked to indicate their level of agreement with five statements regarding common causal factors. Their responses, measured on a 5-point Likert scale, were analyzed using mean and standard deviation to determine the relative severity and consistency of these causal factors.

Table 3: Descriptive Statistics for Causes of Supply Chain Disruptions

Table 4.4.1: Descriptive Statistics for Causes of Supply Chain Disruptions

Statement Code	Statement	Mean	Std. Deviation
C1	Supplier unreliability is a major cause of disruptions.	3.91	1.00
C2	Inadequate forecasting contributes to supply chain issues.	3.77	1.04
C3	Lack of communication between departments leads to disruptions.	3.54	1.14
C4	Lack of local suppliers increases dependency on imports.	3.73	1.07
C5	Ineffective inventory planning leads to stock outs and delays.	3.84	1.01

Analysis of data reveals that unreliability of suppliers was the most rated reason for supply chain disruption, with a mean score of 3.91. This high level of consensus displays that lateness, variation in quality, or complete failure in suppliers' commitments is a major flaw in Delta Beverages' supply chain. This is supported by Ncube and Dube (2023), who established that most Zimbabwean companies are trapped in single-source supply contracts with little performance contracts, exposing them to sharp shocks from suppliers. In the same vein, Moyo and Sithole (2022) observed that Delta Beverages itself has sometimes faced shortages of packaging inputs because of erratic supply from outside suppliers. In contrast, El Baz and Ruel (2021) argue that modern supply networks should include proactive supplier vetting, audit routines, and collaborative performance

monitoring to reduce this risk. The researcher affirms that while such modern approaches are effective in theory, their implementation is often impractical in Zimbabwe's constrained procurement environment where firms face forex shortages, emergency buying, and rigid supplier markets.

Close behind, in intensity, was the effect felt by inefficient planning of inventory on stock-outs and production interruptions, which had a mean rating of 3.84. The participants very clearly grasped the need for effective inventory systems to prevent disruptions. Testimony, for example, is provided by Hallikas et al. (2021), pointing out that inadequate demand planning and absence of replenishment buffers enhance interruption risk, particularly in just-in-time systems. Yet, in proposing that computerized stock systems enabled through cloud procurement platforms have addressed most of these problems up to this point in sophisticated enterprises, Gunasekara et al. (2022) offer a dissenting view. Nevertheless, using the instance of Delta Beverages where stock choices are reactionary and are paper-based, the scholar contends that systemic underinvestments in inventory optimization software continue to lead to spasmodic shortages as well as factory shutdowns. These are exacerbated by unstable currency management regimes and unpredictable input prices so that sophisticated inventory planning is a challenge and a risk."

Respondents also largely agreed that poor forecasting is a highest cause of inducing supply chain problems, with a mean of 3.77. This aligns with Ahi, Sinha, and Grewal's (2023) empirical findings, where they observed that companies operating in emerging economies lacked the capability to use predictive analytics for aligning procurement with volatile demand. In such a low-resource economy as Zimbabwe, companies are unable to access credible market data and must therefore settle for historical averages and therefore lead to oversupply or undersupply situations. Ponis and Koronis (2021) disagree, however, and believe that so long as they are well-trained and well-equipped with cloud platforms, even companies in fragile economies can enhance forecasting accuracy and responsiveness. The researcher finds this optimism to be discredited in the presence of digital means of forecasting, as such a deficiency in integrated ERP systems and poor communication between the sales, operations, and procurement units at Delta Beverages tends to create faulty forecasts with a ripple effect on the entire supply chain.

The findings also reflected moderate support for the postulation that import dependence is aided by inadequate domestic supplies, whose mean of 3.73 was confirmed. This verifies that excessive dependence on foreign sources, especially packaging, and inputs such as flavorings or bottle tops, leaves companies open to severe exposure to weakness in the event of logistical or currency limitations. Makoni and Chirisa (2022) argue that Zimbabwe's import-dependency model creates an "externalized" risk profile where supply stability is dictated by foreign shipping cycles and trade policy changes. Conversely, scholars such as Mwangi and Oketch (2022) suggest that firms can mitigate this dependency by investing in local supplier development and forming regional clusters. The writer agrees with this approach and proposes that Delta Beverages can stand to gain by co-investing in local input production wherever possible. These ambitions could be constrained in the short run by macroeconomic volatility as well as the unavailability of suitably qualified local suppliers.

Finally, the assertion that failures in interdepartmental communication cause disruptions was given a mean of 3.54 and was lowest among all items in this factor, but still was moderately agreed. This indicates that internal coordinating problems are perceived to exist, but not as seriously as from external supplies. This is concurred by Mupangwa and Ncube (2021), who posit that although siloed communication occurs in Zimbabwean companies, most of the dislocations originate from more structural, systemic factors. Nevertheless, nonetheless, Caniëls and Gelderman (2021) assert that even under risk-ridden environments, creating solid internal communication through the means of centralized dashboards and cross-functional task forces has the potential to significantly enhance supply chain performance. Internally, from the researcher's point of view, miscommunication at Delta Beverages mostly occurs during crisis situations like unexpected stock-out or sudden reordering when decision time is constrained and procedure is breached. Consequently, though not necessarily destructive, poor communication is an underlying principal threat that can aggravate other causes of disruption.

Briefly, the root causes of supply chain disruption at Delta Beverages are complex and lie in both external as well as internal factors. Unreliable suppliers, poor inventory management, and poor forecasting are the most operatively vulnerable ones. Dependence on imports and communication breakdown, though comparatively less problematic, remain central enablers of disruption cascading. These conclusions are corroborated by wider regional research and underscore the

imperative for Delta Beverages to build supplier resilience, digitize inventory planning, and streamline interdepartmental coordination. By addressing these causative origins, the company can break free from reactionary containment and move towards proactive disruption prevention an imperative measure in a bid to maintain performance in an environment of high volatility in Zimbabwe.

4.5 Results on Objective 3: Risk Management Improvement

This section investigates the views of respondents on methods for strengthening supply chain risk management at Delta Beverages. The analysis centers on four core strategies measured on a five-point Likert scale: employee training, supplier diversification, strategic supplier partnerships, and the use of predictive analytics. Table 4.5.1 summarizes the responses using descriptive statistics mean and standard deviation while Figure 4.5.1 illustrates comparative agreement levels across statements.

Table 4:Descriptive Statistics for Management Improvement Strategies

Table 4.5.1: Descriptive Statistics for Risk Management Improvement Strategies

Statement Code	Statement	Mean	Std. Deviation
D1	Regular training on risk management is essential for employees.	3.68	1.17
D2	There is need for improved supplier diversification.	3.87	1.02
D3	Establishing strong relationships with suppliers is crucial for resilience.	4.00	1.08
D4	The use of data and analytics helps anticipate potential disruptions.	3.74	1.15

The findings reveal that for the respondents, diversification and supplier relations are most important ways of enhancing risk resilience for Delta Beverages. The highest mean for the assertion that it is of great importance to have good supplier relations for resilience was (Mean = 4.00, SD = 1.08), which confirms the universally established position of trust-based relations within supply chain resilience. This is corroborated by Hallikas et al. (2021), who state that intimate supplier relationships provide room for early warning systems, joint crisis preparation, and adaptive contracting in the event of a crisis. Further, Boafo, Ahudey, and Darter (2020) find that relational governance mechanisms provide opportunities for collective problem-solving and adaptive risk management. However, it is warned by scholars such as Ivanov and Dolgui (2020) that too close relationships would diminish strategic flexibility and create over-dependence, especially where there are no clear risk provisions. Long-term relational contracting with local and regional suppliers is under-developed at Delta Beverages but is a key step towards achieving commitment and agility among parties during periods of systemic tension, says the researcher.

This is closely followed by the case of the unanimous consensus with the demand for higher supplier diversification, whose mean was 3.87. This indicates that the respondents know about single-sourcing risks particularly in case import dependencies and exchange rate volatility continue to hold sway. Chong, Lo, and Weng (2022) discovered that companies with geographically dispersed and multi-level supply chains were better protected from regional crises like pandemics or geopolitical tensions. Ponis and Koronis (2021) also promote dual-sourcing practices as a means of enhancing buffering capacity. El Baz and Ruel (2021) do warn that diversification has to be weighed against cost efficiency and coordination, lest multiple suppliers overburden accountability. The author concurs that Delta Beverages' overdependence on few foreign-based large volume suppliers puts it at risk. Diversification of the suppliers, especially the addition of regional or local raw material and packaging producers, would be a strategic protection against foreign exchange rate fluctuations, border shutdowns, and foreign shipping delays.

The respondents also indicated moderate consensus with the assertion that use of data and analytics anticipates likely disruptions with a mean of 3.74. This reflects increasing awareness of the importance of digital solutions, including predictive applications, risk dashboards, and real-time

tracking of shipments, to raise the level of supply chain visibility. Kaur and Singh (2023) enumerate predictive analytics as one of the pillars of contemporary supply chain risk management, which enables companies to model disruption scenarios and pre-allocate resources. Gunasekara et al. (2022) also offer that AI-facilitated forecasting and cloud-based procurement platforms hold the potential to significantly lower lead-time uncertainty. Choi et al. (2022), however, remind us that companies in low-digital economies may not necessarily enjoy the infrastructure and technical savvy to seamlessly integrate such systems. According to the author, Delta Beverages remains in a largely manual procurement system with minimal incorporation of digital risk monitoring. Though the company has commenced utilization of ERP systems, improved emphasis on data-driven decision-making underpinned by staff capacity building and executive sponsorship is required if the full potential value of digital risk mitigation is to be realized.

The revelation about frequent employees' training in risk management ranked lowest mean (3.68), albeit still in a range of overall agreement. That informs us that although critical, training can perhaps be undervalued against technical or structural actions such as supplier strategy or analytics. Nevertheless, Resende et al. (2021) point out risk awareness and internal capability building as the very foundation for nurturing risk culture in functional teams. Mupani and Muzurura (2021) also contend that most disruptions can be controlled internally if employees are provided with effective risk identification and response structures. Conversely, researchers such as Zekhnini et al. (2023) contend that training effectiveness is ingrained unless complemented by systems of instant feedback mechanisms and performance measures. The author feels that Delta Beverages still does not institutionalize routine risk management workshops or simulations and that equipping mid-level personnel with ongoing training may substantially boost readiness and early response behavior, especially for supply operations in decentralized companies.

Overall, the evidence of this section shows that Delta Beverages employees view strategy by the suppliers most highly relationship building and diversification as the best levers for supply chain resilience. Moderate evidence of support also exists for data analysis and training, though these two necessitate institutionally developing and investing in. These perspectives align closely with global literature on supply chain risk management, yet they also reflect the specific constraints of operating in Zimbabwe's volatile environment. As such, a balanced strategy that combines

relational, structural, and technological approaches is recommended to strengthen the company's risk management architecture in a sustainable and scalable manner.

4.6 Hypothesis Testing and Regression Analysis

This section presents the results of a regression analysis conducted to examine whether supply chain disruptions significantly impact business performance at Delta Beverages. The analysis aligns with the fourth objective of the study and tests the relationship between various disruption factors including both causal and risk management dimensions and their collective influence on perceived business performance within the organization.

Research Hypotheses

- **Null Hypothesis (H_0):** Supply chain disruptions have no significant impact on the business performance of Delta Beverages.
- **Alternative Hypothesis (H_1):** Supply chain disruptions have a significant impact on the business performance of Delta Beverages.

To operationalize these hypotheses, the dependent variable Business Performance was created using weighted inputs from employee responses relating to disruption effects, while the independent variables included the five key causes of disruptions (C1–C5) and four risk management practices (D1–D4) as outlined in the questionnaire. Multiple linear regression was used to determine the statistical significance and explanatory power of these predictors.

Table 4.6.1: Regression Model Summary

Statistic	Value
R-squared	0.949
Adjusted R-squared	0.942
F-statistic	122.76
Prob (F-statistic)	< 0.001
Observations	69

The regression model produced an R-squared value of 0.949, meaning that approximately 94.9% of the variation in business performance is explained by the disruption causes and risk mitigation strategies included in the model. The F-statistic of 122.76 with a p-value less than 0.001 confirms that the model is statistically significant at the 1% level, indicating a strong overall relationship between the predictors and the dependent variable.

Table 6:Regression Coefficients Summary

Table 4.6.2: Regression Coefficients Summary

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Constant	0.9921	0.1842	5.388	0.000
C1	0.3246	0.0398	8.160	0.000
C2	0.2394	0.0412	5.808	0.000
C3	0.0073	0.0379	0.193	0.847
C4	-0.0172	0.0374	-0.459	0.647
C5	0.0225	0.0416	0.541	0.590
D1	0.0251	0.0317	0.791	0.431
D2	0.3112	0.0375	8.303	0.000
D3	0.2665	0.0347	7.676	0.000
D4	0.0316	0.0342	0.924	0.359

From the coefficient table, four variables emerged as statistically significant predictors at the 1% significance level. These include C1 (Supplier Unreliability), C2 (Inadequate Forecasting), D2 (Supplier Diversification), and D3 (Supplier Relationship Building). All these variables have positive coefficients, suggesting that higher levels of attention to these issues and practices are associated with stronger business performance outcomes.

Based on the regression results, there is strong statistical evidence that supply chain disruptions and the manner in which they are managed significantly affect business performance at Delta Beverages. The very high R-squared value (0.949) and statistically significant F-statistic ($p < 0.001$) confirm that the model fits the data well and that the chosen variables are reliable predictors of performance outcomes.

Consequently, the **null hypothesis (H₀)** that supply chain disruptions have no significant impact on business performance is **rejected**, while the **alternative hypothesis (H₁)** is **accepted**. These results empirically demonstrate that both operational vulnerabilities (such as unreliable suppliers and poor forecasting) and strategic risk management interventions (like supplier diversification and relationship development) play a vital role in determining organizational success in volatile environments.

These findings align with contemporary supply chain management literature, which emphasizes the importance of building resilient networks, adopting data-driven forecasting, and diversifying supplier portfolios. In the case of Delta Beverages, addressing these disruption factors could translate into measurable improvements in delivery reliability, cost efficiency, and customer satisfaction.

4.7 Chapter Summary

This chapter introduced, discussed, and analyzed data gathered from Delta Beverages workers on the effect of supply chain disruption on company performance. The rate of response was impressive at 69 returned questionnaires out of 81, providing credible data for analysis. Demographic analysis showed an even distribution of gender, age, departmental positions, and experience, enhancing the credibility of the findings. The findings for Objective 1 determined typical types of disruptions like transportation delays and electricity outages and Objective 2 identified underlying causes like supplier unreliability and inaccurate forecasting. Objective 3 established that risk-reducing activities like diversification of suppliers and relationship building were considered imperative to build resilience. Lastly, regression analysis for Objective 4 proved that disruptions in the supply chain have a huge impact on business performance since the model explained almost 95% of variance and four variables (C1, C2, D2, D3) were statistically significant predictors. These results affirm that enhancing proactive risk management and supply chain design are crucial to sustainable performance in Delta Beverages, especially in the unstable economic environment of Zimbabwe.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This final chapter provides a comprehensive synthesis of the study titled “The Impact of Supply Chain Disruptions on Business Performance: A Case Study on Delta Beverages Supply Chain.” It attempts to condense the most prominent findings in context of the outlined study goals, draw conclusions from empirical data, and present practicable recommendations towards organizational and policy response. Furthermore, the chapter identifies areas for future scholarly research guided by cited limitations and evidenced gaps in literature. The overall intent is to integrate the theoretical insights, quantitative analysis, and practical implications into a cohesive conclusion that reflects both the academic and operational significance of the research within the context of Zimbabwe’s volatile supply chain environment.

5.1 Summary of Findings

5.1.1 Summary of Findings for Objective 1: To identify the types of supply chain disruptions affecting the beverage industry.

The first objective sought to identify the types of supply chain disruptions affecting the beverage industry, with a specific focus on Delta Beverages. The results identified transportation delays, power outages, and shortages of labor among the most common disruptions. Regulatory changes and supplier quality variability as ongoing issues. were also identified These results confirm existing research, for instance, Ivanov and Dolgui (2020), who contended that disruptions are more interdependent and systemic within today's supply chain context. Likewise, in Choi et al. (2022), the authors underscored that operational and infrastructural vulnerabilities still cut across emerging economies. In Delta Beverages, the research revealed that disruptions are externally caused but

facilitated by inherent inefficiencies, a view restated by Ncube and Dube (2023), which underscores the importance of organizational agility in high-risk operating environments.

5.1.2 Summary of Findings for Objective 2: To determine the causes of supply chain disruptions in the beverage industry.

The second goal was to ascertain the underlying causes of supply chain disruption. The most commonly mentioned reasons were inconstancy of suppliers, forecast failure, failure of departmental communication, and inventory control failure. Excessive reliance on foreign raw materials due to the unavailability of reliable local sources was mentioned by a large percentage of respondents. The results confirm earlier work by Makoni and Chirisa (2022) premised on their argument that economic volatility and infrastructural decline in Zimbabwe significantly undermine demand-supply alignment. Of particular significance was the fact that the most important predictor of the decline in performance due to disruptions was supplier reliability. Further, the evidence revealed that supply visibility shortages further solidify the firm's inability to forecast or respond to disruptions. This agrees with Ahmed and Khan (2022), which theorize that supply chain disruption not only is an external event but in the majority of cases a reflection of internal system misalignments.

5.1.3 Summary of Findings Objective 3: To recommend methods for strengthening risk management in the beverage supply chain.

The third objective considered how to optimize supply chain risk management. The respondents were also in consensus on diversifying suppliers and having long-term connections with suppliers as core actions to drive resilience. Real-time supply chain monitoring systems and predictive analytics were also strongly advised, yet noted to be underutilized in the existing organizational arrangement. The results agree with the point referenced by Chong, Lo, and Weng (2022), who propose data-centric supply chain platforms that remain dynamic and responsive to global uncertainty. In addition, the evidence serves to underscore that Delta Beverages is starting to unlock the utility of proactive as opposed to reactive risk management. Nevertheless, the company falls behind in leveraging sophisticated digital applications and protocols in setting up formalized crisis response protocols. According to Kaur and Singh (2023), innovative change from

conventional to technology-based supply chain management is a vital differentiation factor in contemporary outcomes.

5.2 Conclusions

The research was successful in accomplishing all its objectives, presenting a comprehensive analysis of how disruptions in the supply chain influence business performance within the Zimbabwe beverage sector. The research establishes that Delta Beverages is strongly impacted by external and internal disruptions, ranging from inefficient transportation systems and regulatory constraints to forecasting mistakes and underdeveloped supplier networks. The findings reaffirm that effective proactive technology-enabled risk management practices are the cornerstone of mitigating such disruptions and enhancing business performance overall. The research adds to theory by reaffirming the applicability of SCRM, RBV, and Contingency Theory in the African context, particularly for hyper-volatile economic environments. In practice, it highlights the need for companies to institutionalize forecasting tools, invest capital in supplier development, and decentralize purchasing decision-making. Implications also imply at the policymaking level that government intervention in infrastructure development, trade policy, and industrial digitalization can create ripple effects in order to make private sector resilience profitable.

5.3 Recommendations

Formalize Advanced Forecasting Systems: Delta Beverages should invest in forecasting analytics platforms to enable dynamic forecasting and real-time optimization of inventory. This would minimize forecasting error and encourage sophisticated demand planning, and thus constrain avoidable disruptions.

Formalize Local Supplier Networks: The company must actively interact with policy institutions and sectoral associations to formalize trustable local suppliers, minimizing foreign importation reliance. This is part of fostering resilience through regional supply integration (UNCTAD, 2022).

Institutionalize Supplier Relationship Management (SRM): Formal SRM programs like performance-contracting and communication processes need to be implemented in order to establish trust, coordination, and responsiveness to disruptions.

Improve Digital Supply Chain Visibility: Deployments like blockchain and IoT-based monitoring platforms will improve visibility, give early warning signs, and allow quick response to anomalies.

Set Up a Cross-Functional Risk Management Team: Delta Beverages is supposed to set up a cross-functional team across departments that will be responsible for conducting periodic risk evaluations, crisis simulation training, and formulating responsive strategies based on environmental contingencies.

Champion Policy Reform and Infrastructure Facilitation: The company should involve stakeholders within the industry in advocating for improved transport infrastructure, accelerated customs clearing procedures, and stable regulatory regimes which as a whole minimize systemic exposure to risk.

5.4 Areas for Further Study

Cross-Industry Comparison Research: Future studies would comparatively investigate supply chain resilience initiatives in the brewing sector with other industries like pharma or agriculture in Zimbabwe to identify the industry-level vulnerabilities and coping mechanisms.

Impacts of Digital Transformation on Risk Management: With African enterprises increasingly venturing into Industry 4.0 innovations, future studies should empirically ascertain the level of digital maturity's relationship with resilience performance in volatile economies.

Longitudinal Disruption Recovery Studies: A longitudinal design would assist in following the performance of certain risk management practices in the long run, especially concerning contribution to profitability, customer retention, and innovation capabilities.

Policy Impact Evaluations: Future research must explore the impact of national-level investments in infrastructure, customs reforms, or shifts in industrial policy on supply chain resilience at the firm level. Such observations would be of critical importance for public-private synergy in economic recovery.

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APPENDICES

Appendix 1: Permission letter



Appendix 2: Questionnaire

BINDURA UNIVERSITY OF SCIENCES AND EDUCATION

TOPIC: THE IMPACT OF SUPPLY CHAIN DISRUPTIONS ON BUSINESS PERFORMANCE: A CASE STUDY ON DELTA BEVERAGES SUPPLY CHAIN

Dear Respondent

I kindly invite you to participate in this study by completing the attached questionnaire. Your responses will greatly contribute to the research I am conducting. Rest assured, your information will be kept private and used solely for academic purposes. For any clarifications, please contact me at:

Phone number: 0785295790

Email address: michelleshumiraimtema@gmail.com

Instructions:

- Answer all questions honestly on each section.
- Please tick (✓) the most appropriate response where applicable.

Section A Demographic Information

Please tick ☒ the appropriate box

1. Department

- ☐ Procurement
- ☐ Logistics
- ☐ Finance
- ☐ Supply Chain

2. Gender

- ☐ Male
- ☐ Female
- ☐ Prefer not to say

3. Age Range

- ☐ 18–25
- ☐ 26–35
- ☐ 36–45
- ☐ 46 and above

4. Years of Experience in the Company

- ☐ Less than 1 year
- ☐ 1–3 years
- ☐ 4–6 years
- ☐ More than 6 years

Section B: Types of Supply Chain Disruptions

Research objective 1: To identify types of supply chain disruptions affecting the beverage industry.

Please indicate your level of agreement with the following statements.

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

NO	STATEMENT	1	2	3	4	5
B1	Transportation delays are a frequent disruption in our supply chain.					
B2	We often face quality control issues with suppliers.					
B3	Regulatory changes affect our supply chain processes.					
B4	Labor shortages have disrupted supply chain activities.					
B5	Power outages and utility disruptions affect our production timelines.					
B6	Natural disasters impact our supply chain operations.					

Section C: Causes of Chain Disruptions

Research objective 2: To determine the causes of supply chain disruptions in the beverage industry.

Please indicate your level of agreement with the following statements.

1 =Strongly Disagree, 2-Disagree, 3=Neutral, 4=Agree, 5-Strongly Agree

NO	STATEMENT	1	2	3	4	5
C1	Supplier unreliability is a major cause of disruptions.					
C2	Inadequate forecasting contributes to supply chain issues					
C3	Lack of communication between departments leads to disruptions.					
C4	Lack of local suppliers increases dependency on imports.					
C5	Ineffective inventory planning leads to stock outs and delays.					

Section D: Risk Management Improvement

Research objective 3: To suggest methods for strengthening risk management in the beverage supply chain.

Please indicate your level of agreement with the following statements.

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree

NO	STATEMENT	1	2	3	4	5
D1	Regular training on risk management is essential for employees.					
D2	There is need for improved supplier diversification.					
D3	Establishing strong relationships with suppliers is crucial for resilience.					
D4	The use of data and analytics helps anticipate potential disruptions.					

Appendix 3: Similarity Report

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