

**SUPPLY CHAIN DISRUPTION AND ORGANISATIONAL PERFORMANCE A CASE  
STUDY OF THE NIGERIAN BOTTLING COMPANY (NBC) PLC BENIN CITY EDO  
STATE NIGERIA**

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**BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF  
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## **DECLARATION**

I, ANTHONY FAITH IYENGUMHENA Of the Department of Business Administration, Faculty of Management Science University of Benin, Benin City, do hereby declare that this project is entirely my work and composition. All references made to works of other persons have been duly acknowledged

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## CERTIFICATE

We the undersigned, certify that this project work was written by Anthony faith iyengumhena in the department of business administration, faculty of management science University of Benin, Benin City.

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## **DEDICATION**

This project work is dedicated to the Almighty God who has being there right from the start to this very moment and grace to confront the challenges while the study lasted.

## ACKNOWLEDGMENT

First and foremost, I give all glory to God Almighty for His guidance, wisdom, and strength throughout the course of this research work and my academic journey. His grace made everything possible.

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## **ABSTRACT**

This study ascertains the impact of supply chain disruption on organizational performance using the case study of Nigeria Bottling Company, Benin City. The following hypothesis was tested to ascertain how key performance indicators relevant to its operation, such as production efficiency, customer satisfaction, and profitability, are influenced by supplier failures, defective materials, and regulatory changes. A survey research design was adopted for the research, and structured questionnaires were administered to randomly selected staff of the company. Descriptive and inferential statistical tools were used to analyze responses with the help of Statistical Package for the Social Sciences (SPSS). The findings showed that supply chain disruptions negatively affect organizational performance. Precisely, supplier failure and defective materials occasion delays in production, increase costs, and reduce product quality, while frequent regulatory changes impact negatively on efficiency of operation and consumer satisfaction. The study concludes that risk management in supply chains is critical for the sustenance of competitiveness and assured consistent performance. It recommends that NBC should diversify its supplies, enhance local sourcing, and invest in real-time supply chain monitoring technologies. In addition, proactive regulatory compliance and flexible logistics planning were advised in order to mitigate future disruptions. The following provides an overview of the contribution of this research in understanding supply chain risk management within the Nigerian manufacturing sector.

Keywords: Supply chain disruption, supplier failure, defective materials, regulatory changes, organizational performance, Nigeria Bottling Company.

# CHAPTER ONE

## INTRODUCTION

### 1.1 BACKGROUND OF THE STUDY

Supply chain disruption has become a central concern for organization globally, due to their significant impact on organizational performance. Supply chain which is seen as a network of individuals, organizations, resources, activities and technology involved in the creation and sales of a product, is affected by a variety of factors ranging from pandemic, natural disaster, geopolitical instability, and supplier's failures interrupt the flow of goods and services. Over the past years events have provided stark of reminders of the destructive impact supply chain can have in organizational performance. For instance, the outbreak of COVID 19 which impacted supply chains around the world, the lockdown that took place to prevent the spread of the virus also prevented the flow of raw materials and impacted manufacturing, leaving shortages and long lead times on goods (Ivanov, D. 2020). Also, the global disruption that occurred as a result of the ship ever given that was stuck in the Suez Canal, causing an estimated \$ 15 billion losses per day (it was a total six days) as it blocked the route which facilitates about 12% of global trade including around one million barrels of oil per day. These incidents served as a wake-up call for organization to reconsider their supply chain structure and an understanding of how firms can manage and mitigate the risks of these disruption as become a key area of research.

A supply chain disruption is an event that disrupts the flow of goods or services in a supply chain system (Revilla and Saenz,2017, Truong and Hara,2018). and it have negative impact on the performance of the firm at different levels such as financial outcomes, customer satisfaction, market share, increased cost, production delay and reputation damage. For instance, a study

carried out by PWC (2017) found that supply chain disruption cost companies an average of 30% in operational performance decline and up to 7% in market share loss. Similarly, Hohenstein et al .(2015) emphasize that firms without contingency planning or risk mitigation strategies are more likely to suffer severe consequences during disruption. In response these growing threats, organizations are advised to invest in supply chain risk management (SCRM), resilience, digital technology and strategies.

This study seeks to examine the relationship between supply chain disruption and organizational performance outlining strategies on how to mitigate the effect.

## **1.2 STATEMENT OF THE RESEARCH PROBLEM**

While the literature discusses how disruption affect organizational performance, many organizations still struggle to develop effective strategies for managing supply chain disruptions. The reason could include a mix of internal and external factors Which includes lack of foresight and planning, inadequate data and analytics, Reliance on a single source, global events and geopolitical instability and labor shortages and economic downturns. In Nigeria for example the issue is further exacerbated by factors such as inadequate infrastructure, limited technological capacities, poor coordination among supply chain partners, and lack of management systems, government policies, and fuel scarcity (The adviser, 2023; Bill energy services, 2023; AP New, 2023). often hinder their ability to response effectively to these disruptions. Despite the recurring disruptions there is a limited body of academic research that explore how organizations are affected by such shocks. These are gaps that presents a critical area for academic and practical exploration, especially as organizations seek to remain competitive in an era marked by uncertainty, resource constraints, and rapid technological changes.

### **1.3 RESEARCH QUESTIONS**

This study intends to provide answers to the following questions.

1. How does suppliers' failures affect organizational performance?
2. How does defective product or materials impact organizational performance?
3. What impact does regulatory changes have on organizational performance?
4. What causes supply chain disruptions in the organisation?

### **1.4 OBJECTIVE OF THE STUDY**

The main / broad objective is to determine the impact of supply chain disruptions in organizational performance. The following specific objectives includes

1. To find out if supplier failures affects organizational performance.
2. To determine the impact of defective product or materials on organizational performance.
3. To ascertain if regulatory changes affect organizational performances.
4. To identify the causes of supply chain disruption in the organization.

### **1.5 RESEARCH HYPOTHESES**

H<sub>0</sub>: Supply chain disruptions have no significant effect on organizational performance

H<sub>1</sub>: Supply chain disruptions have a significant effect on organizational performance

H<sub>0</sub>: Suppliers failures do not affect organizational performance

H<sub>1</sub>: Suppliers failures affect organizational performance.

H<sub>0</sub>: Regulatory changes do not have effect on organizational performance.

H<sub>1</sub>: Regulatory changes have effect on organizational performance.

## **1.6 SCOPE OF THE STUDY**

This research is geared towards the study of supply chain disruptions and organization performance, using the Nigerian Bottling company (NBC) plc as a case study. The study will be carried out in Benin city, Edo state Nigeria. It will study factors such as the impact of supplier's failures and the effect of defective product and materials on Organizations performance by drawing samples from various strata of the population.

## **1.7 SIGNIFICANCE OF THE STUDY**

This research contributes to the understanding of supply chain disruptions and organization performance, it's unveiling the link between factors that causes supply chain disruptions and organization performance. However, this study is meaningful to

- Managers: This information will be useful to mangers of manufacturing business, as it will point out the importance of understanding supply chain disruptions and how to mitigate its risk
- The general public: This research will be relevant to the general public as the information will add to the knowledge of the general public about support chain and it's risks
- The student: This research will help students understand the effects of supply chain disruptions in organization success.
- The Nigerian economy: This study will be conducted in Nigeria and the result will be useful in improving manufacturing business in the country, and reduce the tendency of business failure.

## **1.8 LIMITATIONS OF THE STUDY**

A major limitation is the data collection method which is subject to respondent's bias, they might understate or overstate the effect of supply chain disruptions, however effort will be made to minimize the impact by assuring respondents that information gotten will be confidential and used for the only stated purpose. Other limitations include time constraints, lack of experience as a first-time research personnel, financial constraints which may hinder the smooth flow of the research process. It is however expected that this would not create a significant error in the result.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1. INTRODUCTION**

This chapter examines the various concepts drawn from the independent and dependent variables of the subject matter. It reviews existing literatures on supply chain disruption and organisational performance within Nigeria.

#### **2.2. CONCEPTUAL REVIEW**

##### **2.2.1. ORGANISATIONAL PERFORMANCE**

Organisational performance (OP) refers to how well an organisation achieves its objectives, including profitability, efficiency, customer satisfaction, innovation and adaptability. It involves comparing an organisations actual output or results with the intended ones. Recent research has highlighted how organisational performance is deeply influenced by supply chain disruptions. Disruption challenges the flow of goods, information, and finances, which in turn affects performance dimensions such as cost efficiency, customer satisfaction, and market competitiveness. (Ivanov & Dolgui, 2020). In manufacturing industry, particularly for firms like Nigeria bottling companies (NBC) in Benin City, which relies on extensive supply network for raw material such as sugar, concentrates, packaging materials, and distribution logistics, performance depends heavily on the smooth operation of supply chains. When disruption such as shortages, fuel scarcity, or transportation breakdown occurs NBCs production and operations are directly affected (Adebayo et al, 2023.). Thus, OP in manufacturing industries cannot be fully understood without examining its relationship with supply chains disruption.

Supply chain disruption (SCDs) can have a significant long-term and immediate effects on organisational performance outcomes. For instance, the global crises such as the outbreak of

COVID 19 pandemic and the Russia- Ukraine conflict which impacted supply chain around world also preventing the flow of raw materials and impacted manufacturing performance and reduced customer trust. According to kazancoglu et al. (2021), such disruption negatively influences key performance indicators such as operational efficiency, inventory turnover, and service levels. The manufacturing industry which relies on just-in-time (JIT) models to reduce holding cost, is particularly vulnerable because even minor delays can ripple across operations.

In measuring organisational performance within manufacturing sector, indicators such as production efficiency, delivery timelines, customer satisfaction levels, and profitability margins are critical (Adeola & Fashola, 2024). These metrics help assess how well NBC responds to disruptions and adapts its operations. The companys investment in supply chain risk management strategies, such as diversifying suppliers or adopting just-in-case systems, can also influence performance outcomes (Ibrahim et al., 2023)

In summary, for Nigeria bottling company, understanding and managing supply chain disruptions is essential not just for operational continuity but for sustaining its overall organisational performance. Supply chain stability enables NBC to meet its production targets, satisfy customers, and sustain profitability, reinforcing the strategic importance robust supply chain management within the manufacturing industry (Ivanov & Dolgui, 2023).

### **2.2.2 MEASURES OF ORGANISATIONAL PERFORMANCE**

Measures of organisational performance refers to standard or indicators used to access how well an organisation is achieving its goals in the manufacturing industry, organizational performance can be measured using the following metric

Production efficiency: This measures how effectively a company converts resources into finished products (Adeola & Fashola, 2024). For Nigeria bottling company (NBC) in Benin city, monitoring production efficiency helps assess how well materials, labor, and equipment are used in the production of beverages. High production efficiency minimizes waste and reduces downtime, both of which are necessary to keep costs low and output steady, especially in the face of common supply chain challenges like raw material shortages or fuel scarcity (Okeke & Ojo, 2022).

Delivery reliability: This is also another essential metric; it tracks how consistently how firms meet its delivery deadlines to distributors and retailers. Delay in delivery can lead to customer dissatisfaction and potential revenue loss, making it an important performance indicator. According to Adeboye et al, (2023), efficient logistics and timely distribution are critical in Nigerian manufacturing firms where infrastructure and transportation disruption are common. NBC's ability to overcome these barriers and deliver products as scheduled shows its strength in managing supply chain risks.

Customer satisfaction: This also plays an important role in measuring an organisations performance. As noted by Kazancoglu et al. (2021), customer satisfaction depends on product availability, affordability, and quality consistency. NBC uses customer feedback, sales trends, and complaints resolution times to assess this measure. When customers consistently find NBC products available and of expected quality, it reflects positively on the company's performance. High satisfaction levels often translate into stronger customer loyalty and repeat sales, which are crucial for sustaining competitiveness.

Financial performance: This also provides insight into the firms' overall profitability and cost management. Financial indicators such as net profit margin, return on investment (ROI), and

overall revenue growth are commonly used to assess financial health. Okeke and Nwankwo (2020) noted that supply chain disruptions often result in increased operational costs due to the need for emergency sourcing of raw materials or higher procurement expenses, which negatively impact profitability. Through financial performance metrics, NBC can evaluate the extent to which supply chain challenges affect its profitability and operational sustainability.

Product quality and defect rates: This serves as an essential performance measure in manufacturing firms. According to Ibrahim et al. (2018), disruptions in supply chains, such as inconsistent or low quality, leading to increased defect rates and returns. NBC measures its performance using quality control metric such as defect rates, returns percentages, and compliance with set quality standards. Higher defect rates not only increase operational costs but also tarnish the company's reputation, emphasizing the need for stringent quality management despite disruptions.

### **2.2.3. IMPLICATIONS OF ORGANISATIONAL PERFORMANCE**

The implications of are critical in understanding how effectively a company like Nigeria Bottling Company (NBC) operates, especially when facing when facing supply chain disruptions. Implications simply means the possible effects, consequences, or outcomes of something. Strong organisational performance typically indicates efficient resource utilization, customer satisfaction, and achievement of strategic goals (Akinola & Olatunij, 2020). Conversely, poor performance often signals operational inefficiencies and increased vulnerability to disruptions, leading to production delays and higher operational costs (Onyema et al, 2019), In manufacturing industry, this can disrupt market brand competitiveness.

A major implication of organisation performance is its direct influence on profitability. High performing organisations can minimize waste, optimize production, and ensure timely delivery of products, thereby enhancing their profit margins (Olajide & Ogundipe, 2021). However, supply chain disruption can hamper performance, increase operational costs and reduce profitability due to delayed or incomplete order fulfillment (Chukwu & Okeke, 2022). In today's competitive environment, companies failing to maintain steady performance are at risk of losing their financial edge (Adewuyi & Eze, 2024).

Another key implication is observed in customer satisfaction and loyalty. When a company maintains consistent performance, customers trust the brand and remain loyal (Eneh, 2023). In NBC's case, frequent disruptions leading to product shortages can frustrate customers and drive them to competitors. Meeting customer expectations through reliable supply and consistent product availability reinforces loyalty and market position (Ogunleye & Bello, 2022). Poor organisational performance erodes trust and can lead to a shrinking customer base.

Employee morale and productivity also depend on organisational performance. Research indicates that operational setbacks caused by supply chain issues can lead to job dissatisfaction, reduced morale, and staff turnover (Nwachukwu et al., 2021). Employees working in consistently underperforming environment often feel demotivated and undervalued, affecting their productivity levels. Conversely, a high performing organisation fosters a positive work environment that encourages employee engagement and loyalty (Okafor & Adeyemi, 2020).

Organisational performance impacts the company's reputation and stakeholder confidence. Investors, suppliers, and regulators observe a company's performance as a signal of its long-term viability and reliability (Ibrahim & Lawal, 2023). For NBC, persistent supply chain disruptions leading to poor performance could tarnish its corporate image, reduce investor interest, and strain

supplier partnerships. Strong performance, therefore, not only benefits internal operations but also strengthens the company's standing in the external business environment (Umeh & Okoro, 2024).

#### **2.2.4. SUPPLY CHAIN DISRUPTIONS**

Supply chain disruption refers to any unexpected event that interrupts the normal flow of goods and services within a company's supply network. In the manufacturing industry, especially within a company like the Nigeria Bottling company (NBC) in Benin city, such disruptions can result from transportation delays, suppliers' failures, economic instability, or political unrest (Christopher & Holweg, 2017). These disruptions can severely affect the timely availability of raw materials, which in turn hampers production schedules and overall operational efficiency (Ivanov, 2021). In the case of Nigeria bottling company, supply chain disruptions often lead to production halts and shortages of finished products like soft drinks. Since NBC depends on both local and imported raw materials sugar concentrates, and packing materials any disruption in logistics-whether due to port congestion, road blockages, or foreign exchange challenges can slow down production (Adeleke et al., 2022). This results in lost sales opportunities and can damage customer trust when products fail to reach the market as expected (Baeyannis et al., 2019).

Additionally, these disruption force NBC to spend more on emergency sourcing and logistics to compensate for the interruptions. The cost of bringing in materials through alternative, more expensive routes or suppliers impacts profitability (Ojokuku & Oladejo, 2020). For example, when local suppliers fail to deliver on time, the company may need to import materials urgently, which comes at a higher cost due to currency fluctuations and import duties (Obi-Anike et al., 2023). These extra operational costs directly reduce the company's margins (Choi et al., 2021). Furthermore, supply chain disruptions negatively affect employee productivity and morale. Frequent stoppages in production lines due to unavailability of materials can demotivate workers

and reduced overall workforce efficiency (Okeke & Okonkwo, 2019). Employees may feel uncertain about job security, especially when prolonged disruptions lead to reduced working hours or temporary shutdowns of certain production unit (Ivanov & Dolgui., 2020).

To mitigate these issues, NBC Benin City must invest in better supply chain management strategies. This includes diversifying its supplier base, investing in local sourcing where possible, and using technology for real-time supply chain monitoring (Fiksel et al., 2015). By adopting proactive planning and developing strong relationships with multiple suppliers, the company can better anticipate potential disruptions and reduce their impact on production and service delivery (Remko, 2020).

## **2.2.5 COMPONENTS OF SUPPLY CHAIN DISRUPTION**

Disruptions do not occur in isolation but often stem from interconnected issues within the supply chain structures (Christopher & Holweg, 2017). Among the components contributing are supplier failures, defectives products or materials, and regulatory changes. Each of these factors can independently or collectively interrupt production and distribution activities, thereby compromising operational efficiency and profitability (Baryannis et al., 2019).

**2.2.5.1. Supplier failures:** This is a critical component of supply disruption, especially in manufacturing industries where production depends heavily on timely delivery of raw materials and components. Suppliers' failures can arise from financial distress, operational inefficiencies, labor strikes, or even political instability in supplier regions (Ivanov, 2021). For manufacturing firms like the Nigeria Bottling Company (NBC), supplier failure can cause delays in sourcing essential items like packaging materials, concentrates, and sugar, leading to production slowdown or stoppages. According to Baryannis et al. (2019), supplier failure is one of the most unpredictable

risks because companies often lack real time visibility into their suppliers' internal operations. The implications of supplier's failures extend beyond immediate production delays. Over dependence on a single supplier or limited suppliers base heightens vulnerability, making the supply chain brittle (Obi-Anike et al., 2023).

**2.2.5.2. Defective products/materials:** defective product or raw materials constitute another serious form of supply chain disruption, particularly in manufacturing industry, where quality is tightly linked to brand reputation. Defective materials can disrupt production processes, results in product recalls, and incur significant financial losses due to waste and rework (Fiksel et al., 2015). According to Choi et al. (2021), defective inputs compromise operational flow as defective batches must be identified, isolated, and replaced causing time delays and resource wastage. Inconsistent quality from suppliers or poor internal quality control mechanisms often exacerbates this issue.

**2.2.5.3. Regulatory changes:** This includes shifts in government policies, tariffs, environmental regulations, and safety standards, can significantly disrupt supply chains (Christopher & Holweg, 2017). For manufacturing firms operating in developing economies like Nigeria, frequent changes in import/export regulations, taxation policies, and quality standards can delay procurement processes and increase compliance costs (Adeleke et al, 2022). For instance, NBC might face disruptions when sudden bans on certain packaging materials, alterations in excise duties, or stringent food safety laws are introduced without adequate adjustment periods. According to Remko (2020), regulatory changes create uncertainties that ripple through supply networks, affecting sourcing, production, and distribution.

## **2.2.6 CAUSES OF SUPPLY CHAIN DISRUPTION**

Supply chain disruptions in manufacturing industry are caused by a variety of internal and external factors that interfere with the flow of goods, services, and information across supply network. One of the most common causes is supplier related issues, such as late deliveries, financial instability, or complete supplier shutdowns (Ivanov, 2021). In a company like NBC, which relies heavily on both local and foreign suppliers for raw materials, any delay on or failure on the supplier's part can halt production and lead to unmet consumer demand. According to Obi-Anike et al. (2023), suppliers' dependence without proper risk diversification can lead to a systematic breakdown when their suppliers face challenges.

Another major cause is logistics and transportation disruptions: poor infrastructure, fuel scarcity, port congestion, or road insecurity common issues in Nigeria can delay the movement of raw materials or finished products, especially for companies operating in cities like Benin (Adeleke et al., 2022). These disruptions not only increase transportation cost but also reduce responsiveness and flexibility.

Additionally, natural disasters and pandemics, such as COVID-19, have exposed how global events can cause sudden breakdowns in supply chains by restricting movement, limiting workforce availability, or causing border closures (Choi et al., 2021).

Technological failures also contribute significantly to supply chain breakdowns. When information systems used to track inventory, monitor supplier performance, or coordinate logistics fail, the entire chain can suffer delays and errors (Baryannis et al., 2019). For instance, delays in digital communication with suppliers or breakdown of inventory systems can result in stockouts or overstocking both of which are costly.

Lastly, regulatory and policy changes play a significant role in causing supply chain disruptions. Changes in import/export laws, tariffs, taxes, or product safety regulations can unexpectedly alter supply routes or restrict access to necessary materials (Remko, 2020). For example, if NBC faces new regulations banning a type of plastic used in packaging, they must quickly find alternatives or risk halting production. These types of disruptions require firms to remain agile and maintain strong relationships with both suppliers and regulators to adapt quickly when changes occur.

### **2.2.7 STRATEGIES OF SUPPLY CHAIN DISRUPTION**

Managing supply chain disruption requires organisation to adopt proactive and reactive strategies aimed at minimizing risks and ensuring operational continuity. One essential strategy is supplier diversification, which involves sourcing materials from multiple suppliers rather than relying heavily on a single vendor. This approach reduces vulnerability when one supplier fails, enabling companies like NBC to continue operations using alternative sources (Ivanov & Dolgui, 2020). Additionally, establishing local supplier relationships where possible can minimize risks associated with international logistics and currency fluctuations (Adeleke et al., 2022).

Another critical strategy is the implementation of real-time supply chain monitoring and digitalization. Technologies such as Artificial Intelligence (AI), Internet of Things (IoT), and predictive analytics help organisations monitor supplier performance, forecast demand, and identify potential disruptions before they escalate (Baryannis et al., 2019). By investing in supply chain visibility systems, NBC can track raw materials from origin to production floor, enabling faster response to disruptions and enhancing decision-making accuracy (Choi et al., 2021).

Inventory buffering, also known as building safety stock, is a widely used reactive strategy. While carrying extra inventory ties up working capital, it serves as a buffer against supply delays and demand fluctuations, allowing companies to continue production even when supply interruptions occur (Ivanov, 2021). Complementary to this is flexible logistics planning, which involves developing multiple transportation routes and logistics partners to quickly reroute shipments during emergencies like road blockages or port congestion (Remko, 2020).

Firms must also focus on collaborative relationships with suppliers and stakeholders. Strong partnerships foster transparent communication, joint problem-solving, and quicker resolution of disruptions (Fiksel et al., 2015). Long-term contracts, supplier performance reviews, and shared risk management plans can enhance collaboration and ensure supply chain stability.

Finally, regulatory risk management is crucial. Monitoring regulatory environments and maintaining compliance readiness help firms adapt swiftly to policy changes without interrupting operations (Obi-Anike et al., 2023). Regular engagement with industry associations and regulatory bodies allows companies like NBC to stay informed about upcoming regulations and plan accordingly.

### **2.3 THEORETICAL REVIEW**

This provides theories for understanding the relationship between supply chain disruption and organisational performance. In this section we will review theories relating supply chain disruption and organisational performance.

### **2.3.1. THEORIES RELATING TO ORGANISATION PERFORMANCE**

The following theories provides a framework for understanding organisation performance

#### **Goal setting theory**

The goal setting theory developed by Edwin locke and Gary latham 1990, proposes that specific and challenging goals lead to higher performance compared to vague or easy objectives. In manufacturing industries, organisational performance often hinges on the clarity and difficulty of operational goals (Locke & Latham, 2002). When disruptions like supplier failures or regulatory changes occur, clear goals help organisations maintain focus and resource allocation toward recovery and continuity (Adeniran & Fatoki, 2019). Thus, the theory emphasizes that firms with well-structured performance targets can better navigate disruptions and sustain productivity.

#### **Balanced Scorecard Framework**

This theory was introduced by Kaplan and Norton (1992), expands performance measurement beyond financial indicators to include customer perspectives, internal processes, and learning and growth. For organisations facing supply chain disruptions, the BSC allows management to assess not only short-term profitability but also operational resilience and adaptability (Akinyemi et al., 2022). By monitoring diverse performance dimensions, firms can identify bottlenecks caused by supply disruptions and implement corrective strategies promptly (Eze et al., 2024). This holistic framework ensures that disruptions do not blindside firms focusing solely on financial performance.

## **Stakeholder Theory**

Stakeholder Theory, proposed by Freeman (1984), suggests that organisational performance depends on how well the firm manages relationships with all its stakeholders, including suppliers, customers, employees, and regulatory bodies. In disrupted supply chains, stakeholder interests often conflict—for instance, customers expect timely delivery, while suppliers face material shortages (Yusuf et al., 2023). According to this theory, organisations must balance these competing interests to maintain overall performance. Effective stakeholder engagement, therefore, becomes essential for managing supply disruptions and sustaining organisational success.

## **THEORIES OF RELATING TO SUPPLY CHAIN DISRUPTION**

The most prominent theories used in explaining supply chain disruptions are contingency theory, system theory and resource dependency theory.

### **Contingency theory**

Contingency theory posits that there is no single best way to manage an organisation; instead, optimal management strategies depend on the specific circumstances faced by the organisation (Donaldson, 2001). In the context of supply chain management, this theory suggests that organisations must adapt their processes and structures in response to environmental uncertainties such as supplier failures, regulatory changes, and defective products. According to Olawale and Garwe (2010), firms that align their operational strategies with prevailing conditions are better equipped to mitigate disruptions. Thus, contingency theory underlines the need for flexible and adaptive supply chain strategies to maintain organisational performance during disruptions (Adeniran & Fatoki, 2019).

## **Systems Theory**

Systems theory views an organisation as a set of interrelated parts working together to achieve common goals (Bertalanffy, 1968). This theory suggests that disruptions in one part of the supply chain, such as supplier failures or regulatory changes, can have ripple effects throughout the entire organisation. As noted by Yusuf et al. (2023), organisations that perceive their supply chain as an integrated system can proactively manage and coordinate responses to disruptions, thereby minimizing negative impacts on performance. Systems theory thus supports the need for coordinated supply chain management to mitigate disruptions effectively.

## **Resource Dependency Theory (RDT)**

The Resource Dependency Theory (RDT) suggests that organisations are not self-sufficient and therefore depend on external factors, such as suppliers and regulatory agencies, for critical resources required for operations (Harland et al., 2021). This reliance creates vulnerabilities, especially when disruptions occur beyond the organisation's control. In the case of the Nigeria Bottling Company (NBC), such dependencies may involve sourcing bottles, sugar, carbon dioxide, and other raw materials. When any of these supply channels are disrupted—due to import restrictions, supplier delays, or transportation bottlenecks—NBC's production processes are negatively affected, leading to reduced performance, inefficiencies, and customer dissatisfaction. RDT is particularly relevant to this research because it establishes the direct link between external supply chain disruptions and internal organisational outcomes.

## **2.4 THEORETICAL FRAMEWORK**

This study is anchored on the contingency theory, this theory says there is no single best way to run a business. Instead, the right approach depends on the situation the organisation is facing

(Donaldson, 2016). In other words, what works well for one company in a stable environment may not work for another facing frequent disruptions. This idea is especially important in supply chain management, where unexpected events like supplier failures, transportation delays, or regulatory changes can suddenly affect how a company operates.

When it comes to supply chain disruptions, Contingency Theory explains that organisations need to be flexible and adaptable in their strategies. For example, a company that depends heavily on a single supplier must quickly find alternatives if that supplier fails. In this case, a rigid approach could damage performance, while a more flexible and responsive one could help the company recover smoothly. Contingency Theory encourages managers to constantly assess their external environment and make decisions based on the challenges they're currently facing (Zsidisin & Wagner, 2019).

This theory also highlights the importance of aligning internal processes with external realities. If an organisation continues to operate as though everything is normal during a disruption, its performance will likely suffer. But if it adjusts its operations—such as speeding up decision-making, communicating more frequently with suppliers, or reallocating resources—it stands a better chance of maintaining strong performance. In this way, Contingency Theory supports the idea that organisational success during disruptions depends on how well a company responds to changing conditions.

## **2.5 EMPIRICAL REVIEW**

Several empirical studies have explored the relationship between supply chain disruption and organisational performance. For instance, A recent study by Ahmed et al. (2023) investigated the

role of digital tools in managing supply chain disruptions among Nigerian manufacturing firms. The study employed a quantitative approach using survey data and found that companies that integrated supply chain management software experienced fewer delays and improved coordination. This enhanced their overall organisational performance despite ongoing disruptions. Similarly, Ivanov and Dolgui (2020) conducted a study on supply chain resilience in the context of COVID-19 disruptions. They found that disruptions significantly reduced operational efficiency, especially in firms that lacked digital tools and contingency plans. Their research emphasized that organisations with flexible supply chain structures performed better during uncertain times.

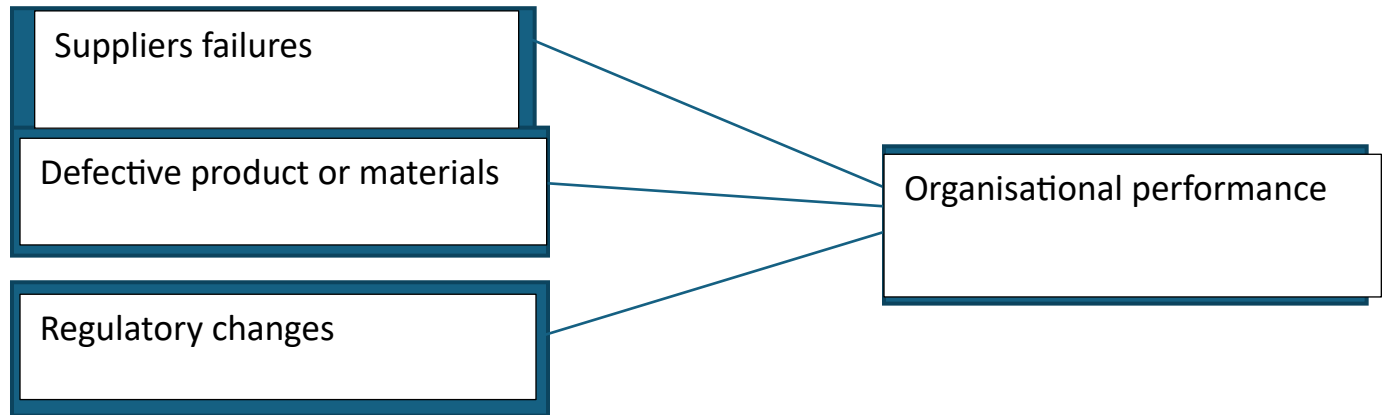
In the Nigerian context, Adebayo and Okoro (2019) studied supply chain challenges in the food and beverage industry. Their findings showed that regulatory changes and poor infrastructure often disrupted production schedules. The research further identified that firms that adopted adaptive strategies, like sourcing locally or maintaining safety stock, were able to sustain better output and customer service.

Also, Ojha et al. (2018) examined the effects of supplier failures on manufacturing firms in emerging economies. Using data collected from Indian manufacturing firms, the study revealed that frequent supplier breakdowns led to increased costs and poor customer satisfaction, which negatively impacted organisational performance. They concluded that strong supplier relationships and proactive risk management strategies are crucial for maintaining performance levels.

Furthermore, Tang and Musa (2017) carried out a comparative study across Asian and African manufacturing firms to assess how product defects affected operational performance. Their results indicated that defective inputs caused production delays, increased rework costs, and damaged

company reputation. These factors, in turn, affected both short-term revenue and long-term competitiveness.

## 2.6 CONCEPTUAL FRAMEWORK



This framework is adapted from Ivanov & Dolgui (2020) and Christopher & Peck (2015), who proposed that specific supply chain disruptions negatively affect organizational performance, but the degree of impact depends on how well the organization responds (resilience, adaptability, etc.).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter explains the methodologies that were employed in this research endeavor. It provides a detailed look at the research design itself, the group under study, the number of participants selected, and how they were chosen. Furthermore, the sources of information, the specific tools used for the research, and how their accuracy and dependability were guaranteed are also outlined.

#### **3.2 Research Design**

Research design refers to the plan, structure, and strategy of investigation conceived by the researcher so as to obtain answers to research questions. A descriptive survey research design was used for the study. This method was selected because it enabled the researcher to directly gather information from those involved about issues relating to supply chain interruptions and their effects on organizational success. The survey design also proved useful in exploring the connections between different elements, thus enabling the researcher to draw more general conclusions based on the study's findings.

#### **3.3 Population of the Study**

The study population comprised all personnel at the Nigeria Bottling Company Plc, Benin City Plant. According to company records from the Personnel Department (2024), there were a total of 208 employees, excluding domestic staff. This group was considered significant as its members actively participate in supply chain activities, production processes, and overall organizational operations, therefore making their perspectives valuable to the research.

### 3.4 Sample Size and Sampling Technique

Given the population's size, surveying all 208 employees wasn't practical. Therefore, the Taro Yamane (1967) formula was employed to determine the suitable sample size:

$$n = N / (1 + N(e)^2)$$

Where:

$n$  = sample size

$N$  = population (208)

$e$  = margin of error (0.05)

$$n = \frac{208}{(1 + 208(0.05)^2)}$$

$$n = \frac{208}{1.52} = 136.84 \sim 137$$

Consequently, the sample size was set at 137 participants.

The study made use of a stratified random sampling technique to ensure a fair representation of different departments, including production, procurement, logistics, sales/marketing, and administration. Within each department, simple random sampling was used to choose the respondents.

### 3.5 Sources of Data

The study primarily relied on primary data as its primary source of information. This data was gathered directly from the participants via a structured questionnaire developed by the researcher. This approach was favored as it provided direct information that was relevant to the research's aims.

### **3.6 Research Instrument**

The primary tool used for data collection was a structured questionnaire. The questionnaire was divided into several parts: Section A gathered demographic data about the participants, while Sections B, C, and D focused on supply chain disruptions, organizational performance, and the relationship between the two. A five-point Likert scale, spanning from Strongly Agree (5) to Strongly Disagree (1), was used to gauge the responses.

### **3.7 Validity of the Instrument**

To ensure the questionnaire's validity, it was reviewed by academic supervisors and experts in supply chain management. Their feedback aided in refining the instrument, confirming that it was clear, pertinent, and aligned with the research objectives. A preliminary test was also undertaken with a small group of employees not included in the final sample, and any necessary modifications were made before the main data collection began.

### **3.8 Reliability of the Instrument**

The reliability of the questionnaire was tested using the Cronbach's Alpha method to evaluate the consistency of the items. A pilot test involving 20 participants yielded a Cronbach's Alpha coefficient above 0.70, suggesting that the instrument was reliable and suitable for collecting data.

### **3.9 Method of Data Collection**

The researcher personally distributed the questionnaires to the participants, with assistance from departmental heads to ensure smooth distribution. Participants were given ample time to complete the questionnaires, which were then collected. This approach helped to improve the response rate and decrease the quantity of incomplete or missing data.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Introduction

In this chapter, we delve into the empirical evaluation of data gathered from the field survey. Specifically, 137 questionnaires were disseminated to selected personnel at the Nigeria Bottling Company Plc, Benin City Plant. Impressively, same number of questionnaires were returned, processed, and utilized in our analysis, reflecting an 100% response rate.

#### 4.2 Demographic Analysis

The demographic data of the respondents is presented in this section below.

**Table 4.1: Demographic Distribution of Respondents**

<b>Demographic Variables</b>	<b>Categories</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Gender</b>	Male	55	40.1%
	Female	82	59.9%
	<b>Total</b>	<b>137</b>	<b>100.0%</b>
<b>Age</b>	Less than 20 years	8	5.8%
	20–40 years	99	72.3%
	41–60 years	30	21.9%
	<b>Total</b>	<b>137</b>	<b>100.0%</b>
<b>Job Status</b>	Employee	109	79.6%
	Self-employed	28	20.4%
	<b>Total</b>	<b>137</b>	<b>100.0%</b>
<b>Educational Attainment</b>	SSCE	9	6.6%

	BSc	96	70.1%
	MSc	28	20.4%
	PhD	4	2.9%
	<b>Total</b>	<b>137</b>	<b>100.0%</b>

**Field Survey (2025)**

**Gender:** The gender distribution of respondents reveals that females constituted the majority of the sample population. Out of 137 total respondents, 82 were female, accounting for 59.9% of the total, while 55 respondents were male, representing 40.1%.

**Age:** The age composition of the respondents shows that the majority fell within the 20–40 years age bracket, with 99 individuals, constituting 72.3% of the total sample. Respondents aged 41–60 years numbered 30, making up 21.9%, while those below 20 years of age were the least represented with only 8 individuals, accounting for 5.8%.

**Job Status:** Regarding employment status, the data indicates that the majority of respondents were employees, with 109 individuals representing 79.6% of the total sample. In contrast, only 28 respondents, or 20.4%, were self-employed.

**Educational Attainment:** The educational background of respondents reveals a high level of academic attainment. A significant proportion held a Bachelor's degree (BSc), with 96 respondents accounting for 70.1% of the sample. This was followed by 28 respondents with a Master’s degree (MSc), representing 20.4%, and 9 individuals (6.6%) who had completed only secondary education (SSCE). The least represented group were those with doctoral degrees (PhD), numbering 4, or 2.9%.

### 4.3 Descriptive Analysis of Supply Chain Disruptions and Organizational Performance

This section presents descriptive analysis on the data retrieved from respondents using frequency count, percentage (%) and mean.

#### 4.3.1 Data Presentation and Analysis for the Dependent Variable

The table below presents the descriptive analysis on the dependent variable (Organisational Performance) using frequency count, percentage and mean.

**Table 4.2: Descriptive Analysis of Organisational Performance**

S/N	Statement	Total Responses	SA (5) f/(%)	A (4) f/(%)	U (3) f/(%)	D (2) f/(%)	SD (1) f/(%)	Mean ( $\bar{x}$ )
5	I am satisfied with my organization's revenue growth considering the supply chain disruptions	137	10 (7.3%)	32 (23.4%)	40 (29.2%)	47 (34.3%)	8 (5.8%)	2.92
6	With its current supply chain levels, my	137	21 (15.3%)	83 (60.6%)	21 (15.3%)	5 (3.6%)	7 (5.1%)	3.77

	organization meets customer expectation							
7	My organization is effective in managing its resources considering the supply chain disruptions	137	21 (15.3%)	40 (29.2%)	56 (40.9%)	13 (9.5%)	7 (5.1%)	3.40
8	My organization is effective in developing and retaining talents that can mitigate supply chain disruptions	137	24 (17.5%)	79 (57.7%)	26 (19.0%)	6 (4.4%)	2 (1.5%)	3.85

9	My organization responds to changes effectively as a result of supply chain disruptions	137	21 (15.3%)	52 (38.0%)	49 (35.8%)	10 (7.3%)	5 (3.6%)	3.54
<b>Average</b>			<b>19.4</b> <b>(14.2%)</b>	<b>57.2</b> <b>(41.8%)</b>	<b>38.4</b> <b>(28.0%)</b>	<b>16.2</b> <b>(11.8%)</b>	<b>5.8</b> <b>(4.2%)</b>	<b>3.50</b>

**Field Survey (2025)**

Table 4.2 presents the respondents’ perceptions of organisational performance in relation to supply chain disruptions. Regarding satisfaction with revenue growth (Statement 5), the responses were mostly moderate or negative, with 34.3% disagreeing and 29.2% remaining neutral, while only 7.3% strongly agreed and 23.4% agreed, producing a relatively low mean score of 2.92. For customer expectation fulfilment (Statement 6), 60.6% agreed and 15.3% strongly agreed, with a high mean of 3.77, indicating strong consensus that the organisation performs well in this area. In resource management (Statement 7), 40.9% were neutral and 29.2% agreed, but with a mean of 3.40, this suggests moderate confidence in internal resource effectiveness. For talent development and retention (Statement 8), a large majority agreed (57.7%) or strongly agreed (17.5%), giving the highest mean of 3.85, suggesting strong organisational commitment in this area. Lastly, in responding to changes (Statement 9), 38.0% agreed and 15.3% strongly agreed, but the high neutrality (35.8%) indicates some uncertainty, resulting in a mean of 3.54.

The overall average across all five statements shows the following: 14.2% of responses were in strong agreement (SA), 41.8% in agreement (A), 28.0% neutral (U), 11.8% disagreed (D), and only 4.2% strongly disagreed (SD). These figures reveal that a significant portion of the respondents lean positively towards their organisation's performance amidst supply chain challenges, especially in areas like talent retention and customer satisfaction. However, a relatively high level of neutrality and moderate disagreement, especially in revenue growth and resource management, suggests there is still room for improvement in certain performance dimensions under disrupted conditions. The overall mean score of 3.50 reflects a moderately positive organisational performance across the surveyed dimensions.

#### 4.3.2 Data Presentation and Analysis for the Independent Variable

The table below presents the descriptive analysis on the independent variables (supplier failure, defective products, regulatory changes, and supply chain disruptions) using frequency count, percentage and mean.

**Table 4.3: Descriptive Analysis of Supplier Failure (SF)**

S/ N	Statement	Total Response s	SA (5) f/(%)	A (4) f/(%)	U (3) f/(%)	D (2) f/(%)	SD (1) f/(%)	Mea n ( $\bar{x}$ )
10	Supplier failure affects the flow of operations in	137	27 (19.7%)	29 (21.2%)	43 (31.4%)	30 (21.9%)	8 (5.8%)	3.07

	my organization							
11	My organization is effective in mitigating the effects of supplier failure	137	23 (16.8%)	80 (58.4%)	20 (14.6%)	12 (8.8%)	2 (1.5%)	3.80
12	There is effective communication between my organization and the supplier	137	26 (19.0%)	39 (28.5%)	47 (34.3%)	19 (13.9%)	6 (4.4%)	3.44
13	My organization measures well the performance of its suppliers	137	17 (12.4%)	62 (45.3%)	36 (26.3%)	12 (8.8%)	10 (7.3%)	3.46

14	It is likely that my organization will experience supplier failure in the future	137	14 (10.2%)	46 (33.6%)	43 (31.4%)	18 (13.1%)	16 (11.7%)	3.18
15	My organization is very collaborative with its suppliers	137	21 (15.3%)	62 (45.3%)	39 (28.5%)	8 (5.8%)	7 (5.1%)	3.59
<b>Average</b>			<b>21.3 (15.6%) )</b>	<b>53.0 (38.7%) )</b>	<b>38.0 (27.7%) )</b>	<b>16.5 (12.0%) )</b>	<b>8.2 (6.0%)</b>	<b>3.42</b>

**Field Survey (2025)**

Table 4.3 outlines respondents' perspectives on supplier failure and their organisations' capabilities in managing it. For Statement 10, 31.4% of respondents were neutral, and 41% agreed or strongly agreed that supplier failure affects operational flow, with a mean score of 3.07, indicating moderate concern. Statement 11 showed the highest mean (3.80), with a combined 75.2% agreeing or strongly agreeing that their organisation effectively mitigates supplier failure. In Statement 12, while 47.5% agreed or strongly agreed about effective communication with suppliers, a considerable 34.3% remained neutral, leading to a moderate mean of 3.44. Statement 13 revealed

that 57.7% acknowledged that supplier performance is well measured, while 26.3% were neutral, yielding a mean of 3.46. For Statement 14, only 10.2% strongly agreed and 33.6% agreed that future supplier failure is likely, while a high neutrality of 31.4% and a relatively balanced spread across other scales resulted in a lower mean of 3.18.

The overall average across all six statements reveals that 15.6% of respondents strongly agreed, 38.7% agreed, 27.7% were neutral, 12.0% disagreed, and 6.0% strongly disagreed. These figures indicate a general agreement that supplier-related risks exist and are acknowledged, but also reflect a substantial level of uncertainty, particularly around future supplier failure and communication effectiveness. The overall mean score of 3.42 suggests that while organisations are moderately confident in their supplier management capabilities, there remains significant room for improvement in fostering stronger supplier relationships and anticipating potential failures.

**Table 4.4: Descriptive Statistics of Defective Products (DP)**

S/N	Statement	Total Responses	SA (5) f/(%)	A (4) f/(%)	U (3) f/(%)	D (2) f/(%)	SD (1) f/(%)	Mean ( $\bar{x}$ )
16	We often encounter defective products or material	137	26 (19.0%)	49 (35.8%)	41 (29.9%)	12 (8.8%)	9 (6.6%)	3.52
17	The presence of defective products or	137	32 (23.4%)	68 (49.6%)	27 (19.7%)	6 (4.4%)	4 (2.9%)	3.87

	material affects customer satisfaction							
18	There is an effective quality control measure in minimizing defectives	137	28 (20.4%)	43 (31.4%)	49 (35.8%)	12 (8.8%)	5 (3.6%)	3.57
19	The cost of defective products or materials is significant to my organization	137	31 (22.6%)	50 (36.5%)	39 (28.5%)	16 (11.7%)	1 (0.7%)	3.68
20	My organization often reviews and improves its processes to minimize	137	31 (22.6%)	44 (32.1%)	49 (35.8%)	8 (5.8%)	5 (3.6%)	3.65

	defective products							
21	My organization is committed to continuous improvement and quality enhancement	137	29 (21.2%)	67 (48.9%)	33 (24.1%)	4 (2.9%)	4 (2.9%)	3.83
<b>Average</b>			<b>29.5</b> <b>(21.5%)</b>	<b>53.5</b> <b>(39.0%)</b>	<b>39.7</b> <b>(29.0%)</b>	<b>9.7</b> <b>(7.1%)</b>	<b>4.7</b> <b>(3.4%)</b>	<b>3.69</b>

**Field Survey (2025)**

Table 4.4 highlights organizational experiences and responses to defective products. In Statement 16, a notable 54.8% of respondents agreed or strongly agreed that their organizations often encounter defective materials, while 29.9% remained neutral, resulting in a moderate mean of 3.52. A stronger perception emerged in Statement 17, where 73% agreed or strongly agreed that defective products negatively impact customer satisfaction, with a high mean of 3.87. In Statement 18, 51.8% believed there are effective quality control measures in place, though a significant portion (35.8%) was neutral, yielding a mean of 3.57. For Statement 19, 59.1% acknowledged that defect-related costs are significant, supported by a mean of 3.68. In Statement 20, 54.7% agreed or strongly agreed that their organizations review and improve processes to reduce defects, and 35.8% were neutral, leading to a mean of 3.65. Statement 21 showed strong affirmation of commitment to continuous improvement, with 70.1% agreement and a mean of 3.83.

On average, 21.5% of respondents strongly agreed and 39.0% agreed across all statements, while 29.0% were neutral, 7.1% disagreed, and 3.4% strongly disagreed. The overall mean of 3.69 suggests that most respondents perceive their organizations to be moderately effective in handling defective products through quality control, process improvement, and continuous enhancement initiatives. However, the relatively high level of neutrality, especially in areas of quality control and process review, indicates potential gaps in awareness or implementation consistency that may warrant strategic attention.

**Table 4.5: Descriptive Statistics of Regulatory Changes**

S/N	Statement	Total Responses	SA (5) f/(%)	A (4) f/(%)	U (3) f/(%)	D (2) f/(%)	SD (1) f/(%)	Mean ( $\bar{x}$ )
22	My organization is compliant in adhering to regulatory changes	137	28 (20.4%)	69 (50.4%)	29 (21.2%)	5 (3.6%)	6 (4.4%)	3.79
23	Regulatory changes are communicated to stakeholders	137	24 (17.5%)	46 (33.6%)	54 (39.4%)	8 (5.8%)	5 (3.6%)	3.56
24	Employees are aware of the	137	31 (22.6%)	56 (40.9%)	41 (29.9%)	3 (2.2%)	5 (3.6%)	3.78

	regulatory changes							
25	My organization's risk management strategies are effective in mitigating the impact of regulatory changes	137	19 (13.9%)	60 (43.8%)	50 (36.5%)	4 (2.9%)	4 (2.9%)	3.62
<b>Average</b>			<b>25.5 (18.6%)</b>	<b>57.8 (42.2%)</b>	<b>43.5 (31.7%)</b>	<b>5.0 (3.6%)</b>	<b>5.0 (3.6%)</b>	<b>3.69</b>

**Field Survey (2025)**

Table 4.5 presents respondents' perceptions of how well their organizations respond to and manage regulatory changes. Statement 22 revealed that 70.8% of respondents agreed or strongly agreed that their organizations are compliant with regulatory changes, with only 7.9% in disagreement and a moderate neutrality of 21.2%, producing a relatively high mean of 3.79. In Statement 23, the communication of regulatory changes showed a mixed response: 51.1% agreed or strongly agreed, while 39.4% remained neutral, indicating room for improvement in internal communication, and leading to a moderate mean of 3.56. Statement 24 shows a more positive response, with 63.5% agreeing or strongly agreeing that employees are aware of regulatory changes, and a relatively low

disagreement of 5.8%, resulting in a strong mean of 3.78. For Statement 25, 57.7% agreed or strongly agreed that risk management strategies are effective in mitigating regulatory impacts, though 36.5% remained neutral, leading to a mean of 3.62.

On average, 18.6% of respondents strongly agreed, 42.2% agreed, 31.7% were neutral, while 3.6% disagreed and 3.6% strongly disagreed across the four statements. The overall mean score of 3.69 reflects a moderately strong confidence in organizational responses to regulatory change, particularly in terms of compliance and employee awareness. However, the relatively high proportion of neutral responses—especially concerning communication to stakeholders and risk management—suggests some ambiguity or inconsistency in how regulatory frameworks are disseminated and operationalized across the organizations surveyed.

**Table 4.6: Descriptive Statistics of Supply Chain Disruptions**

S/N	Statement	Total Responses	SA (5) f/(%)	A (4) f/(%)	U (3) f/(%)	D (2) f/(%)	SD (1) f/(%)	Mean ( $\bar{x}$ )
26	My organization often experiences supply chain disruptions	137	11 (8.0%)	54 (39.4%)	39 (28.5%)	25 (18.2%)	8 (5.8%)	3.26
27	There are strategies to mitigate	137	17 (12.4%)	52 (38.0%)	51 (37.2%)	12 (8.8%)	5 (3.6%)	3.47

	supply chain disruptions							
28	My organization has visibility into its supply chain	137	22 (16.1%)	62 (45.3%)	36 (26.3%)	10 (7.3%)	7 (5.1%)	3.60
29	My organization is very adaptable in responding to supply chain disruptions	137	14 (10.2%)	43 (31.4%)	50 (36.5%)	23 (16.8%)	7 (5.1%)	3.25
<b>Average</b>			<b>16.0</b> <b>(11.7%)</b>	<b>52.8</b> <b>(38.5%)</b>	<b>44.0</b> <b>(32.1%)</b>	<b>17.5</b> <b>(12.8%)</b>	<b>6.8</b> <b>(5.0%)</b>	<b>3.40</b>

**Field Survey (2025)**

Table 4.6 reflects the respondents’ assessment of their organization’s exposure to and management of supply chain disruptions. In Statement 26, a significant proportion (47.4%) agreed or strongly agreed that their organizations experience disruptions, while 28.5% were neutral, and 24.0% disagreed or strongly disagreed, resulting in a moderate mean of 3.26. In Statement 27, which explores the existence of mitigation strategies, 50.4% of the respondents confirmed such strategies exist, though a notable 37.2% remained neutral, indicating some uncertainty; the mean response

here was 3.47. Statement 28 yielded the highest mean (3.60), with 61.4% of respondents acknowledging that their organizations have visibility into the supply chain, suggesting a relatively strong operational oversight. In Statement 29, organizational adaptability received more mixed results, with only 41.6% agreeing or strongly agreeing and a significant 36.5% remaining neutral, yielding a mean of 3.25.

On average, 11.7% of respondents strongly agreed, 38.5% agreed, 32.1% were neutral, 12.8% disagreed, and 5.0% strongly disagreed across the four items. The overall mean of 3.40 indicates a moderately positive perception of how organizations experience and respond to supply chain disruptions. While there is evident awareness of the issue and some preparedness, the high neutrality rates suggest that many respondents either lack sufficient information or perceive inconsistency in how their organizations manage supply chain disruptions, particularly regarding adaptability and mitigation strategies.

**Table 4.7 Common Causes of Supply Chain Disruptions in the Organization**

<b>Cause of Disruption</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
Logistics and Transportation Issues	109	79.6%
Supplier Failure	95	69.3%
Natural Disaster	101	73.7%
Demand Fluctuations	55	40.1%

*Source: Field Survey (2025)*

Table 4.7 presents the most commonly reported causes of supply chain disruptions based on respondents' experiences within their respective organizations. The leading cause identified is logistics and transportation issues, reported by 79.6% of respondents, underscoring the criticality of efficient movement of goods and materials in maintaining supply chain continuity. This is

closely followed by natural disasters (73.7%) and supplier failure (69.3%), both of which suggest external dependencies and environmental factors remain significant sources of instability in the supply chain. Demand fluctuations, though still notable, were reported by 40.1% of respondents, indicating that while market unpredictability is a concern, operational and environmental challenges appear more immediate or impactful in the organizational context surveyed. Overall, these findings suggest a need for robust risk management strategies focusing on logistics resilience, supplier relationships, and contingency planning against environmental shocks.

#### 4.4 Correlation Analysis of Supply Chain Disruptions and Organizational Performance

The results from the correlation analysis provide insights into the character and orientation of the connection between the dependent and independent variables. While the correlation coefficient doesn't denote a direct functional dependence, it serves as a preliminary indicator of the strength and trend of this relationship. The details of these findings will be elaborated upon in the subsequent discussion.

**Table 4.8: Correlation Results of Supply Chain Disruptions and Organizational Performance**

##### Correlations

		OP	SF	DP	RC	SCD
OP	Pearson Correlation	1				
	Sig. (1-tailed)					
	N	137				
SF	Pearson Correlation	.197*	1			
	Sig. (1-tailed)	.011				

	N	137	137			
DP	Pearson Correlation	.293**	.394**	1		
	Sig. (1-tailed)	.000	.000			
	N	137	137	137		
RC	Pearson Correlation	.507**	.389**	.643**	1	
	Sig. (1-tailed)	.000	.000	.000		
	N	137	137	137	137	
SCD	Pearson Correlation	.413**	.362**	.542**	.713**	1
	Sig. (1-tailed)	.000	.000	.000	.000	
	N	137	137	137	137	137

\*. Correlation is significant at the 0.05 level (1-tailed).

\*\*. Correlation is significant at the 0.01 level (1-tailed).

**Source: Author's Estimation from SPSS 22, 2025.**

Table 4.8 presents the Pearson correlation coefficients between Organizational Performance (OP) and key supply chain disruption factors: Supplier Failure (SF), Defective Products (DP), Regulatory Changes (RC), and Supply Chain Disruptions (SCD). The results reveal varying degrees of statistically significant positive relationships, indicating that these supply chain-related variables are meaningfully associated with organizational performance.

The correlation between Supplier Failure and Organizational Performance is positive and weak ( $r = .197$ ,  $p < 0.05$ ), suggesting that as organizations better manage supplier failures or when such disruptions are acknowledged, performance slightly improves. A moderate and positive correlation exists between Defective Products and Organizational Performance ( $r = .293$ ,  $p < 0.01$ ), implying that minimizing defective products contributes meaningfully to enhanced performance. More

notably, Regulatory Changes exhibit a strong and statistically significant relationship with Organizational Performance ( $r = .507, p < 0.01$ ), indicating that effective adaptation to regulatory dynamics considerably enhances operational outcomes. Additionally, Supply Chain Disruptions (SCD) as a broad construct show a moderately strong positive correlation with Organizational Performance ( $r = .413, p < 0.01$ ), reflecting the importance of resilience and adaptability in disrupted supply environments.

Furthermore, none of the variables have a coefficient value greater than 0.80, indicating the presence of a multicollinearity problem, which denotes a situation in which some of the explanatory variables in a model are correlated, limiting and altering the efficiency of the regression results.

#### 4.5 Hypothesis Testing

The research hypotheses were tested utilising regression analysis in order to achieve the current study's objectives. The hypotheses were evaluated with an Alpha level of significance of 0.05 (Decision rule: computed level of significance  $<0.05$ , reject null hypothesis; computed level of significance  $>0.05$ , accept null hypothesis).

**Table 4.9a Model Summary of Supply Chain Disruptions and Organizational Performance**

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. Change	
1	.515 <sup>a</sup>	.266	.243	.61512	.266	11.936	4	132	.000	1.540

a. Predictors: (Constant), SCD, SF, DP, RC

b. Dependent Variable: OP

**Source: Statistical Package for social Sciences v.22**

Table 4.9a presents the model summary from a multiple linear regression analysis examining the influence of supply chain disruption variables such as Supplier Failure (SF), Defective Products (DP), Regulatory Changes (RC), and Supply Chain Disruptions (SCD) on Organizational Performance (OP).

The model yielded a multiple correlation coefficient (R) of 0.515, indicating a moderate positive relationship between the independent variables (SF, DP, RC, SCD) and the dependent variable (OP). The R Square value of 0.266 signifies that approximately 26.6% of the variance in organizational performance can be explained by the combined influence of the four predictors. The Adjusted R Square, which accounts for the number of predictors and the sample size, is 0.243, suggesting a reasonably good fit after adjusting for potential overfitting.

The F-statistic of 11.936 with 4 and 132 degrees of freedom is statistically significant ( $p < 0.001$ ), confirming that the overall model is significant and that at least one of the independent variables contributes meaningfully to the prediction of organizational performance. The Durbin-Watson value of 1.540 falls within the acceptable range (1.5–2.5), indicating no serious autocorrelation in the residuals, thus supporting the assumption of independence of errors in the regression model.

**Table 4.9b Analysis of Variance (ANOVA) of Supply Chain Disruptions and Organizational Performance**

ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	18.065	4	4.516	11.936	.000 <sup>b</sup>
Residual	49.945	132	.378		
Total	68.009	136			

a. Dependent Variable: OP

b. Predictors: (Constant), SCD, SF, DP, RC

**Source: Statistical Package for social Sciences v.22**

Table 4.9b presents the ANOVA results for the regression model assessing the influence of supply chain disruption variables, including Supplier Failure (SF), Defective Products (DP), Regulatory Changes (RC), and Supply Chain Disruptions (SCD) on Organizational Performance (OP).

The Regression Sum of Squares (SSR) is 18.065 with 4 degrees of freedom (df), reflecting the proportion of variation in organizational performance explained by the independent variables. The Residual Sum of Squares (SSE) is 49.945 with 132 degrees of freedom, representing the unexplained variation in the model. The Total Sum of Squares (SST) is 68.009, which combines both explained and unexplained variance.

The model's F-statistic is 11.936 with a corresponding significance value (p-value) of .000, indicating that the overall regression model is statistically significant at the 0.01 level. This result confirms that the group of independent variables collectively provides a better prediction of organizational performance than a model with no predictors. In practical terms, it means that supply chain-related disruptions and their management play a meaningful role in influencing the effectiveness and outcomes of organizational operations.

**Table 4.9c Regression Output of Supply Chain Disruptions and Organizational Performance**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.609	.382		4.215	.000		
SF	.000	.070	.000	.003	.998	.805	1.242
DP	-.094	.128	-.073	-.731	.466	.552	1.812
RC	.479	.121	.470	3.957	.000	.394	2.537
SCD	.138	.126	.118	1.089	.278	.475	2.105

a. Dependent Variable: OP

**Source: Statistical Package for social Sciences v.22**

Table 4.9c presents the regression coefficients for the model assessing the effect of supply chain disruption variables, including Supplier Failure (SF), Defective Products (DP), Regulatory Changes (RC), and Supply Chain Disruptions (SCD) on Organizational Performance (OP). Both unstandardized and standardized coefficients are reported, along with their significance levels and multicollinearity diagnostics.

The regression model's constant (intercept) is 1.609, indicating the baseline value of organizational performance when all predictors are held at zero. Among the predictors, Regulatory Changes (RC) is the only variable with a statistically significant impact on organizational performance ( $B = 0.479$ ,  $\beta = 0.470$ ,  $t = 3.957$ ,  $p < 0.001$ ). This suggests that for every one-unit increase in effective

response to regulatory changes, organizational performance increases by approximately 0.479 units, controlling for other variables. Regulatory compliance is, therefore, a strong and positive predictor of organizational performance.

In contrast, Supplier Failure (SF) and Defective Products (DP) show non-significant relationships with organizational performance. SF has a coefficient of .000 with a very low t-value (.003) and a p-value of .998, indicating no measurable effect. Similarly, DP has a negative but non-significant effect ( $B = -0.094$ ,  $p = .466$ ). Supply Chain Disruptions (SCD) also do not show a statistically significant effect ( $B = 0.138$ ,  $p = .278$ ), despite a positive coefficient.

The collinearity statistics indicate acceptable levels of multicollinearity. All Variance Inflation Factor (VIF) values are below the critical threshold of 5, with the highest being 2.537 for RC, and Tolerance values are well above 0.1, confirming that the independent variables do not suffer from severe multicollinearity.

Thus, the regression output confirms that Regulatory Changes are the most influential factor among the four supply chain disruption variables in predicting organizational performance. The other variables, although conceptually important, do not show significant statistical contributions in this model. This suggests that strategic focus on regulatory compliance and adaptation is key to enhancing organizational outcomes in the face of supply chain disruptions.

### **Hypothesis One**

**H<sub>01</sub>:** Supplier failures do not affect organizational performance.

The regression result shows a coefficient ( $B = 0.000$ ) with a p-value of 0.998, which is far greater than 0.05. Therefore, the null hypothesis is accepted. This implies that supplier failures do not have a statistically significant effect on organizational performance in the sampled organizations,

suggesting that supplier-related disruptions are either well managed or have minimal direct influence on performance outcomes.

### **Hypothesis Two**

**H<sub>02</sub>:** Defective products do not affect organizational performance.

The regression coefficient for defective products is  $B = -0.094$  with a p-value of 0.466, which exceeds 0.05. Hence, the null hypothesis is accepted. This indicates that defective products do not significantly affect organizational performance, implying that quality control measures may be sufficiently mitigating the adverse effects of product defects on overall performance.

### **Hypothesis Three**

**H<sub>03</sub>:** Regulatory changes do not affect organizational performance.

The regression output reveals a coefficient ( $B = 0.479$ ) with a p-value of 0.000, which is less than 0.05. Therefore, the null hypothesis is rejected. This finding demonstrates that regulatory changes have a significant positive effect on organizational performance, suggesting that organizations that effectively adapt to regulatory requirements tend to perform better.

### **Hypothesis Four**

**H<sub>04</sub>:** Supply chain disruptions have no significant effect on organizational performance.

The regression result shows a coefficient ( $B = 0.138$ ) with a p-value of 0.278, which is greater than 0.05. Consequently, the null hypothesis is accepted. This means that, although disruptions exist, they do not exert a statistically significant direct effect on organizational performance, possibly due to the organizations' resilience strategies or adaptive capacity.

## **4.5 Discussion of Findings**

### **4.5.1. Supplier Failures and Organizational Performance**

The study found that supplier failures do not have a statistically significant effect on organizational performance ( $B = 0.000$ ,  $p = 0.998$ ). This finding aligns only partially with existing literature. While many studies emphasize the risks posed by supplier unreliability (Ivanov, 2021; Baryannis et al., 2019), the current result suggests that in the context of the studied organization—possibly the Nigeria Bottling Company (NBC) in Benin City—effective mitigation strategies or diversified sourcing may have minimized the impact of supplier-related issues. According to Contingency Theory (Donaldson, 2001), firms that adapt strategies based on contextual realities perform better during disruptions. NBC may have adopted contingency approaches such as maintaining backup suppliers or enforcing supplier performance standards, which neutralized the operational risks from supplier failures. This contrasts with findings by Ojha et al. (2018), who reported that supplier breakdowns in manufacturing often increase costs and reduce customer satisfaction. However, in a resilient system with effective procurement planning, such disruptions may not translate directly into performance loss, especially in firms with local sourcing capabilities (Adeleke et al., 2022).

### **4.5.2. Defective Products and Organizational Performance**

Contrary to widespread academic evidence, the analysis shows that defective products have no significant impact on organizational performance ( $B = -0.094$ ,  $p = 0.466$ ). This is surprising given the consensus in literature that defective inputs disrupt operations, delay production, and incur rework costs (Choi et al., 2021; Fiksel et al., 2015). For example, Tang and Musa (2017) reported that product defects reduce both short-term revenue and long-term competitiveness. One possible explanation for this discrepancy is that the organization under study may have implemented robust internal quality control systems capable of detecting and resolving defects before they escalate.

Systems Theory (Bertalanffy, 1968) supports this notion, emphasizing that well-integrated systems can absorb shocks and prevent localized issues (like defects) from affecting overall performance. NBC, for instance, might have buffering strategies such as quality checkpoints or automated quality assurance protocols that prevent defective products from interrupting the production flow significantly.

#### **4.5.3. Regulatory Changes and Organizational Performance**

This study confirms that regulatory changes significantly and positively affect organizational performance ( $B = 0.479$ ,  $p = 0.000$ ), marking it as the most influential predictor in the regression model. This aligns strongly with existing scholarship (Remko, 2020; Adeleke et al., 2022), which argues that regulatory changes—though disruptive—can enhance performance when organizations are well-prepared and compliant. According to Stakeholder Theory (Freeman, 1984), responsiveness to regulatory bodies and the ability to integrate policy shifts into operations strengthens stakeholder trust and competitive advantage. In the case of NBC, such adaptability could translate into improved market reputation, continued operations under new laws, and even eligibility for government incentives. Regulatory agility, rather than rigidity, appears to foster better organizational alignment, reduce legal risks, and ensure operational continuity, which explains the observed strong and positive relationship with performance.

#### **4.5.4. General Supply Chain Disruptions and Organizational Performance**

Despite a moderate positive correlation ( $r = .413$ ) identified earlier, the regression analysis revealed that supply chain disruptions as a general construct do not have a statistically significant direct effect on performance ( $B = 0.138$ ,  $p = 0.278$ ). This result highlights the nuanced nature of disruptions, where not all disturbances translate directly into performance degradation. As explained by Contingency Theory (Donaldson, 2016), the impact of disruptions depends on how

flexibly and effectively the organization adapts to them. Literature (Ivanov & Dolgui, 2020) affirms that companies with real-time monitoring, inventory buffers, and diversified logistics strategies may absorb shocks without compromising outcomes. NBC, for example, may experience frequent disruptions (as indicated by Table 4.6) but remains resilient through proactive strategies such as flexible logistics planning or collaborative supplier relationships (Fiksel et al., 2015). Thus, the absence of a significant effect could indicate successful operational responses that neutralize the disruptive impact before it influences core performance metrics.

#### **4.5.5. Causes of Supply Chain Disruptions**

The analysis in Table 4.7 identifies the most common causes of supply chain disruptions as: logistics and transportation issues (79.6%), natural disasters (73.7%), supplier failure (69.3%), and demand fluctuations (40.1%). These findings are well-aligned with both theoretical and empirical literature. Ivanov (2021) and Adeleke et al. (2022) highlight how poor infrastructure, port congestion, and road insecurity often cause major bottlenecks in Nigerian manufacturing logistics, especially in cities like Benin. Furthermore, frequent natural events, such as floods or pandemics, impose unexpected delays that affect the availability of raw materials (Choi et al., 2021). Supplier failure as a notable cause reinforces the dependency emphasized in Resource Dependency Theory (Harland et al., 2021), which warns of vulnerabilities in overreliance on external suppliers. Demand fluctuations, while less prevalent, still present operational uncertainties requiring flexible production planning. Overall, the causes of disruption identified in this study mirror the multi-dimensional risks presented in global and local studies and underscore the urgent need for resilient, adaptive, and technologically integrated supply chain strategies to maintain business continuity in volatile environments.

## CHAPTER 5

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

**5.1 Introduction:** This study has looked at how disruptions in the supply chain affect organizational performance, focusing on the Nigeria Bottling Company. The analysis in Chapter Four revealed that selected factors causing supply chain disruption include supplier failure, defective materials, and regulatory changes, which in turn have negative effects on organizational performance.

The result on supplier failure showed that delays and inconsistencies in the supplies of raw materials disrupt production schedules, increase costs, and reduce productivity. This supports the work of Akinola and Okonkwo (2021) that observed that supplier unreliability negatively affected the efficiency of production and delivery time in Nigerian manufacturing firms.

Likewise, defective materials were found to considerably lower product quality and customer satisfaction. This agrees with Chowdhury, Paul, Kaisar, and Moktadir (2021), who established that poor-quality inputs within the supply chain result in wastage, rework, and loss of profitability. This study established that defective materials raise operation costs and damage the brand reputation of the company.

In addition, changes in regulations were identified as significant factors affecting organizational performance. Frequent changes to government policy, taxation, and import regulations have created supply shortages and increased compliance costs. This finding agreed with Olaniyan and Lawal (2022), who concluded that an unstable regulatory environment negatively affects operational efficiency within Nigeria's manufacturing sector.

On the whole, the findings are in line with the position of Ivanov and Dolgui (2020), who argued that supply chain disruptions, if not well managed, will weaken a firm's operational viability and competitive advantage. Evidence from the results of Nigeria Bottling Company proves how resilience and proactive risk management could help ensure business continuity.

And trust me, there is so much work to do.

**5.2 Summary of findings:** This study examined the relationship between supply chain disruption and organizational performance, with a focus on the Nigeria Bottling Company. Precisely, the study sought to:

1. Establish the impact of supplier failure on organizational performance.
2. Consider the impact of defective products or materials on organizational performance.
3. Evaluate how changes in regulatory requirements might affect organizational performance.

**According to the data analyzed in Chapter Four, the major findings were as follows:**

1. Supplier failure has contributed to a considerable decline in organizational performance.
2. Poor material quality drastically reduces productivity and customer satisfaction.
3. Regulatory changes hurt performance as operational and compliance costs increase.
4. All dimensions of supply chain disruption are strongly and positively correlated, which means they collectively influence organizational performance.

### **5.3 Conclusion:**

The study established that supply chain disruption factors like supplier failure, defective materials, and changes in regulations have strong impacts on the performance of NBC. These disruptions result in a reduction of production efficiency and increased costs, thereby lowering customer satisfaction.

Therefore, efficient supply chain management and resilience strategies are essential in maintaining performance through disruptions. Organizations should diversify suppliers, operate quality assurance systems, and devise adaptive strategies that deal with policy and regulatory changes.

This will result in the company ensuring better operation outcomes through proactive risk management, continuous product and process innovations, and strong partnerships across the supply chain.

### **5.4 Recommendations:**

Recommendations based on the findings and conclusions are as follows:

#### **1. Supplier Relationship Management:**

The company should establish long-term partnerships with reliable suppliers and diversify its supply base to minimize risks of material shortages.

#### **2. Improvement in Quality Control:**

There should be continuous monitoring and evaluation of input materials through advanced quality assurance systems to reduce the incidences of defective materials.

3. Regulatory Adaptation: The company should have a compliance group that would ensure constant surveillance regarding changes in regulations and rapid adaptation to changed requirements.

4. Integration of Risk Management: Management should incorporate formal risk assessment and mitigation strategies into supply chain planning to anticipate and minimize potential disruptions.

5. Adoption of Technology: It should invest in digital supply chain systems, data analytics, and predictive software that will improve the visibility, traceability and responsiveness across the supply chain.

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## APPENDICES

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EXECUTE.

COMPUTE RC=MEAN (RC1, RC2, RC3, RC4).

EXECUTE.

COMPUTE SCD=MEAN (SCD1, SCD2, SCD3, SCD4).

EXECUTE.

FREQUENCIES VARIABLES=Gender Age Job Education OP1 OP2 OP3 OP4 OP5 SF1 SF2 SF3

SF4 SF5 SF6 DP1 DP2 DP3 DP4 DP5 DP6 RC1 RC2 RC3 RC4 SCD1 SCD2 SCD3 SCD4

Causes1 Causes2 Causes3 Causes4

/ORDER=ANALYSIS.

## Frequencies

### Notes

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	Cases Used	Statistics are based on all cases with valid data.
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N	Valid	137	137	137	137	137
	Missing	0	0	0	0	0

**Frequency Table**

**Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	55	40.1	40.1	40.1
	Female	82	59.9	59.9	100.0
	Total	137	100.0	100.0	

**Age**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 20 years	8	5.8	5.8	5.8
	20-40years	99	72.3	72.3	78.1
	41-60years	30	21.9	21.9	100.0
	Total	137	100.0	100.0	

**Job Status**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employee	109	79.6	79.6	79.6
	Self Employed	28	20.4	20.4	100.0
	Total	137	100.0	100.0	

**Education Obtained**

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	SSCE	9	6.6	6.6	6.6
	BSc	96	70.1	70.1	76.6
	MSc	28	20.4	20.4	97.1
	Ph.D	4	2.9	2.9	100.0
	Total	137	100.0	100.0	

**I am satisfied with my organization's revenue growth considering the supply chain disruptions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	5.8	5.8	5.8
	Disagree	47	34.3	34.3	40.1
	Neutral	40	29.2	29.2	69.3
	Agree	32	23.4	23.4	92.7
	Strongly Agree	10	7.3	7.3	100.0
	Total	137	100.0	100.0	

**With its current supply chain levels, my organization meet customer expectation**

		Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	Strongly Disagree	7	5.1	5.1	5.1
	Disagree	5	3.6	3.6	8.8
	Neutral	21	15.3	15.3	24.1
	Agree	83	60.6	60.6	84.7
	Strongly Agree	21	15.3	15.3	100.0
	Total	137	100.0	100.0	

**My organization is effective in managing its resources considering the supply chain disruptions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	5.1	5.1	5.1
	Disagree	13	9.5	9.5	14.6
	Neutral	56	40.9	40.9	55.5
	Agree	40	29.2	29.2	84.7
	Strongly Agree	21	15.3	15.3	100.0
	Total	137	100.0	100.0	

**My organization is effective in developing and retaining talents that can mitigate supply chain disruptions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.5	1.5	1.5
	Disagree	6	4.4	4.4	5.8
	Neutral	26	19.0	19.0	24.8
	Agree	79	57.7	57.7	82.5
	Strongly Agree	24	17.5	17.5	100.0
	Total	137	100.0	100.0	

**My organization responds to changes effectively as a result of supply chain disruptions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	3.6	3.6	3.6
	Disagree	10	7.3	7.3	10.9
	Neutral	49	35.8	35.8	46.7
	Agree	52	38.0	38.0	84.7
	Strongly Agree	21	15.3	15.3	100.0
	Total	137	100.0	100.0	

**Supplier failure affect the flow of operations in my organization**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	5.8	5.8	5.8
	Disagree	30	21.9	21.9	27.7
	Neutral	43	31.4	31.4	59.1
	Agree	29	21.2	21.2	80.3
	Strongly Agree	27	19.7	19.7	100.0
	Total	137	100.0	100.0	

**My organization is effective in mitigating the effects of supplier failure**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.5	1.5	1.5
	Disagree	12	8.8	8.8	10.2
	Neutral	20	14.6	14.6	24.8
	Agree	80	58.4	58.4	83.2
	Strongly Agree	23	16.8	16.8	100.0
	Total	137	100.0	100.0	

**There is effective communication between my organization and the supplier**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	4.4	4.4	4.4
	Disagree	19	13.9	13.9	18.2
	Neutral	47	34.3	34.3	52.6
	Agree	39	28.5	28.5	81.0
	Strongly Agree	26	19.0	19.0	100.0
	Total	137	100.0	100.0	

**My organization measures well the performance of its suppliers**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	7.3	7.3	7.3
	Disagree	12	8.8	8.8	16.1
	Neutral	36	26.3	26.3	42.3
	Agree	62	45.3	45.3	87.6
	Strongly Agree	17	12.4	12.4	100.0
	Total	137	100.0	100.0	

**It is likely that my organization will experience supplier failure in the future**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	11.7	11.7	11.7
	Disagree	18	13.1	13.1	24.8
	Neutral	43	31.4	31.4	56.2
	Agree	46	33.6	33.6	89.8
	Strongly Agree	14	10.2	10.2	100.0
	Total	137	100.0	100.0	

**My organization is very collaborative with its suppliers**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	5.1	5.1	5.1
	Disagree	8	5.8	5.8	10.9
	Neutral	39	28.5	28.5	39.4
	Agree	62	45.3	45.3	84.7
	Strongly Agree	20	14.6	14.6	99.3
	44.00	1	.7	.7	100.0
	Total	137	100.0	100.0	

**We often encounter defective products or material**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	6.6	6.6	6.6
	Disagree	12	8.8	8.8	15.3
	Neutral	41	29.9	29.9	45.3
	Agree	49	35.8	35.8	81.0
	Strongly Agree	26	19.0	19.0	100.0
	Total	137	100.0	100.0	

**The presence of defective products or material affect customer satisfaction**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.9	2.9	2.9
	Disagree	6	4.4	4.4	7.3
	Neutral	27	19.7	19.7	27.0
	Agree	68	49.6	49.6	76.6
	Strongly Agree	32	23.4	23.4	100.0
	Total	137	100.0	100.0	

**There is an effective quality control measure in minimizing defectives**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	3.6	3.6	3.6
	Disagree	12	8.8	8.8	12.4
	Neutral	49	35.8	35.8	48.2
	Agree	43	31.4	31.4	79.6
	Strongly Agree	28	20.4	20.4	100.0
	Total	137	100.0	100.0	

**The cost of defective products or materials is significant to my organization**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	.7	.7	.7
	Disagree	16	11.7	11.7	12.4
	Neutral	39	28.5	28.5	40.9
	Agree	50	36.5	36.5	77.4
	Strongly Agree	31	22.6	22.6	100.0
	Total	137	100.0	100.0	

**My organization often review and improve its processes to minimize defective products**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	3.6	3.6	3.6
	Disagree	8	5.8	5.8	9.5
	Neutral	49	35.8	35.8	45.3
	Agree	44	32.1	32.1	77.4
	Strongly Agree	31	22.6	22.6	100.0
	Total	137	100.0	100.0	

**My organization is committed to continuous improvement and quality enhancement**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.9	2.9	2.9
	Disagree	4	2.9	2.9	5.8
	Neutral	33	24.1	24.1	29.9
	Agree	67	48.9	48.9	78.8
	Strongly Agree	29	21.2	21.2	100.0
	Total	137	100.0	100.0	

**My organization is compliant in adhering to regulatory changes**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	4.4	4.4	4.4
	Disagree	5	3.6	3.6	8.0
	Neutral	29	21.2	21.2	29.2
	Agree	69	50.4	50.4	79.6
	Strongly Agree	28	20.4	20.4	100.0
	Total	137	100.0	100.0	

**Regulatory changes are communicated to stakeholders**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	3.6	3.6	3.6
	Disagree	8	5.8	5.8	9.5
	Neutral	54	39.4	39.4	48.9
	Agree	46	33.6	33.6	82.5
	Strongly Agree	24	17.5	17.5	100.0
	Total	137	100.0	100.0	

**Employees are aware of the regulatory changes**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	3.6	3.6	3.6
	Disagree	3	2.2	2.2	5.8
	Neutral	41	29.9	29.9	35.8
	Agree	56	40.9	40.9	76.6
	Strongly Agree	31	22.6	22.6	99.3
	6.00	1	.7	.7	100.0
	Total	137	100.0	100.0	

**My organization risk management strategies are effective in mitigating the impact of regulatory changes**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.9	2.9	2.9
	Disagree	4	2.9	2.9	5.8
	Neutral	50	36.5	36.5	42.3
	Agree	60	43.8	43.8	86.1
	Strongly Agree	19	13.9	13.9	100.0
	Total	137	100.0	100.0	

**My organization often experience supply chain disruptions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	5.8	5.8	5.8
	Disagree	25	18.2	18.2	24.1
	Neutral	39	28.5	28.5	52.6
	Agree	54	39.4	39.4	92.0
	Strongly Agree	11	8.0	8.0	100.0
	Total	137	100.0	100.0	

**There are strategies to mitigate supply chain disruptions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	3.6	3.6	3.6
	Disagree	12	8.8	8.8	12.4
	Neutral	51	37.2	37.2	49.6
	Agree	52	38.0	38.0	87.6
	Strongly Agree	17	12.4	12.4	100.0
	Total	137	100.0	100.0	

**My organization have visibility into its supply chain**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	5.1	5.1	5.1
	Disagree	10	7.3	7.3	12.4
	Neutral	36	26.3	26.3	38.7
	Agree	62	45.3	45.3	83.9
	Strongly Agree	22	16.1	16.1	100.0
	Total	137	100.0	100.0	

**My organization is very adaptable in responding to supply chain disruptions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	5.1	5.1	5.1
	Disagree	23	16.8	16.8	21.9
	Neutral	50	36.5	36.5	58.4
	Agree	43	31.4	31.4	89.8
	Strongly Agree	14	10.2	10.2	100.0
	Total	137	100.0	100.0	

**What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Natural Disaster	101	73.7	100.0	100.0
Missing	System	36	26.3		
Total		137	100.0		

**What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Natural Disaster	2	1.5	2.1	2.1
	Supplier failure	95	69.3	97.9	100.0
	Total	97	70.8	100.0	
Missing	System	40	29.2		
Total		137	100.0		

**What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supplier failure	1	.7	.9	.9
	Logistics and transportation issues	109	79.6	99.1	100.0
	Total	110	80.3	100.0	
Missing	System	27	19.7		
Total		137	100.0		

**What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Demand fluctuations	55	40.1	100.0	100.0
Missing	System	82	59.9		
Total		137	100.0		

DESCRIPTIVES VARIABLES=Gender Age Job Education OP1 OP2 OP3 OP4 OP5 SF1 SF2  
 SF3 SF4 SF5 SF6 DP1 DP2 DP3 DP4 DP5 DP6 RC1 RC2 RC3 RC4 SCD1 SCD2 SCD3 SCD4  
 Causes1 Causes2 Causes3 Causes4 OP SF DP RC SCD  
 /STATISTICS=MEAN STDDEV MIN MAX.

**Descriptives**

**Notes**

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Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.

Syntax		DESCRIPTIVES VARIABLES=Gender Age Job Education OP1 OP2 OP3 OP4 OP5 SF1 SF2 SF3 SF4 SF5 SF6 DP1 DP2 DP3 DP4 DP5 DP6 RC1 RC2 RC3 RC4 SCD1 SCD2 SCD3 SCD4 Causes1 Causes2 Causes3 Causes4 OP SF DP RC SCD  /STATISTICS=MEAN STDDEV MIN MAX.
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### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	137	1.00	2.00	1.5985	.49199
Age	137	1.00	3.00	2.1606	.50342
Job Status	137	1.00	2.00	1.2044	.40473
Education Obtained	137	2.00	5.00	3.1971	.59210
I am satisfied with my organization's revenue growth considering the supply chain disruptions	137	1.00	5.00	2.9197	1.05062

With its current supply chain levels, my organization meet customer expectation	137	1.00	5.00	3.7737	.93142
My organization is effective in managing its resources considering the supply chain disruptions	137	1.00	5.00	3.4015	1.02512
My organization is effective in developing and retaining talents that can mitigate supply chain disruptions	137	1.00	5.00	3.8540	.80932
My organization responds to changes effectively as a result of supply chain disruptions	137	1.00	5.00	3.5401	.96264
Supplier failure affect the flow of operations in my organization	137	1.00	5.00	3.2701	1.17888
My organization is effective in mitigating the effects of supplier failure	137	1.00	5.00	3.8029	.87312
There is effective communication between my organization and the supplier	137	1.00	5.00	3.4380	1.08371

My organization measures well the performance of its suppliers	137	1.00	5.00	3.4672	1.05754
It is likely that my organization will experience supplier failure in the future	137	1.00	5.00	3.1752	1.14979
My organization is very collaborative with its suppliers	137	1.00	44.00	3.8832	3.58933
We often encounter defective products or material	137	1.00	5.00	3.5182	1.09881
The presence of defective products or material affect customer satisfaction	137	1.00	5.00	3.8613	.92500
There is an effective quality control measure in minimizing defectives	137	1.00	5.00	3.5620	1.02800
The cost of defective products or materials is significant to my organization	137	1.00	5.00	3.6861	.97582
My organization often review and improve its processes to minimize defective products	137	1.00	5.00	3.6423	1.01269

My organization is committed to continuous improvement and quality enhancement	137	1.00	5.00	3.8248	.89851
My organization is compliant in adhering to regulatory changes	137	1.00	5.00	3.7883	.95817
Regulatory changes are communicated to stakeholders	137	1.00	5.00	3.5547	.96953
Employees are aware of the regulatory changes	137	1.00	6.00	3.7883	.96582
My organization risk management strategies are effective in mitigating the impact of regulatory changes	137	1.00	5.00	3.6277	.86609
My organization often experience supply chain disruptions	137	1.00	5.00	3.2555	1.03632
There are strategies to mitigate supply chain disruptions	137	1.00	5.00	3.4672	.94753
My organization have visibility into its supply chain	137	1.00	5.00	3.5985	1.01068

My organization is very adaptable in responding to supply chain disruptions	137	1.00	5.00	3.2482	1.02024
What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)	101	1.00	1.00	1.0000	.00000
What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)	97	1.00	2.00	1.9794	.14284
What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)	110	2.00	3.00	2.9909	.09535
What are the most common causes of supply chain disruptions in my organization? (Please you can tick more than one)	55	4.00	4.00	4.0000	.00000

OP	137	1.00	5.00	3.4978	.70716
SF	137	1.83	10.00	3.5061	.84148
DP	137	1.67	5.00	3.6825	.55420
RC	137	1.00	5.00	3.6898	.69433
SCD	137	1.50	5.00	3.3923	.60618
Valid N (listwise)	11				

## CORRELATIONS

/VARIABLES=OP SF DP RC SCD

/PRINT=ONETAIL NOSIG

/MISSING=PAIRWISE.

## Correlations

### Notes

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	N of Rows in Working Data
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	File

Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		<p>CORRELATIONS</p> <p>/VARIABLES=OP SF DP RC SCD</p> <p>/PRINT=ONETAIL NOSIG</p> <p>/MISSING=PAIRWISE.</p>
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.02

### Correlations

		OP	SF	DP	RC	SCD
OP	Pearson Correlation	1	.197*	.293**	.507**	.413**
	Sig. (1-tailed)		.011	.000	.000	.000
	N	137	137	137	137	137
SF	Pearson Correlation	.197*	1	.394**	.389**	.362**
	Sig. (1-tailed)	.011		.000	.000	.000
	N	137	137	137	137	137
DP	Pearson Correlation	.293**	.394**	1	.643**	.542**

	Sig. (1-tailed)	.000	.000		.000	.000
	N	137	137	137	137	137
RC	Pearson Correlation	.507**	.389**	.643**	1	.713**
	Sig. (1-tailed)	.000	.000	.000		.000
	N	137	137	137	137	137
SCD	Pearson Correlation	.413**	.362**	.542**	.713**	1
	Sig. (1-tailed)	.000	.000	.000	.000	
	N	137	137	137	137	137

\*. Correlation is significant at the 0.05 level (1-tailed).

\*\*. Correlation is significant at the 0.01 level (1-tailed).

## REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT OP

/METHOD=ENTER SF DP RC SCD

/RESIDUALS DURBIN.

## Regression

### Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.

Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT OP /METHOD=ENTER SF DP RC SCD /RESIDUALS DURBIN.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.03
	Memory Required	5424 bytes
	Additional Memory Required for Residual Plots	0 bytes

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	SCD, SF, DP, RC <sup>b</sup>	.	Enter

a. Dependent Variable: OP

b. All requested variables entered.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df
1	.515 <sup>a</sup>	.266	.243	.61512	.266	11.936	4

a. Predictors: (Constant), SCD, SF, DP, RC

b. Dependent Variable: OP

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.065	4	4.516	11.936	.000 <sup>b</sup>
	Residual	49.945	132	.378		
	Total	68.009	136			

a. Dependent Variable: OP

b. Predictors: (Constant), SCD, SF, DP, RC

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0%
		B	Std. Error	Beta			Lower
1	(Constant)	1.609	.382		4.215	.000	.854
	SF	.000	.070	.000	.003	.998	-.138
	DP	-.094	.128	-.073	-.731	.466	-.347
	RC	.479	.121	.470	3.957	.000	.239
	SCD	.138	.126	.118	1.089	.278	-.112

a. Dependent Variable: OP

### Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	SF	DP	RC
1	1	4.927	1.000	.00	.00	.00	.00
	2	.035	11.793	.02	.98	.01	.03
	3	.019	16.142	.59	.02	.02	.16
	4	.011	21.170	.13	.00	.45	.12
	5	.008	25.217	.27	.00	.52	.69

a. Dependent Variable: OP

### Residuals Statistics<sup>a</sup>

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.0945	4.3010	3.4978	.36446	137
Residual	-2.35442	1.92587	.00000	.60600	137
Std. Predicted Value	-3.850	2.204	.000	1.000	137
Std. Residual	-3.828	3.131	.000	.985	137

a. Dependent Variable: OP