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THE IMPACT OF SUPPLY CHAIN RISKS ON ORGANISATION PERFORMANCE OF SMES IN ZIMBABWE

BY

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I, **TENDAI ELIAH MAVANDUDZA**, hereby certify that this project is a unique work of mine that has never been published or presented to another college or university.

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Dedications

I dedicate this study to my family, friends and my supervisor.

Abstract

The study analysed the effect of supply chain risks on performance of Small and Medium Enterprises (SMEs) in Zimbabwe. The main dependent variable performance was measures as efficiency, effectiveness and profitability whilst the supply chain risks were finance risk, collaboration risk and logistics risk. The study employed a linear regression model to analyse this relationship and concluded that there is a negative relationship between supply chain risks and performance of SMES. For instance, at 1 per cent level of significance, logistic risk was found to have a negatively effect on effectiveness by around 11%. The study revealed that SMEs in Zimbabwe are highly vulnerable to various types of supply chain risks. These risks include but are not limited to transportation disruptions (logistics risk), inventory shortages, supplier reliability (collaboration risk), finance risk, and demand variability. The main recommendation was to train the SMEs on how to counter the risks experienced in the business.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction and Background

For industrial companies, globalization, fierce international competition, and technology breakthroughs create a whole new business environment. First, in reaction to this growing competitiveness, manufacturing businesses have used lean production and achieved significant efficiency increases. The "waste" has been removed from numerous local companies in order to increase production. Such significant increases in productivity are now quite rare for many manufacturing enterprises. Rather, there is a great deal of room for development to lessen the inefficiencies brought on by subpar supplier performance, erratic client demands, and an unstable business environment. An integrated supply chain clearly outperforms individual enterprises in terms of competitiveness. Consequently, although there are still plenty of enterprise-enterprise rivalries, especially in the less developed nations (Koh et al., 2006), the chain-chain rivalry has begun to replace the enterprise-enterprise competition. Today's forward-thinking businesses are dynamic; they work together with suppliers, clients, and even rival businesses; they exchange information and knowledge in an effort to build a cooperative supply chain that can rival, if not outperform, its own industry. So, in such a brutal setting, getting a competitive advantage becomes more and more difficult, if not impossible.

The idea behind the supply chain is based on the development of a value chain network made up of distinct functional organizations dedicated to offering resources and data in order to fulfill the goals of effective supplier management and components flow (Lau & Lee, 2000).In order to improve the long-term performance of each company as well as the supply chain as a whole in a well-integrated and highly effective business model, supply chain management (SCM) comprises a set of approaches and practices that effectively integrate suppliers, manufacturers, distributors, and customers (Chopra and Meindl, 2001).The planning and management of all sourcing and procurement, conversion, and logistics management activities, as well as coordination and

cooperation with channel partners, are all included in supply chain management, according to the definition provided by the Council of Supply Chain Management Professionals (CSCMP).

SCM and associated tactics are vital to a manufacturing company's performance. This is true because there is a direct correlation between the price and quality of products and services acquired and the price and quality of goods and services sold. As a result, the SCM places a high value on supply chain strategies such supplier selection and procurement (Hartley and Choi, 1996; Degraeve et al., 2000). Other well-known SCM strategies include lean techniques to enhance internal business operations in accordance with just-in-time (JIT) supply principles (Burgess et al., 2006; Cigolini et al., 2004).

The core concept of supply chain management (SCM) is the integration of an organization's internal processes with those of its suppliers and customers. Web-based systems help businesses create strong customer and supplier integration for inventory management, demand forecasting, and customer and supplier relationship management in light of the increasing use of the internet (Frohlich and Westbrook, 2002).

Every economic activity involves some level of risk, which must be managed by every business based on its size and mode of operation. Without effective risk management, no organization can last over the long term. This is because businesses now have to contend with considerably more obstacles than they did in the past because of the growing and more obvious interconnection of the economy, technology, and law. It would be expected that depending on an organization's size or industry sector, its internal control and risk management systems would differ from one to the next. Therefore, it makes sense to presume that every company has internal control mechanisms and a robust risk management framework in place to aid in achieving its objectives.

These are essential to the smooth operation and daily management of a business and help an organization reach its goals. By controlling risk at the supply chain level, we can identify any possible risks to the chain as a whole, to the organizations in it, and particularly to the logistics resources that is people, infrastructure, and superstructure as well as the flow of goods, services, and information. While the supply chains of different businesses vary, most companies' supply chains share the risk of realizing their intended supply chain. The complexity of the supply chain

grows along with globalization and industry competitiveness, which has a significant impact on an organization's overall performance.

A supply chain interruption brought on by anticipated and unanticipated circumstances has a negative impact on any organization's performance. Any company's risk of not having enough raw materials for production will have a significant impact on fulfilling client orders, which can cause lower sales and lower earnings. Many organizations still lack a supply chain risk management program, despite the significant impact that supply chain disruptions have on their bottom lines. This program involves identifying potential risks within an organization's supply chains and developing mitigation strategies and contingency plans for supply chain risks that could negatively impact the organization's performance. Thus, in order to boost supply chain efficiency and effectiveness, organizations must clearly understand all of the risks associated with supply chains as well as all of the uncertainties in providing value to consumers. Supply chain managers should then develop effective mitigation methods.

Supply Chain Risk

According to the majority of researchers, there are three main categories of supply chain risks: internal factors that are related to the organization; external factors that are related to the network but internal to the organization; and finally, external risk sources that are related to the environment (Basole et al.,2016; Ellis et al.,2011; Faisal et al., 2006; Jüttner et al. 2003; Lockamy III and McCormack, 2010; Ritchie and Brindley, 2007). According to the accepted definition, industrial factors are relationships between supply chain partners that are connected by flow. A supply chain contains three types of flow: financial, material, and informational. Accordingly, logistic side risks are produced by material movement (Tse et al., 2016), financial side risks are produced by finance flow, and information side risks are produced by information flow (Tang and Musa, 2011).

Logistics Risk

Logistics risk refers to the potential challenges, uncertainties, and vulnerabilities that can arise within the supply chain and logistics operations of an organization. It encompasses a wide range of factors that can disrupt the flow of goods, materials, and information, leading to delays, inefficiencies, and potential financial losses. Some common types of logistics risks include:

- Transportation Risks: These involve issues related to the movement of goods, such as accidents, breakdowns, delays, theft, and damage during transportation.
- Inventory Risks: These risks pertain to the management of inventory levels, including stockouts, overstocking, obsolescence, spoilage, and shrinkage.
- Supplier Risks: These risks arise from the reliance on external suppliers and include supplier failures, quality issues, capacity constraints, and geopolitical risks affecting the sourcing of materials or components.
- Demand Risks: These risks relate to uncertainties in customer demand, such as market fluctuations, seasonality, changing consumer preferences, and unpredictable demand patterns.
- Information Risks: These risks involve data inaccuracies, communication breakdowns, cybersecurity threats, and disruptions in information systems, which can impede the smooth flow of information across the supply chain.
- Regulatory and Compliance Risks: These risks arise from non-compliance with regulations and standards, including customs regulations, trade restrictions, environmental regulations, and labor laws, which can lead to penalties, legal issues, and reputational damage.
- Natural and Environmental Risks: These risks encompass natural disasters, extreme weather conditions, pandemics, and other environmental factors that can disrupt transportation networks, damage infrastructure, and hinder logistics operations.

Throughout the logistic process, natural disasters or one's own or a partner's logistics system can cause delays or interruptions. This is known as logistics uncertainty (Tse et al., 2016). Risks related to the material flow of goods from the supply side to the demand side are taken into account, but the logistic side has typically received less attention. Nonetheless, logistical disruption has been shown to "quickly cripple the entire supply chain" (Punniyamoorthy et al., 2013; Shahbaz et al., 2018a). Logistic side risks typically stem from the following: faulty packaging (Zubair and Mufti, 2015), labour disputes, natural catastrophes, terrorist activities, and problems in the transportation infrastructure; cargo damage; supply side or warehousing issues (Wilson, 2007); and delivery delays (Wang et al., 2014).

Managing logistics risks requires proactive planning, robust contingency plans, effective communication, collaboration with partners, and the use of technology and analytics to monitor

and mitigate potential disruptions. By identifying and addressing logistics risks, organizations can enhance the resilience, efficiency, and reliability of their supply chain operations

Collaboration Risk

Collaboration risk in supply chain management refers to the potential risks that can arise when multiple entities within a supply chain collaborate to achieve common goals. These risks can impact the efficiency, effectiveness, and overall performance of the supply chain. Here are some common collaboration risks in supply chain management:

- Information Sharing and Trust: Collaborative supply chain management relies on the sharing of sensitive and critical information among partners. However, sharing such information can create risks related to data security, confidentiality breaches, and trust among the collaborating entities. Unauthorized access, data breaches, or misuse of information can lead to disruptions, compromised competitiveness, and damaged relationships.
- Dependency and Reliance: Collaboration often involves interdependencies among supply chain partners. Overreliance on a single partner or a limited number of partners can create risks such as supply disruptions if one partner fails to deliver or experiences operational issues. A lack of backup or contingency plans can leave the supply chain vulnerable to disruptions and bottlenecks.
- Coordination and Communication: Effective supply chain collaboration requires seamless coordination and communication among partners. However, miscommunication, inadequate information flow, or delays in decision-making can lead to errors, delays, and inefficiencies. Lack of visibility into partner activities or changes in plans can disrupt the smooth flow of goods, information, and cash within the supply chain.
- Cultural and Organizational Differences: Collaborating entities within a supply chain often come from diverse cultural backgrounds and organizational structures. These differences can create challenges in terms of understanding and aligning processes, norms, and expectations. Different approaches to risk management, decision-making, and responsiveness may lead to conflicts, misunderstandings, and difficulties in achieving collaboration goals.
- Performance and Alignment: Collaborative supply chain management requires alignment of performance metrics, goals, and incentives across multiple partners. Misalignments in

performance expectations, conflicting priorities, or variations in operational capabilities can result in suboptimal performance, subpar service levels, and disagreements on resource allocations.

- Legal and Contractual Risks: Collaborative supply chain initiatives are often governed by contracts and legal agreements. Failure to establish clear contractual terms, define responsibilities, or address potential risks can lead to disputes, breaches of contract, and legal liabilities. Ambiguities in contract terms or inadequate risk-sharing mechanisms can create legal uncertainties and financial losses.

  According to research, there are a number of drawbacks to collaboration as well as benefits. For example, collaboration risk is defined as "the anxiety associated with cooperative relationships or the likelihood that the partner does not adhere to the spirit of cooperation" (Faisal, 2009), or alternatively as "risks refer to uncertainty in coordination and information" (Kouvelis et al., 2011). Consequently, it would be extremely problematic if one supply chain participant did not commit to cooperating as expected by the other participants (Basole et al., 2016; Das and Teng, 1998; Shahbaz et al., 2018c). Information risks, on the other hand, are related to information systems and flows of information and include data capture and transfer, integrity, information processing, market intelligence, system failure, etc. These risks manifest as data loss, information errors, data security breaches, malfunctioning systems, erroneous transactions, and so on (Waters, 2011). This study focuses on the hazards associated with information flow across supply chain partners, but there are many other factors at play as well, such as trust, poor coordination, a lack of competence, and strong linkages.

  To mitigate collaboration risks in supply chain management, organizations should focus on establishing robust communication channels, fostering trust among partners, implementing secure information-sharing protocols, and developing contingency plans for supply disruptions. Clear performance metrics and incentive structures, along with well-defined contracts, can help align goals and ensure accountability. Regular monitoring, continuous improvement, and open dialogue among partners are crucial for addressing emerging risks and maintaining successful collaboration within the supply chain

Financial Risk

Financial risk in supply chain management refers to the potential threats and uncertainties that can impact the financial performance and stability of a supply chain. These risks can arise from various factors and have implications for the profitability, cash flow, and financial health of the organizations involved in the supply chain. Here are some common financial risks in supply chain management:

- Demand and Market Risks: Fluctuations in customer demand, changes in market conditions, and shifts in consumer preferences can create financial risks within the supply chain. If organizations fail to accurately forecast demand or respond effectively to market changes, it can lead to inventory imbalances, excess stock, or stockouts. These situations can result in increased costs, price erosion, lost sales, and reduced profitability.
- Pricing and Cost Risks: In supply chain management, pricing and cost risks can arise from factors such as volatile commodity prices, currency exchange rate fluctuations, and changes in input costs. Increases in raw material prices or transportation costs can squeeze profit margins, especially when contractual agreements or pricing structures are inflexible.
- Supplier and Vendor Risks: Dependence on suppliers and vendors introduces financial risks in the supply chain. Supplier disruptions, such as delays in delivery, quality issues, or supplier failures, can cause disruptions to production, result in additional costs for alternative sourcing, and impact customer satisfaction. Poor supplier performance can lead to financial losses, contractual penalties, and reputational damage.
- Credit and Financial Stability Risks: Financial instability or insolvency of supply chain partners can create risks for the entire supply chain. If a key supplier or customer faces financial challenges or defaults on payments, it can have a ripple effect on other organizations within the supply chain. Late payments, bad debts, or non-payment can strain cash flow, increase financial leverage, and jeopardize the financial stability of the affected organizations.
- Inventory and Working Capital Risks: Inefficient inventory management practices can tie up working capital, increase carrying costs, and lead to inventory obsolescence or write-offs. Poor coordination and visibility across the supply chain can result in excessive inventory levels, inadequate inventory turnover, and liquidity challenges. Optimizing inventory levels and improving working capital management are vital to mitigate these risks.
- Foreign Exchange and Trade Risks: International supply chains are exposed to currency exchange rate fluctuations, trade barriers, and regulatory changes. These factors can impact the pricing,

profitability, and competitiveness of organizations involved in cross-border trade. Currency devaluations, trade tariffs, or political instability can create financial risks and uncertainties for supply chain operations.

"Risk that members of supply chain encounter financial challenges that could impact its ability to produce and supply a particular good or service" is how financial side risks are defined (Mody, 2012). According to Abidin and Afroze (2018), the financial crisis was cited as one of the most frequent disruptive events challenged by both public (16%) and private companies (17%). According to Faisal (2009), the financial side risks are brought on by cash movements between businesses, expenses incurred, investments used for the network as a whole, accounts payable, settlements, and accounts receivable. "The risk that a potential event will have a financial impact" is another definition for financial side risks.

To manage financial risks in supply chain management, organizations should focus on robust financial planning and forecasting, implementing risk mitigation strategies, and maintaining financial flexibility.

1.2 Statement of the problem

The impact of supply chain risks on the organizational performance of small and medium-sized enterprises (SMEs) in Zimbabwe is a significant concern. SMEs play a crucial role in the country's economy, but they face numerous challenges in managing their supply chains effectively. Supply chain risks, such as disruptions, delays, quality issues, and inventory problems, can have detrimental effects on SMEs' performance, including their productivity, profitability, and customer satisfaction. However, the specific nature and extent of these supply chain risks and their impact on SMEs in Zimbabwe remain largely unexplored. Therefore, there is a pressing need to investigate and understand the relationship between supply chain risks and organizational performance in the context of Zimbabwean SMEs. By identifying and addressing these risks, policymakers, industry practitioners, and SME owners can develop targeted strategies and interventions to enhance supply chain resilience and improve the overall performance and competitiveness of SMEs in Zimbabwe. According to Sheffie (2005) supply continuity is the single biggest business driver

1.1 Objectives of the study

i. To assess the impact of supply chain risks on SMEs organisational performance
ii. To recommend mitigatory risk measures that can employed by SMES to deal with supply chain risks

1.4 Research Questions

i. What is the impact of supply chain risks on SMEs organisational performance
ii. What are the recommended mitigatory risk measures that can employed by SMES to deal with supply chain risks

1.6 Significance of the Study

The purpose of this study's findings is to examine how crucial supply chain risk management is to improving organizational performance in SMEs. The study also aims to offer a fundamental framework that organizations could use to recognize supply chain risks, develop backup plans to reduce the risk, and enhance the efficacy and efficiency of the supply networks. While it would offer insights into the study and make references, the study also hopes to aid future social science researchers. The purpose of this study is to examine the effects of supply chain risks on an organization's performance and the potential benefits of implementing an effective risk management strategy.

To the Author

The research is crucial to the researcher because it sheds light on how important it is to ascertain how supply chain risk affect SME's performance. Additionally, this study will deepen the student's understanding of how all these affect economic growth. The study will also improve the student's analytical abilities by coming up with practical suggestions for reviving SMEs in Zimbabwe's economy

To the University

The fact that this research will expand the university's e-learning resources and enhance the university's reputation makes it crucial for Bindura University's educational mission. By analysing

the results, the research institutions will gain from this study. Researchers will assess the suggestions to see whether supply chain risk management has significantly improved. Other research institutions will pursue the suggested topics of additional research to expand their understanding of supply chain management.

Policy Makers

Policymakers in both the private and public sectors will gain from this study's conclusions and suggestions, which they can utilize to improve organizational performance by implementing sensible supply chain risk management techniques. The identification of variables that contribute to supply chain disruptions and the recommendation of mitigation solutions can enhance the performance of both public and private entities.

1.7 Assumptions

i. Primary data collection will not be biased.
ii. The study will be completed on the stipulated time set by the department.
iii. Findings from the research will be bias free.
iv. There will no spurious regression.
v. Dataset used in this research is accurate and reliable.

1.8 Definition of Terms

1.8.1 Risk

According to Jutter (2006), it refers to the potential for loss or failure to meet business objective.

1.8.2 Supply chain

It is a system of organizations, people, activities, information, and resources involved in transferring a good or service from a supplier to a client, according to Lyson (2006). Natural resources, raw materials, and component parts are transformed through supply chain operations into a final product that is shipped to the final consumer.

1.8.3 Risk management

According to Sheffi (2005) refers to the identification, assessment, control and monitoring of any uncertainties in business that may cause failure or loss

1.8.4 Supply chain Risks

Supply Chain Risk is defined by Kersten et al. (2006) as the potential harm that an event within a company, its supply chain, or its environment could cause to negatively impact the business processes of multiple companies involved in the supply chain. This harm is measured by the probability of the event occurring.

1.8.5 Supply Chain Risk Management

According to Christopher and Peck (2005), lowering supply chain vulnerability overall requires the identification and management of risks for the chain through a coordinated strategy across chain participants.

1.8 Delimitations

i. The research utilise primary data only.
ii. The study is mainly for the Zimbabwean economy only.

1.9 Limitations

Gathering primary information and data for the research is expensive. This may lead to a small sample to be used. However the researcher will be guided by the standard sampling procedures for instance using the Krejcie & Morgan (1970) as right sample size will be drawn from the population.

1.10 Chapter summary

The research issue was presented in this chapter along with explanation of its background, research problem, objectives, research questions, research hypothesis, significant of the study, delimitations and limitations. There will be five primary chapters in this study. The gap analysis and literature

review (both theoretical and empirical) linked to the area of emphasis will be covered in the following chapter.

CHAPTER TWO

LITERATUTURE REVIEW

2.0 Introduction

This chapter comprises five sections: a theoretical review, empirical studies, conceptual framework and hypothesis development, gap analysis, and a chapter summary. Additionally, the chapter delves into the theoretical review, which encompasses an explanation of reverse logistics on profitability theories and corporate image within the manufacturing sector. Moreover, the chapter proceeds to examine the empirical evidence, consisting of studies conducted by other researchers on the topic. It also presents a detailed conceptual framework and hypothesis development. Finally, the chapter concludes with a gap analysis and a summary of its contents.

2.1 Theoretical Framework

This section reviews theories that underpin the study. When examining the theoretical literature on the impact of supply chain risks on the organizational performance of Small and Medium Enterprises (SMEs) in Zimbabwe, several key concepts and theories can be considered. These include the following:

2.1.1 Resource-Based View (RBV): The RBV theory

This suggests that a firm's unique resources and capabilities can influence its performance and competitive advantage. In the context of supply chain risks, SMEs with effective risk management strategies and resilient supply chain networks may be better equipped to mitigate disruptions and maintain performance. The Resource-Based View (RBV) is a theoretical framework that focuses on the internal resources and capabilities of a firm as the primary drivers of its competitive advantage and performance. It suggests that a firm's unique resources, which are valuable, rare, difficult to imitate, and non-substitutable (VRIN criteria), can lead to sustained competitive advantage and superior performance.

Resources refer to the tangible and intangible assets owned, controlled, or accessible to a firm. Tangible resources include physical assets like machinery, technology, and financial capital, while

intangible resources encompass intellectual property, brand reputation, knowledge, and organizational culture.

Capabilities are the firm's ability to utilize its resources effectively to perform specific activities and tasks. They represent the firm's capacity to integrate, coordinate, and deploy resources to achieve strategic objectives. Capabilities can be in the form of technological expertise, managerial skills, innovation processes, supply chain management, and marketing capabilities.

Competitive advantage is the superior performance and market position achieved by a firm compared to its competitors. It stems from the firm's ability to leverage its unique resources and capabilities, creating value for customers and outperforming rivals. Competitive advantage can manifest in various forms, such as cost leadership, product differentiation, or a combination of both.

The VRIN criteria are used to evaluate the strategic value of resources. According to RBV, resources that meet all four criteria (valuable, rare, difficult to imitate, and non-substitutable) have the potential to generate sustained competitive advantage. Valuable resources contribute to customer value creation, rare resources are not easily available to competitors, resources that are difficult to imitate prevent replication, and non-substitutable resources have no close alternatives.

RBV recognizes the importance of dynamic capabilities, which refer to a firm's ability to adapt, innovate, and reconfigure its resources and capabilities to respond to changing market conditions and seize new opportunities. Dynamic capabilities enable firms to sustain competitive advantage over time by continuously adjusting their resource base to match evolving competitive landscapes.

RBV has several implications for strategic management and organizational practices:

Resource Identification and Development (RBV) encourages firms to identify and develop unique resources and capabilities that can provide a competitive advantage. Firms must assess their resource portfolio, identify gaps, and invest in acquiring or developing resources that align with their strategic objectives.

Resource Heterogeneity and Imitation Barriers: RBV suggests that firms can gain a competitive advantage by possessing resources that are difficult to imitate or replicate by competitors. This

emphasizes the need for firms to build capabilities and resources that are rare, valuable, and not easily duplicated, creating barriers to imitation.

Resource Allocation and Strategy Formulation: RBV emphasizes the importance of aligning resources and capabilities with the firm's strategic goals. It guides firms in making decisions regarding resource allocation, investment priorities, and strategic choices to leverage their distinctive competencies and gain a sustainable competitive advantage.

Long-term Perspective: RBV takes a long-term perspective by focusing on the development of unique resources and capabilities. It recognizes that competitive advantage is not easily achieved or sustained in the short term, requiring continuous investment, innovation, and adaptation to changing market conditions.

RBV has been influential in shaping strategic management thinking, particularly in understanding the sources of competitive advantage and the role of firm-specific resources and capabilities.

2.1.2 Transaction Cost Economics (TCE)

TCE theory focuses on the costs and risks associated with transactions between firms. In the context of supply chain risks, SMEs may face higher transaction costs due to uncertainties, information asymmetry, and opportunistic behaviour. Understanding and managing these transaction costs is crucial for maintaining performance. Transaction Cost Economics (TCE) is a theoretical framework developed by economist Oliver E. Williamson to explain and analyze the costs and risks associated with transactions between economic actors. It focuses on understanding the factors that influence the choice between market transactions and hierarchical governance structures within organizations.

Key Concepts of Transaction Cost Economics:

Transaction Costs: Transaction costs are the costs incurred in the process of conducting economic transactions, including searching for information, negotiating contracts, monitoring performance, and enforcing agreements. TCE recognizes that these costs are pervasive in economic activities and play a significant role in shaping the structure and coordination mechanisms of transactions.

Asset Specificity: Asset specificity refers to the degree to which an asset is dedicated to a particular transaction or use and has limited value in alternative uses. TCE distinguishes between three forms of asset specificity: physical asset specificity (specific physical assets required for a transaction), human asset specificity (specific skills and knowledge required for a transaction), and site asset specificity (location-specific assets).

Uncertainty and Information Asymmetry: TCE acknowledges that transactions are often characterized by uncertainty and information asymmetry, where one party possesses more or better information than the other. This creates the potential for opportunistic behaviour, moral hazard, and adverse selection, leading to transaction costs.

Governance Structures: TCE examines the choice of governance structures to minimize transaction costs. It compares alternative forms of governance, primarily market (using price mechanisms) and hierarchy (using authority and control mechanisms). TCE argues that the choice of governance structure depends on factors such as asset specificity, uncertainty, frequency of transactions, and the availability of efficient contracting.

Make-or-Buy Decision: The make-or-buy decision refers to the decision faced by firms to produce a good or service internally (make) or obtain it from external suppliers (buy). TCE provides insights into this decision by considering the trade-offs between transaction costs in the market (buying) and the costs of internal coordination and management (making).

Implications of Transaction Cost Economics

Transaction Cost Economics offers several implications for understanding economic behaviour and organizational design:

Transaction Cost Analysis: TCE provides a framework for analysing and assessing transaction costs in economic activities. It helps identify the factors that influence transaction costs, such as asset specificity, uncertainty, and information asymmetry. By understanding these costs, firms can make informed decisions regarding the most efficient governance structure for a given transaction.

Governance Structure Choice: TCE suggests that the choice of governance structure is influenced by transaction-specific factors. When asset specificity is high, uncertainty is significant, or

information asymmetry is prevalent, hierarchical governance structures (such as internal production) may be preferred over market transactions. Conversely, when transaction-specific factors are low, market transactions may be more efficient.

Contracting and Relationship Management: TCE highlights the importance of effective contracting and relationship management in reducing transaction costs. Firms need to design contracts that align incentives, specify performance criteria, and address potential opportunistic behaviour. Relationship-specific investments, trust-building, and long-term commitments can foster cooperation and reduce transaction costs.

Vertical Integration and Outsourcing: TCE provides insights into decisions regarding vertical integration and outsourcing. Firms may choose to vertically integrate to internalize transactions and reduce the costs associated with market transactions. Alternatively, they may outsource certain activities to external suppliers to take advantage of market efficiencies and reduce internal coordination costs.

Transaction Cost Analysis in Policy and Regulation: TCE has implications for policy and regulation, particularly in understanding the effects of transaction costs on market outcomes. It helps policymakers assess the impact of regulations on transaction costs, market competition, and the choice of governance structures.

2.3 Contingency Theory

Contingency theory suggests that the effectiveness of management practices depends on the fit between the organization and its environment. In the context of supply chain risks, SMEs need to align their risk management strategies and practices with the specific risks they face in the Zimbabwean business environment to mitigate disruptions and enhance organizational performance. Contingency Theory is a theoretical framework that suggests that the effectiveness of management practices and organizational structures depends on the fit or alignment between the organization and its environment. It proposes that there is no one-size-fits-all approach to organizing and managing, and that different situations require different strategies and structures.

Key Concepts of Contingency Theory:

Fit: Fit refers to the alignment between the characteristics of the organization and the demands of its environment. Contingency Theory argues that organizations are more effective when there is a match or fit between their internal structures, processes, and strategies, and the external factors they face, such as technology, market conditions, and regulatory environment.

Contingency Variables: Contingency variables are the factors or dimensions that determine the appropriate management practices and organizational structures for a given situation. These variables can include environmental uncertainty, task complexity, organization size, technology, and the skills and preferences of individuals within the organization.

Mechanistic and Organic Structures: Contingency Theory contrasts mechanistic and organic structures as two ends of a continuum. Mechanistic structures are characterized by formalized procedures, hierarchical decision-making, and centralization of authority. Organic structures, on the other hand, are more flexible, decentralized, and adaptable to changes in the environment.

Contingency Approach to Decision-Making: Contingency Theory suggests that decision-making processes should be contingent upon the situation. Depending on the nature of the decision, the level of uncertainty, and the availability of information, different decision-making approaches, such as centralized or decentralized decision-making, may be more effective.

Contingency Approach to Leadership: Contingency Theory proposes that effective leadership depends on the match between the leader's style and the characteristics of the situation. Different leadership styles, such as autocratic, participative, or laissez-faire, may be more effective depending on the demands of the task, the capabilities of the followers, and the level of uncertainty in the environment.

Implications of Contingency Theory:

Contingency Theory has several implications for organizational design and management practices:

Designing Organizational Structures: Contingency Theory suggests that organizations should design their structures based on the demands of their environment. If the environment is stable and predictable, a more mechanistic structure with clear rules and procedures may be appropriate. In

contrast, in dynamic and uncertain environments, an organic structure that allows for flexibility and adaptation may be more effective.

Adapting Management Practices: Contingency Theory highlights the need for managers to adapt their practices based on the specific situation. This includes adapting decision-making processes, leadership styles, communication channels, and control systems to fit the contingencies of the organization and its environment.

Environmental Scanning: Contingency Theory emphasizes the importance of monitoring and scanning the external environment to identify changes and adapt accordingly. Organizations need to be proactive in gathering information about technological advancements, market trends, regulatory developments, and other factors that may impact their effectiveness.

Fostering Organizational Flexibility: Contingency Theory suggests that organizations should strive for flexibility and adaptability to respond to changing environments. This may involve promoting a culture of innovation, encouraging employee involvement and empowerment, and building agile processes and structures that can quickly adapt to new circumstances.

Situational Leadership: Contingency Theory highlights the need for leaders to assess the situation and adjust their leadership style accordingly. Effective leaders are those who can match their style to the demands of the task, the capabilities of their team members, and the dynamics of the external environment.

Contingency Theory provides a framework for understanding the contingent nature of organizational phenomena and the need for flexibility and adaptation. By considering the fit between the organization and its environment, managers can make informed decisions about structures, practices, and strategies that enhance organizational effectiveness in specific situations.

2.4 Resilience Theory

Resilience theory focuses on an organization's ability to adapt and recover from disruptions. SMEs that exhibit resilience in their supply chain management practices, such as flexibility, redundancy, and agility, are better positioned to withstand supply chain risks and maintain performance levels. Resilience Theory is a multidisciplinary theoretical framework that focuses on understanding how individuals, communities, and systems can effectively adapt, recover, and thrive in the face of

adversity, shocks, and disturbances. It seeks to explain why some individuals or systems are better able to bounce back and maintain functionality in the face of challenges, while others struggle or experience long-lasting negative effects.

Key Concepts of Resilience Theory:

Resilience: Resilience refers to the capacity of individuals, communities, or systems to withstand, adapt to, and recover from adversity. It encompasses the ability to bounce back, maintain functionality, and even grow stronger in the face of challenges. Resilience is not a fixed trait but rather a dynamic process influenced by multiple factors.

Adaptive Capacity: Adaptive capacity is a central concept in Resilience Theory. It represents the ability of individuals, communities, or systems to adjust, learn, and respond effectively to changing circumstances and stressors. Adaptive capacity involves factors such as flexibility, learning, social capital, diversity, and the availability of resources and options for adaptation.

Complex Systems Perspective: Resilience Theory takes a complex systems perspective, recognizing that individuals, communities, and ecosystems are interconnected and influenced by multiple interacting factors. It considers the interactions and feedback loops between different components of a system and examines how changes in one part of the system can have ripple effects throughout the system.

Multiple Pathways and Trajectories: Resilience Theory acknowledges that there are multiple pathways and trajectories of resilience. Different individuals, communities, or systems may employ diverse strategies, resources, and adaptive responses depending on their unique circumstances, characteristics, and context.

Panarchy: Resilience Theory incorporates the concept of panarchy, which refers to the nested, hierarchical relationships between different scales and levels of organization. It recognizes that resilience operates at multiple scales, from individuals to communities, organizations, and larger socio-ecological systems. Changes and disruptions at one level can affect the resilience and dynamics of other levels.

Factors Influencing Resilience:

Resilience Theory identifies various factors that influence resilience across different levels of analysis:

Individual Factors: Individual factors include personal characteristics, coping strategies, self-efficacy, optimism, problem-solving skills, and emotional intelligence. Personal resilience can be influenced by factors such as genetic predispositions, early life experiences, social support networks, and access to resources and opportunities.

Community Factors: Community factors encompass social networks, social capital, trust, collaboration, community cohesion, and collective action. Communities with strong social ties, supportive institutions, and effective governance structures are often more resilient in the face of challenges.

Organizational Factors: Organizational factors include leadership, organizational culture, communication, adaptability, learning capacity, and resource availability. Resilient organizations are characterized by flexible structures, diverse skill sets, effective crisis management strategies, and the ability to learn from past experiences.

Socio-Ecological Factors: Socio-ecological factors recognize the interdependence between human systems and the natural environment. Resilience is influenced by factors such as ecosystem health, resource availability, climate change, land use practices, and the capacity to manage environmental risks and vulnerabilities.

Applications of Resilience Theory:

Resilience Theory has been applied in various fields, including psychology, sociology, disaster management, community development, and environmental sustainability. Some practical applications include:

Disaster Management and Emergency Response: Resilience Theory provides insights for designing disaster management systems that focus on building preparedness, response capabilities, and recovery strategies that enhance resilience at individual, community, and organizational levels.

Community Development and Social Policy: Resilience Theory guides community development approaches that foster community empowerment, social capital, and the creation of supportive environments that enable communities to better withstand and recover from adversity.

Organizational Resilience and Business Continuity: Resilience Theory informs strategies for building organizational resilience, including crisis management plans, flexible structures, diversification of resources, and the development of adaptive capacities to respond to disruptions.

Sustainable Development and Environmental Resilience: Resilience Theory contributes to understanding the resilience of socio-ecological systems and guides efforts to promote sustainable development, manage natural resources, and address the impacts of climate change.

Resilience Theory offers a valuable perspective for understanding how individuals, communities, and systems can effectively navigate challenges and adapt to changing circumstances. By identifying the factors that enhance resilience, researchers and practitioners can develop strategies and interventions to promote resilience and well-being in various contexts.

2.5 Stakeholder Theory

Stakeholder theory emphasizes the importance of considering the interests and expectations of various stakeholders in organizational decision-making. In the context of supply chain risks, SMEs need to consider the expectations and demands of customers, suppliers, regulators, and other stakeholders to effectively manage risks and maintain performance. Stakeholder Theory is a theoretical framework that focuses on the relationships between an organization and its stakeholders. It suggests that organizations have a responsibility not only to their shareholders but also to a broader range of individuals and groups who are affected by or can affect the organization's actions and decisions. Stakeholder Theory emphasizes the importance of considering the interests, rights, and concerns of all relevant stakeholders in organizational decision-making and management practices.

Key Concepts of Stakeholder Theory:

Stakeholders: Stakeholders are individuals, groups, or entities that have a stake or interest in the activities, decisions, and outcomes of an organization. Stakeholders can include shareholders,

employees, customers, suppliers, local communities, government authorities, non-governmental organizations (NGOs), and the natural environment.

Stakeholder Interests: Stakeholder Theory recognizes that stakeholders have different interests and that organizations should consider and balance these interests when making decisions. Stakeholder interests may include financial returns, employment opportunities, product quality and safety, environmental sustainability, social responsibility, and ethical considerations.

Stakeholder Salience: Stakeholder salience refers to the degree of significance or importance assigned to different stakeholders by an organization. Stakeholders can be classified based on their power (ability to influence the organization), legitimacy (the appropriateness of their claim on the organization), and urgency (the time sensitivity of their claims or needs).

Stakeholder Engagement: Stakeholder engagement involves actively involving and communicating with stakeholders in decision-making processes. It includes seeking input, gathering feedback, and considering stakeholder perspectives and concerns. Effective stakeholder engagement can enhance trust, legitimacy, and the quality of decision-making.

Stakeholder Management: Stakeholder management involves identifying and prioritizing stakeholders, understanding their interests and concerns, and developing strategies to address their needs and expectations. It aims to build positive relationships, minimize conflicts, and create value for both the organization and its stakeholders.

Implications of Stakeholder Theory:

Stakeholder Theory has several implications for organizational strategy and practices:

Broadening the Scope of Responsibility: Stakeholder Theory challenges the notion that the primary responsibility of an organization is solely to maximize shareholder value. It emphasizes the importance of considering the interests and well-being of all stakeholders and integrating their concerns into decision-making processes.

Long-Term Perspective: Stakeholder Theory promotes a long-term perspective by recognizing that sustainable success requires the satisfaction of multiple stakeholders over time. Organizations that prioritize stakeholder relationships and address their concerns are more likely to build trust, loyalty, and reputation, leading to long-term success.

Ethical and Social Responsibility: Stakeholder Theory encourages organizations to consider ethical and social implications in their decision-making. It highlights the importance of conducting business in a responsible and sustainable manner, addressing social and environmental concerns, and contributing positively to society.

Reputation and Trust Building: Stakeholder Theory recognizes that stakeholder relationships are crucial for an organization's reputation and success. By actively engaging with stakeholders, addressing their concerns, and fulfilling commitments, organizations can build trust, enhance their reputation, and gain a competitive advantage.

Risk and Crisis Management: Stakeholder Theory emphasizes the need for organizations to proactively manage risks and anticipate potential conflicts or crises that may arise from stakeholder concerns. By understanding stakeholder interests and engaging in dialogue, organizations can identify and address issues before they escalate into significant problems.

Innovation and Competitive Advantage: Stakeholder Theory suggests that organizations can gain a competitive advantage by understanding and responding to stakeholder needs and expectations. By involving stakeholders in the innovation process, organizations can develop products, services, and business models that better meet market demands and create value for multiple stakeholders.

Stakeholder Theory provides a framework for organizations to navigate the complex landscape of stakeholder relationships and consider the broader impact of their actions. By adopting a stakeholder-oriented approach, organizations can enhance their legitimacy, build trust, and contribute to sustainable and responsible business practices.

Supply Chain Performance

Supply chain performance refers to the measurement and evaluation of the effectiveness and efficiency of a supply chain in meeting its objectives and delivering value to customers. It involves assessing various key performance indicators (KPIs) and metrics to gauge the overall performance of the supply chain and identify areas for improvement. Supply chain performance is crucial for organizations as it directly impacts customer satisfaction, profitability, and competitive advantage.

According to Maestrini et al. (2017), the performance is "A set of metrics used to quantify the efficiency and effectiveness of supply chain processes and relationships, spanning multiple organizational functions and multiple firms and enabling supply chain orchestration." Every business wants to increase performance, but in order to do so, they must first effectively measure it (Gunasekaran and Kobu, 2007). Cost was used to gauge success in the past, but as time went on, additional financial indicators were introduced, such as return on asset, return on investment, sale, and so forth (Anand and Grover, 2015). Since financial indicators alone are insufficient to accurately and comprehensively assess performance, some operational indicators were incorporated when the balance scorecard technique was developed (Gunasekaran et al., 2004).
Customer Service is one of the supply chain performance aspects. One of the primary goals of a supply chain is to provide excellent customer service. Customer service performance metrics include on-time delivery, order fulfilment rates, accuracy of deliveries, response time to customer inquiries, and customer satisfaction surveys. Meeting or exceeding customer expectations is essential for maintaining customer loyalty and gaining a competitive edge.

Additionally, cost efficiency supply chain performance is another aspect of supply chain performance and is closely tied to cost efficiency. Organizations strive to minimize costs across the supply chain while maintaining quality and service levels. Key cost-related metrics include total logistics costs, cost of goods sold, transportation costs, inventory carrying costs, and cost per order. Identifying cost-saving opportunities and optimizing processes can contribute to improved supply chain performance.

Effective inventory management is crucial for supply chain performance. Metrics such as inventory turnover, carrying costs, stock outs, and order fill rates provide insights into inventory efficiency and accuracy. Balancing inventory levels to meet customer demands while minimizing carrying costs and obsolescence is a key objective.

Lead Time and Responsiveness is also one of the key aspects of the supply chain performance. The speed and responsiveness of a supply chain significantly impact customer satisfaction and market competitiveness. Metrics related to lead time, order processing time, production cycle time, and responsiveness to changes in demand or market conditions help evaluate the agility and responsiveness of the supply chain.

Under supplier performance collaborating closely with suppliers is essential for supply chain success. Evaluating supplier performance through metrics such as on-time delivery, quality performance, lead time, and cost compliance helps identify reliable and efficient suppliers. Strong supplier performance contributes to smoother supply chain operations and customer

2.6 Empirical Literature Review

This section presents the empirical literature by basically analysing some researches which were done and are related to the topic under discussion.

Supply chain risk management (SCRM) is a new field that came from the juncture of the supply chain (SC) and risk management and it has gain historical importance in research (Zubair and Mufti, 2015). Being a relatively new area SCRM is being assumed as a confused and orderless field (Trkman and McCormack, 2009). According to Manuj and Mentzer (2008), there is still no clear definition that describes SCRM completely. Even though this area has attracted many researcher's attention still it does not have a clear definition (Ponomarov and Holcomb, 2009). A comprehensive review from 1995 to 2009 shows that study on SCRM is still limited (Tang and Musa, 2011). Some definitions have been mention below to get common and better understanding of the area according to the current study. From the above-stated definitions, it is clear that SCRM is vast in its objectives and have become more complex (Basole et al., 2016). Consensus has been developed that there is no clear definition of SCRM (Musa, 2012; Sodhi et al., 2012; Tang and Musa, 2011). After thorough investigations of definitions, some limitations have been identified. (i) there is no definition that explain the flow of information, material and finance, (ii) no definition is available that express the whole supply chain risk management process like identification, assessment, and mitigation of supply chain risks, (iii) there is no definition that aims to reduce vulnerability as whole that means the focus is on whole supply chain and all members, not an only organization.

Supply chain performance The performance is "A set of metrics used to quantify the efficiency and effectiveness of supply chain processes and relationships, spanning multiple organizational functions and multiple firms and enabling supply chain orchestration" (Maestrini et al., 2017). The aim of every organization is to enhance the performance but for improvement, they must need to measure it accurately first (Gunasekaran and Kobu, 2007). Previously performance was measured by cost with the passage of time more financial indicator were added like return on asset, return

on investment, sale and etc. (Anand and Grover, 2015). Only financial indicators are not enough for measure overall and accurate performance, consequently, with invent of balance scorecard approach some operational indicators were added (Gunasekaran et al., 2004). Other approaches also added values in measuring supply chain like quantitative or qualitative measures, strategic, tactical and operational measures and etc. (Arzu Akyuz and Erman Erkan, 2010).

A comprehensive review and revealed that for the good performance measure all the members should be considered, performance measure should consider both financial and non-financial items, all the levels of supply chain must be considered and all process of supply chain should be included so the performance should be measured by operational performance (Shahbaz et al., 2018b). Meanwhile, researchers had used many ways to measure the effects of risk sources and supply chain practices with different means like firm or organizational performance (Cook et al., 2011; Shukla et al., 2013), product performance, operational performance (Kauppi et al., 2016; Sukati et al., 2013), logistic performance (Effendi, 2015), financial performance (Li et al., 2015) or operational performance (Ahmad and Saifudin, 2014; Chen, 2012; Sukati et al., 2012; Sundram et al., 2016). Supply chain risks have been assessed in various ways in the literature review. It is concluded in the performance section in the literature review that it is almost impossible to find out a unique and commonly acceptable way to measure the performance.

Performance measures should have some characteristics like sustainability, relevance, effectiveness, coherence, efficiency, and robustness (Chardine-Baumann and Botta-Genoulaz, 2014). The study of (Wagner and Bode, 2008) considered a good attempt, performance metric investigate overall supply chain performance for risk management on four indicators delivery dependability, delivery speed, order fill capacity, and customer satisfaction. Since quality is critical factors, many risk direct effect on quality (Chen, 2012). Additionally, Chen et al. (2013) add quality and measure overall supply chain performance on five indicators Items Product quality, Order fill capacity, Delivery dependability, Delivery speed, and Customer satisfaction. This study is closet and updated that is current study adopted the items of supply chain performance from (Chen et al., 2013).

Muhammad Saeed Shahbaz et al (2019), carried out an empirical investigation on supply chain risks and SMEs performance in Malaysia. The data was collected through a questionnaire distributed by systemic probability sampling to listed Manufacturing organizations listed in the Federation of Manufacturing Malaysia by emails. Final and purified data was analyzed through

Structural Equational Modeling through Smart PLS. Total three types of risks were assessed namely logistic side risks, collaboration side risks, and finance side risks. It has been found that although all three types have a negative impact on supply chain performance only logistic side risks is effecting significantly.

Caroline Wanjiru Munyuko (2015) researched about the effects of supply chain risk management on organization performance for Andy Forwarders Company. The population for the research included staff at Andy forwarders and logistics services. The research methodology included both primary and secondary data; both interviews and questionnaires were used, questionnaires being the main instrument of data collection. The researcher used questionnaire Tables, bar graphs and pie charts were used during the analysis using the statistical of science package software in order to come up with accurate analysis and presented in tabular and graphical methods. The results obtained showed that there was a direct link between supply chain risk management and organization performance.

2.7 Conceptual Framework

The conceptual framework presented in Figure 1 predicts that supply chain risks will either positively or negatively affect supply chain performance of Zimbabwe's SMEs. The dependent variable is the supply chain performance which comprises of effectiveness, efficiency and flexibility. Supply chain risk is the main independent variable which comprises of logistic risk, collaboration risk and finance risk. Other control variables will be added guided by the literature.

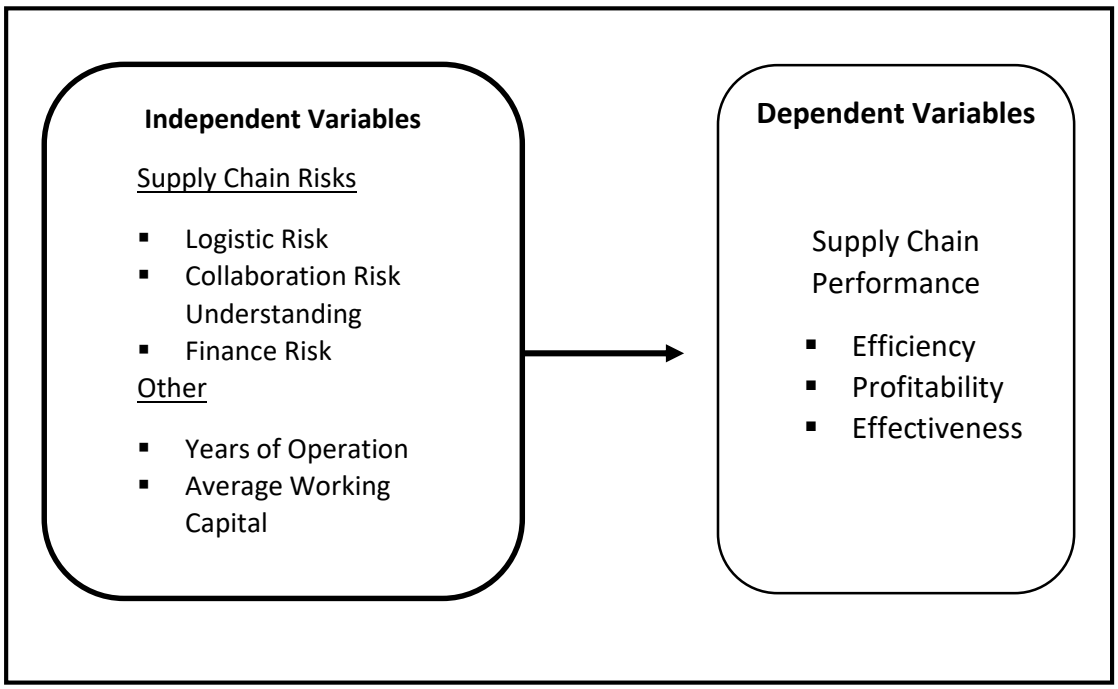


Figure 1: Conceptual framework

2.8 Research Gap

To cover above mentioned limitations this study proposes a new definition and perceives the supply chain risk management as "the management of supply chain risks through supply chain risk management process that makes the smooth flow of the information, material and financial from supplier to end-users".

There has been an ever-going debate on how the SMEs can be fully incorporated into the main GDP activities. In most developing countries, there is no consensus on how this can be done since most SMEs are not well registered and in most cases the government loses potential income due to tax losses. The SMEs points the lack of enough capital, low profitability and risks in getting

incorporated into main supply chains. This study therefore focuses on how supply chain risks affect SMEs performance in Zimbabwe, focusing on Harare and Bulawayo Provinces.

2.9 Chapter Summary

This chapter presented five sections: a theoretical review, empirical studies, conceptual framework and hypothesis development, gap analysis, and a chapter summary. Additionally, the chapter delved into the theoretical review, which encompasses an explanation of reverse logistics on profitability theories and corporate image within the manufacturing sector. Moreover, the chapter proceeded to examine the empirical evidence, consisting of studies conducted by other researchers on the topic. It also presents a detailed conceptual framework and hypothesis development. Finally, the chapter concludes with a gap analysis and a summary of its contents. The next chapter is the methodology section.

CHAPTER THREE

METHODOLOGY

2.0 Introduction

In this chapter, the methodology of the study is examined. It covers essential components such as the research design and approach, the research population including the targeted population and sampling size, the research instruments, the methods of data collection, and the presentation and analysis of the data. The techniques employed for analysis and the rationale behind their selection are supported by relevant literature. Furthermore, this section provides a comprehensive explanation of the ethical standards followed during the data collection process.

3.1 Research design

Research design is described as an all-inclusive strategy for data amassing in an evidence based research project (Neuman, 2018). Azevedo *et al*. (2011) further expounded that, it as a blue-print for empirical research aimed at answering specific research questions and problems. A case study research strategy was employed. This gave room to the researcher to provide a comprehensive study. As such this corresponds with Rebolj (2017) that case studies make it easier for researchers to study the operation of causal meanings and to obtain detailed and relevant data.

3.2 Research Approach

The study adopted a mixed research approach such that the researcher quantified and explain supply chain risks' effect on organizational performance in the SMEs sector in Zimbabwe. Both quantitative and qualitative survey approaches were also useful to put up a sample size in order to carry out statistical analysis.

3.2.1 Deductive approach

A deductive approach is concerned with developing a hypothesis based on existing theory, and then designing a research strategy to test the hypothesis (Wilson, 2010). Therefore, deductive means reasoning from the particular to the general. A deductive design might test to see if this relationship or link did obtain on more general circumstances. Deductive approach can be explained by the means of hypotheses, which can be derived from the propositions of the theory. In other words, deductive approach is concerned with deducting conclusions from premises or propositions. According to Gulati (2009) deduction begins with an expected pattern that is tested against observations, whereas induction begins with observations and seeks to find a pattern within them.

Deductive approach offers the following advantages namely possibility to explain causal relationships between concepts and variables, possibility to measure concepts quantitatively and possibility to generalize research findings to a certain extent. Alternative to deductive approach is inductive approach.

Table 1: Choice between deductive and inductive approaches

	Deductive approach preferred	Inductive approach preferred
Wealth of literature	Abundance of sources	Scarcity of sources
Time availability	Short time available to complete the study	There is no shortage of time to compete the study
Risk	To avoid risk	Risk is accepted, no theory may emerge at all

Source: Alistair (2015)

Deductive research approach explores a known theory or phenomenon and tests if that theory is valid in given circumstances. It has been noted that the deductive approach follows the path of logic most closely (Babbie, 2010). The reasoning starts with a theory and leads to a new hypothesis. This hypothesis is put to the test by confronting it with observations that either lead to a confirmation or a rejection of the hypothesis.

Moreover, deductive reasoning can be explained as reasoning from the general to the particular, whereas inductive reasoning is the opposite. In other words, deductive approach involves

formulation of hypotheses and their subjection to testing during the research process, while inductive studies do not deal with hypotheses in any ways. Wilson (2010) is of the view that in studies with deductive approach, the researcher formulates a set of hypotheses at the start of the research. Then, relevant research methods are chosen and applied to test the hypotheses to prove them right or wrong.

Deductive approach was adopted in study following stages; deducing hypothesis from theory, Formulating hypothesis in operational terms and proposing relationships between two specific variables, testing hypothesis with the application of relevant method. These are quantitative methods such as regression and correlation analysis, mean, mode and median and others, and finally examining the outcome of the test, and thus confirming or rejecting the theory. When analyzing the outcome of tests, it is important to compare research findings with the literature review findings.

3.2.2 Inductive approach

Inductive approach, also known in inductive reasoning, starts with the observations and theories are proposed towards the end of the research process as a result of observations (Pelissier, 2008). Inductive research involves the search for pattern from observation and the development of explanations theories for those patterns through series of hypotheses. It is important to stress that inductive approach does not imply disregarding theories when formulating research questions and objectives. This approach aims to generate meanings from the data set collected in order to identify patterns and relationships to build a theory; however, inductive approach does not prevent the researcher from using existing theory to formulate the research question to be explored. Inductive reasoning is based on learning from experience. Patterns, resemblances and regularities in experience (premises) are observed in order to reach conclusions (or to generate theory).

Inductive reasoning begins with detailed observations of the world, which moves towards more abstract generalisations and ideas. Snieder and Larner (2009) contends that when following an inductive approach, beginning with a topic, a researcher tends to develop empirical generalisations and identify preliminary relationships as he progresses through his research. No hypotheses can be found at the initial stages of the research and the researcher is not sure about the type and nature of the research findings until the study is completed, hence the study did not consider this approach as it does not fit the well.

3.3 Research paradigm

A research paradigm refers to model, method or a pattern for carrying out a research (Bird, 2010). In another words, a research paradigm refers to a set of beliefs, assumptions, and principles that guide the way research is conducted within a particular field or discipline. It provides a framework for understanding and approaching research questions, data collection, analysis, and interpretation. Different research paradigms offer distinct perspectives and methodologies, shaping the overall approach to knowledge creation. Here are three commonly recognized research paradigms:

- Positivist Paradigm: The positivist paradigm is rooted in the belief that knowledge can be obtained through objective observation, measurement, and experimentation. It emphasizes the use of quantitative methods and aims to establish causal relationships between variables. Positivist researchers typically adhere to the principles of objectivity, replication, and generalizability, seeking to produce knowledge that is valid and reliable.

- Interpretivist Paradigm: The interpretivist paradigm, also known as the constructivist or qualitative paradigm, focuses on understanding the subjective meanings and interpretations individuals assign to their experiences. It emphasizes the context, social interactions, and the subjective nature of reality. Interpretivist researchers employ qualitative methods such as interviews, observations, and textual analysis to explore the complexity of human experiences and phenomena.

- Pragmatic Paradigm: The pragmatic paradigm recognizes the value of both positivist and interpretivist approaches and seeks to integrate them, depending on the research question and context. Researchers operating within the pragmatic paradigm are concerned with finding practical solutions to real-world problems. They may utilize a mixed methods approach, combining quantitative and qualitative methods, to gain a comprehensive understanding of the research topic.

The study has a set of values, beliefs and ideas which theories and practices can function. Therefore, the paradigm derived is the pragmatism. This is so because it is oriented toward solving practical problems in real world rather than on assumptions about the nature of knowledge.

3.4 Population

According to Nueman (2011) population is the number of elements available for study. Population is the group of interest to the researcher and it is upon this group that the researcher generalized

the results of the study (Parker 2012). The study population is derived from a list of SMEs in Harare and Bulawayo province which houses the biggest percentage of SMEs in Zimbabwe.

3.4.1 Target population of the Study

The target research population consisted of SMEs owners and workers. Interviews and questionnaires were used by the researcher in collecting qualitative data. Focus Group Discussions and Key Informant Interviews were used to collect qualitative data. The targeted population is 500 SMEs owners and workers.

3.5 Sample size Determination

The sample size was determined using Krejcie and Morgan (1970)[1] model. This means the minimum sample required to a true representation of the population is 217 respondents for the quantitative data.

3.6 Sampling Method

A sample encompasses elements of the population considered for the definite inclusion in the research (Creswell, 2012). Sampling benefited this study as it enabled feasibility. The process of sampling convoluted non-probability together with the probability sampling methods, this allowed the researcher to use both own personal judgment and statistics of who to take in the sample.

3.7 Sampling Techniques

Both non probability and probability sampling methods were used. Probability sampling methods were used for quantitative data collection whilst non-probability sampling was used for qualitative data collection. Stratified sampling was used by first grouping SMEs in the same industry and then carry out random sampling from the stata.

Purposive sampling is the type of sampling that is wholly based the researcher's judgment, in a sample that is composed of elements that contain typical attributes of the population (Marxwell, 2004). The judgmental sampling technique was selected for this research to handpick subjects that illuminated the purpose of this study. The procedure paved way for the researcher to own discretion, thus, the more information the researcher is pertaining the target population, the lighter

[1] Please see the Krejcie and Morgan (1970) table in appendix 1

and objective the selection of the sample. These techniques were mainly used for the qualitative data collection.

3.8 Data Collection Sources, Instruments and Methods

3.8.1 Data Collection Source

Primary data was collected using semi-structured questionnaires. Primary data was collected to allow the researcher to control the amount of error for accuracy to be made (Kumar, 2005). However, the researcher experienced some challenges in using primary data as data gathering was time consuming and expensive.

3.8.2 Data Collection Instruments and Methods

3.8.2.1 Questionnaires

As is defined by Walliman (2011) a questionnaire is tool of data gathering containing a series of standardised questions in line to the study subject be completed in writing by the participants as a systematic compilation of questions that are aimed at a sample of population from which relevant and reliable information is desired Bloomberg (2011) weighs in and describe a questionnaire as a framework which encompasses a set of questions as well as gauges architecture to generate primary data. In this regard the respondents read and interpret the questions and write down answers for themselves, with some help if need be. The researcher used both open-ended and closed questions. These were engaged as they are ideal in administering them in limited time. The respondents were made to fill in the details and this type of a tool was directed at the general public. A Likert type scale was used in scoring responses in the questionnaire, as these ranged from either yes and no or One (1) up to Five (5) with the respondents ticking on appropriate response. These techniques were advantageous as it enabled the researcher to explore and expose data which is found within the mind, heart and feelings by the people. The open and closed ended questions helped in enabling the study participants to fully express one-self, these also were answered in the same framework so that they could be comparable with one another. Correspondingly, Parker (2016) describes the Likert scale as measure of the responses used in questionnaires to retrieve the gravity of agreement by participants to a given subject matter.

3.8.2.2 In-depth Interviews

A person-person interface between two or more people with a particular tenacity in mind is an interview (Myers and DeWall, 2015). This method of data gathering allowed the enquirer to get a positive effect as people can open up their minds, as these are individually interviewed, such that a problem can be shed. In a bid to collect rich data, which increases reliability and validity, from the participants the researcher avoided distortions such as asking leading questions, the interviewer should be equipped with proper skill in order to solicit data from the respondents (Singleton and Straits, 2010). The interviews were done through non digital means such as face to face and digital means which is via telephone calls, virtual video meeting platforms such as Skype, Zoom meeting and Electronic mailings. The interviewees (4), only those that gave their consent, were audio-taped and later transcribed in their original language and translated to English as needed.

3.9 Data Analysis

Data is presented in three forms namely descriptive, diagrammatic and tabular. A simple linear regression is also used for quantitative data analysis. These presentation approaches are helpful and effective as they help the study to communicate important takeaways, gives valuable information and guide important business decisions (Yin, 2019). Over and above these data presentation procedures are relevant to the study as they are useful for translating facts and statistics into actionable knowledge.

3.10 Model and Estimation Procedure

3.10.1 Multiple Regression Model

To analyze the relationship between supply chain performance (dependent variable) and supply chain risks and other control variables, this research applies a simple linear regression model guided by the following model specification. The formula for regression equation with multiple variables is as follows;

$$\boldsymbol{Perf = \alpha + \beta_1 CollRisk + \beta_2 LogRisk + \beta_3 FinRisk + \beta_4 OperYears + \beta_5 WorCapit + \mu}$$

$Perf$ = the dependent variable representing the performance of the SME which is sub divided into Effectiveness, Profitability and Efficiency

$CollRisk$ = Collaboration Risk.

$LogRisk$ = Logistics Risk

$FinRisk$ = Financial Risk.

$OperYears$ =Years of operations of the SME.

$WorCapit =$ Average Working Capital

μ=an error term

3.11 Validity and Reliability of Results

Reliability is the level to which results are consistent over time, Joppe cited in (Golafshani, 2003). The researcher tested the reliability of the results using Cronbach's Alpha. Cronbach's (Sekaran and Bougie 2019). The researcher carried out content validity to ensure that the questions in the questionnaire were in line with the objectives of the research study. Also, pilot study was conducted in order to test the face validity of the study. The pilot study was carried out to make sure that the questionnaire is adjusted if there are any issues raised by the respondents as well as testing the perceived validity and reliability of the questionnaire.

3.12Ethical and Legal Considerations

Informed consent was made to respondents throughout the study. The researcher started by requesting for permission to carry out the study at Bindura University of Science Education and he informed the university about the purpose of the study. For the qualitative data collection especially the Focus Group Discussion, ethical considerations are important.

The researcher instructed the respondents not to write their names on questionnaires in order to protect their identity. This was in line with Morrison et al (2011) who put forward that, when the information that is to be provided by participants is confidential, they should not disclose their identities in order to make them participate freely without any fear of punishment and so helping the researcher to acquire more relevant data.

Also, the study was not duplicated from any person nor plagiarized. Plagiarism is taking someone's work or ideas and presenting them as your own (Ezikiel, 2008). The entire literature

and structure which was used in this study was referenced and listed on the section of references. Therefore, the study was wholly carried out by the researcher.

3.13 Chapter Summary

The Chapter looked at the methodology in which the study employed to carry out data gathering collection processes. The chapter touched on various areas such as research design, which identified the case study as a design. Target population and sampling techniques for the study are also established in this section. The chapter discussed the methods of methods of data collection and analysis as well as the ethical standards that were adhered to during the data collection process in detail. The next chapter focuses on study findings from the generated data processes and analysis.

CHAPTER IV

DATA ANALYSIS AND RESULTS PRESENTATION

4.0 Introduction

This chapter provides a comprehensive overview of the key discoveries, conclusions, and contributions that have been made, shedding light on the core objectives of the research and addressing the research questions or hypotheses. This chapter not only presents the findings but also provides a detailed explanation of the methodology employed to collect and analyze the data. It highlights the research design, outlines the techniques and tools used, and discusses the limitations and potential biases that may have influenced the results. Through an in-depth analysis

of the key results, we aim to contribute to the existing body of knowledge and inspire further investigations in the field.

4.1 Descriptive data analysis

Table 2 displays the descriptive statistics of the primary variables in this study. The dependent variable which is subdivided into three, efficiency, effectiveness and profitability have a minimum of 1 and maximum of 5 and were measured using a Likert scale with values ranging from 1 to 5 with a mean of 4.22, 3.73, 4.06 respectively. Logistics risk has a minimum value of 3 and a maximum value of 5 with a mean of 3.76. Additionally, collaboration risk, finance risk have a minimum of 1 and a maximum of 5 with average values of 4.25 and 3.35 respectively. Other control variables, years of operation and average working capital have a minimum of 1 year and $1500 and maximum of 19years and $15000 respectively. Average Working Capital variable has an average of $7095. Figures 2 and 3 also present the average working capital and years of operation graphically.

Table 2: Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
efficiency	217	1	5	4.22	1.181
Effectiveness	217	1	5	3.73	1.338
profitability	217	1	5	4.06	1.197
Logistic risk	217	3	5	3.76	.731
Collaboration risk	217	1	5	4.25	1.140
Finance risk	217	1	5	3.35	1.436
Years operation	217	1	19	7.37	3.378
Average Working Capital	217	1500	15000	7095.85	3680.558

Figure 2: Average Working Capital

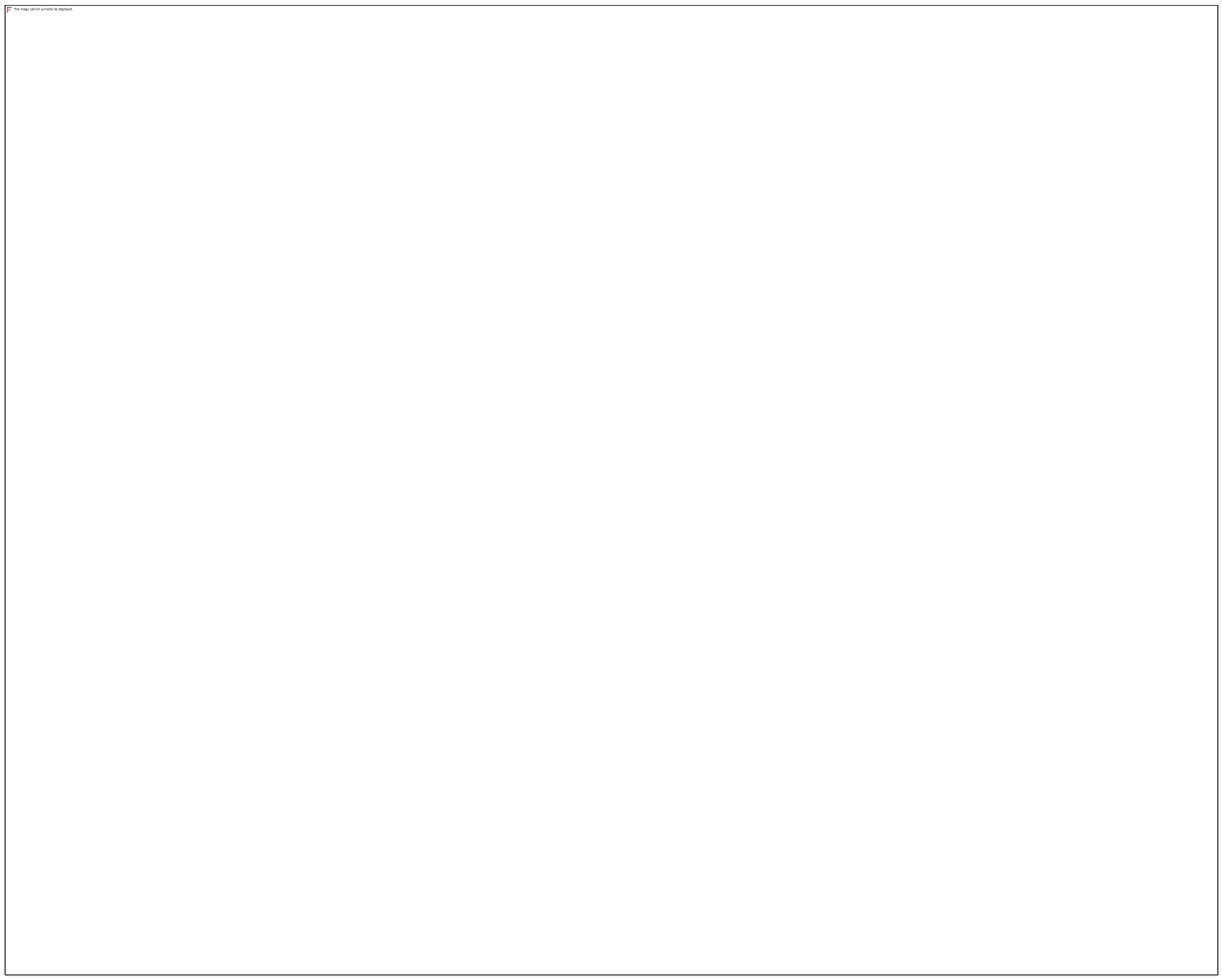
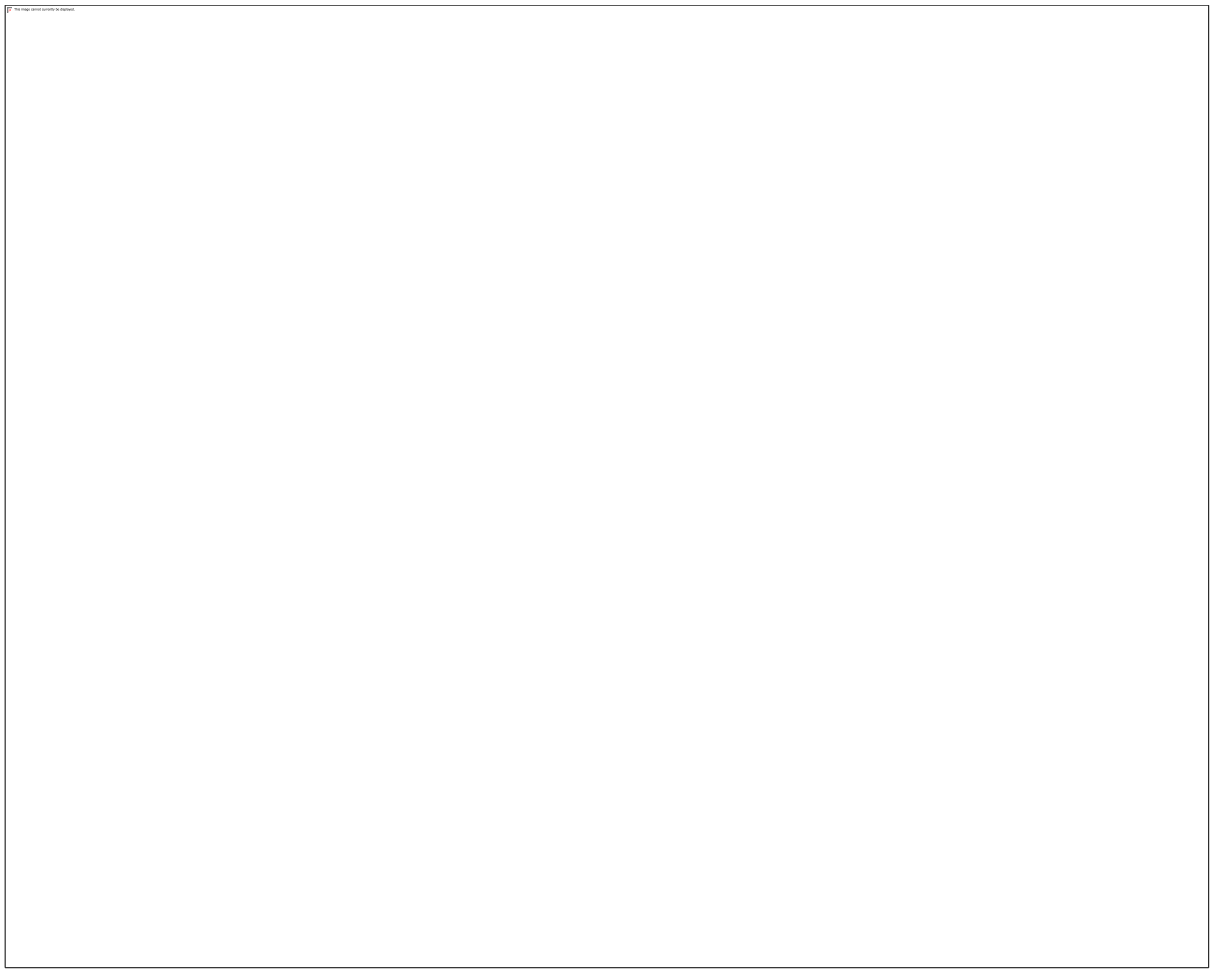


Figure 3: Years of Operation



4.2 Correlation Matrix

Table 3, 4 and 5 displays the relationships among several pairs of variables utilized in this investigation using the correlation matrix. All the tables demonstrate the absence of multicollinearity across all explanatory factors. The dependent variables efficiency exhibits strong correlations with several independent variables, indicating the existence of a causal relationship between the efficiency and supply marker risks. The correlation between efficiency and logistic risk, collaboration risk and finance risk is - 89%, - 75% and -85% respectively.

Table 3: Correlation matrix (Efficiency)

		1	2	3	4	5	6
1	Efficiency	1					
2	Logistic Risk	-0.897**	1				

3	Collaboration Risk	-0.752*	-0.239**	1			
4	Finance Risk	-0.859**	-0.302**	0.385**	1		
5	Years Operation	0.702	0.061	0.033	-.058	1	
6	Average Working Capital	0.544	0.074	-0.001	.013	.073	1

In table 4, the dependent variable effectiveness exhibits strong correlations with several independent variables, indicating the existence of a causal relationship between the efficiency and supply marker risks. The correlation between effectiveness and logistic risk, collaboration risk and finance risk is - 74%, - 90% and -78% respectively.

Table 4: Correlation matrix (Effectiveness)

		1	2	3	4	5	6
1	Effectiveness	1					
2	Logistic Risk	-0.739**	1				
3	Collaboration Risk	-0.901	-0.239**	1			
4	Finance Risk	-0.788**	-0.302**	0.385**	1		
5	Years Operation	-0.687	0.061	0.033	-0.058	1	
6	Average Working Capital	-0.692	0.074	-0.001	0.013	0.073	1
**. Correlation is significant at the 0.01 level (2-tailed).							

In table 5, the dependent variable profitability exhibits strong correlations with several independent variables, indicating the existence of a causal relationship between the efficiency and supply marker risks. The correlation between profitability and logistic risk, collaboration risk and finance risk is - 85%, - 80% and -78% respectively.

Table 5: Correlation matrix (Profitability)

		1	2	3	4	5	6
1	profitability	1					
2	Logistic Risk	-0.849**	1				
3	Collaboration Risk	-0.8041	-0.239**	1			
4	Finance Risk	0.786**	-0.302**	0.385**	1		

5	Years Operation	0.001	0.061	0.033	-0.058	1	
6	Average Working Capital	-0.154*	0.074	-0.001	0.013	0.073	1
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

4.3: Linear regression model results

Table 6: Linear regression model results (Efficiency as the dependent variable)

VARIABLES	(1) efficiency	(2) efficiency	(3) efficiency	(4) efficiency
Logistic Risk	-0.394***	-0.410***		
	(0.0941)	(0.0866)		
Collaboration Risk	-0.2254*		-0.157***	
	(0.0509)		(0.0423)	
Finance Risk	-0.478***			-0.370***
	(0.116)			(0.118)
Years Operation	0.0785			
	(0.0207)			
Average Working Capital	0.085			
	(0.345)			
Constant	4.804***	6.027***	3.554***	3.341***
	(0.519)	(0.286)	(0.212)	(0.212)
Observations	217	217	217	217
R-squared	0.125	0.088	0.023	0.067

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The principal findings of the linear regression using efficiency as the dependent variable are shown in Table 6. A regression analysis was used to establish the relationship between Efficiency and supply chain risk. As presented in table 6, the findings indicate a negative relationship between supply chain risk and efficiency. At 1 percent level of significance, logistic risk negatively affects effectiveness by around 39%. At 10 percent level of significance, collaboration risk negatively and significantly affects efficiency by about 22%. Again at 1% level of significance, finance risk negatively and significantly affect efficiency by around 47%. The control variables average working capital and years of operation positively affect efficiency. These results are supported by Goetschalckx et al (2013) who pointed out that there is a trade-off between the two.

Table 7: Linear regression model results (Effectiveness as the dependent variable)

VARIABLES	(7) Effectiveness	(8) Effectiveness	(9) Effectiveness	(10) Effectiveness
Logistic Risk	-0.106***	-1.170***		
	(0.0896)	(0.107)		
Collaboration Risk	-0.309***		-0.2113	
	(0.0638)		(0.0442)	
Finance Risk	-0.1940***			-0.192***
	(0.0966)			(0.128)
Years Operation	-0.0793			
	(0.0192)			
Average Working Capital	0.1705			
	(0.105)			
Constant	8.208***	8.126***	3.733***	2.234***
	(0.512)	(0.360)	(0.161)	(0.230)
Observations	217	217	217	217
R-squared	0.512	0.408	0.000	0.151

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The principal findings of the linear regression using effectiveness as the dependent variable are shown in Table 7. A regression analysis was used to establish the relationship between Effectiveness and supply chain risk. As presented in table 7, the findings indicate a negative relationship between supply chain risk and effectiveness. At 1 percent level of significance, logistic risk negatively affects effectiveness by around 11%. At 1 percent level of significance, collaboration risk negatively and significantly affects effectiveness by about 30%. Again at 1% level of significance, finance risk negatively and significantly affect effectiveness by around 19%. The control variables average working capital and years of operation positively affect effectiveness. These results are supported by Goetschalckx et al (2013) who pointed out that there is a trade-off between the two.

Table 8: Linear regression model results (Profitability as the dependent variable)

VARIABLES	(5) profitability	(6) profitability	(7) profitability	(8) profitability

Logistic Risk	-0.368***	-0.408***		
	(0.134)	(0.119)		
Collaboration Risk	-0.176***		-0.0427	
	(0.0460)		(0.0417)	
Finance Risk	0.513***			0.510***
	(0.160)			(0.124)
Years Operation	0.0146			
	(0.0201)			
Average Working Capital	4.65e-05**			
	(2.22e-05)			
Constant	5.767***	5.589***	4.237***	3.415***
	(0.752)	(0.465)	(0.180)	(0.220)
Observations	217	217	217	217
R-squared	0.720	0.662	0.592	0.551

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The principal findings of the linear regression using profitability as the dependent variable are shown in Table 7. A regression analysis was used to establish the relationship between Profitability and supply chain risk. As presented in table 7, the findings indicate a negative relationship between supply chain risk and profitability. At 1 percent level of significance, logistic risk negatively affects profitability by around 37%. At 1 percent level of significance, collaboration risk negatively and significantly affects profitability by about 18%. Again at 1% level of significance, finance risk negatively and significantly affect profitability by around 51%. Just like the above presented results, the control variables average working capital and years of operation positively affect profitability. These results are supported by Goetschalckx et al (2013) who pointed out that there is a trade-off between the two.

4.4 Chapter Summary

The results chapter of this study focused on investigating the impact of supply chain risks on the performance of small and medium-sized enterprises (SMEs) in Zimbabwe. Through rigorous research and data analysis, the chapter aims to shed light on the relationship between supply chain risks and the overall organizational performance of SMEs operating in the Zimbabwean context and found a negative relationship between supply chain risk and performance which was measured by efficiency, effectiveness and profitability.

The results reveal that supply chain risks have a significant negative impact on the performance of SMEs in Zimbabwe. The findings indicate that disruptions in the supply chain lead to increased costs, production delays, and decreased customer satisfaction. These adverse effects ultimately affect the overall financial performance and competitiveness of the organizations under study. Furthermore, the chapter discusses the specific risk management strategies adopted by SMEs to mitigate the impact of supply chain risks. It identifies common practices such as diversifying suppliers, maintaining buffer inventories, and implementing effective communication channels with key stakeholders. The effectiveness of these strategies in minimizing the negative consequences of supply chain risks is evaluated, providing valuable insights for SMEs in Zimbabwe and beyond.

The chapter concludes by highlighting the significance and implications of the research findings. It emphasizes the importance of proactive risk management practices for SMEs operating in a volatile and uncertain business environment. The study contributes to the existing body of knowledge by providing empirical evidence on the relationship between supply chain risks and organizational performance in the context of Zimbabwean SMEs. Overall, this results chapter serves as a comprehensive and rigorous examination of the impact of supply chain risks on the performance of SMEs in Zimbabwe. The findings provide valuable insights for both academic researchers and practitioners, offering a foundation for further research and informing strategic decision-making in the realm of supply chain risk management.

CHAPTER V

SUMMARY, CONCLUSION AND POLICY RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the key findings of the research on the impact of supply chain risks on the organizational performance of SMEs in Zimbabwe. It reiterates the significance of the study, offers concluding remarks, and proposes recommendations for future research and action.

5.1 Summary of the study

In conclusion, this study has aimed to investigate the impact of supply chain risks on the organizational performance of Small and Medium Enterprises (SMEs) in Zimbabwe. The findings of this research shed light on the critical role that supply chain risks play in shaping the performance outcomes of SMEs in Zimbabwe.

Firstly, the study revealed that SMEs in Zimbabwe are highly vulnerable to various types of supply chain risks. These risks include but are not limited to transportation disruptions (logistics risk), inventory shortages, supplier reliability (collaboration risk), finance risk, and demand variability. The presence of these risks has a direct impact on the overall performance of SMEs, hindering their ability to meet customer demands, deliver products on time, and maintain efficient operations. Secondly, the research highlighted the negative consequences of supply chain risks on the financial performance of SMEs. The disruptions caused by these risks often lead to increased costs, decreased revenues, and reduced profitability. SMEs struggle to absorb the financial implications of supply chain disruptions, which can ultimately threaten their survival and growth prospects.

Furthermore, the study emphasized the importance of effective risk management strategies for SMEs in Zimbabwe. The findings revealed that SMEs with well-developed risk management practices are better equipped to mitigate and respond to supply chain risks. These organizations tend to have contingency plans in place, establish strong relationships with suppliers, invest in technology and information systems, and engage in collaborative efforts with other stakeholders in the supply chain. Moreover, it was evident that the impact of supply chain risks on organizational performance is not limited to financial aspects. These risks also affect other performance dimensions such as customer satisfaction, product quality, and market share. SMEs

that fail to effectively manage supply chain risks may experience deteriorating relationships with customers, reputational damage, and loss of market competitiveness.

In light of these findings, it is crucial for SMEs in Zimbabwe to recognize the significance of supply chain risk management as a strategic imperative. Organizations should invest in building resilience and flexibility within their supply chains to better cope with potential disruptions. This can be achieved through diversifying suppliers, adopting advanced technologies, implementing robust monitoring systems, and fostering collaboration and information sharing with key stakeholders. Additionally, policymakers and industry associations have a vital role to play in supporting SMEs in managing supply chain risks. It is essential to create an enabling environment that facilitates access to information, resources, and training on risk management practices. Government agencies should also consider the development of supportive policies and regulations that encourage SMEs to prioritize risk management and allocate resources accordingly.

It is worth noting that this study has certain limitations. The research focused specifically on SMEs in Zimbabwe, which may limit the generalizability of the findings to other contexts. Future studies could explore the impact of supply chain risks on SMEs in different countries or industries to gain a more comprehensive understanding of the topic.

5.2 Conclusion

In conclusion, the findings of this study emphasize the critical role of supply chain risk management in enhancing the performance and resilience of SMEs in Zimbabwe. By recognizing and effectively addressing these risks, SMEs can navigate uncertainties, maintain customer satisfaction, and achieve sustainable growth in a highly competitive business environment.

5.3 Policy recommendations

Based on the findings of the study on the impact of supply chain risks on the organizational performance of SMEs in Zimbabwe, the following policy recommendations are proposed to support SMEs in effectively managing and mitigating these risks:

Develop a National Risk Management Framework: The government should establish a comprehensive national risk management framework specifically tailored to the needs of SMEs. This framework should provide guidelines, resources, and support for SMEs in identifying,

assessing, and managing supply chain risks. It should also promote collaboration and knowledge sharing among SMEs, industry associations, and government agencies.

Enhance Access to Information and Training: Government agencies and industry associations should collaborate to provide SMEs with access to relevant information, training programs, and workshops on supply chain risk management. This will enable SMEs to improve their understanding of different types of risks and develop necessary skills and capabilities to effectively manage them.

Encourage Collaboration and Networking: The government should encourage SMEs to engage in collaborative efforts and networking with other stakeholders in the supply chain. This can be facilitated through the establishment of industry clusters, trade associations, and platforms for knowledge sharing and best practice exchange. Collaboration can help SMEs in jointly addressing common supply chain risks and sharing resources for risk mitigation.

Facilitate Technology Adoption: The government should provide incentives and support for SMEs to adopt advanced technologies that enhance supply chain visibility, traceability, and resilience. This includes technologies such as supply chain management systems, real-time tracking tools, and data analytics. Financial assistance, training programs, and technology hubs can facilitate technology adoption among SMEs.

Foster Supplier Development Programs: The government and industry associations should encourage SMEs to develop long-term relationships with reliable suppliers. Supplier development programs can be established to support SMEs in identifying and partnering with trustworthy suppliers. These programs can provide training and mentoring to suppliers, helping them improve their capabilities and reliability.

Enhance Financial Support: Financial institutions should design tailored financial products and services to support SMEs in managing supply chain risks. This may include access to working capital loans, trade finance, and insurance products specifically designed to mitigate supply chain risks. The government can provide incentives and guarantees to financial institutions to encourage them to offer these specialized financial services.

Establish Business Continuity Planning: SMEs should be encouraged to develop business continuity plans that outline strategies and actions to be taken in the event of supply chain

disruptions. Government agencies can provide templates, guidelines, and training to support SMEs in creating effective business continuity plans. This will enable SMEs to respond swiftly and effectively to disruptions, minimizing their impact on organizational performance.

Create a Regulatory Environment for Supply Chain Risk Management: The government should consider introducing regulations and standards that promote supply chain risk management practices among SMEs. This may include mandatory reporting of supply chain risks, disclosure requirements, and compliance audits. Such regulations can create a level playing field and encourage SMEs to prioritize risk management.

By implementing these policy recommendations, the government, industry associations, and financial institutions can provide the necessary support and resources to SMEs in Zimbabwe to effectively manage supply chain risks. This will help SMEs improve their organizational performance, enhance their resilience, and contribute to the overall economic growth of the country.

5.4 Suggestion for further study

As area for further study, the extension of this research could increase the sample size and include other SMEs from other cities. This will improve the reliability of the results.

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APPENDICES

Appendix 1: Krejcie and Morgan (1970) table

Target population	Sample size	Target population	Sample size	Target population	Sample size	Target population	Sample size
10	*10*	**100**	*80*	**1 250**	*294*	**6 000**	*361*
15	*14*	**200**	*132*	**1 500**	*306*	**7 500**	*366*
20	*19*	**300**	*169*	**2 000**	*322*	**10 000**	*370*

29	*28*	**400**	*196*	**2 500**	*333*	**15 000**	*375*
40	*36*	**500**	*217*	**3 000**	*341*	**20 000**	*377*
50	*40*	**600**	*234*	**3 500**	*346*	**30 000**	*379*
60	*44*	**700**	*248*	**4 000**	*351*	**40 000**	*380*
70	*59*	**800**	*260*	**4 500**	*354*	**50 000**	*381*
80	*66*	**900**	*269*	**5 000**	*357*	**75 000**	*382*
90	*73*	**1 000**	*278*	**5 500**	*359*	**1 000 000**	*384*

Appendix 2: Questionnaire

Please read the questions and provide answers to the best of your knowledge. Please try and answer all the questions. Tick in the spaces. The aim of the study is to ***THE IMPACT OF SUPPLY CHAIN RISKS ON ORGANISATION PERFORMANCE OF SMES IN ZIMBABWE***. Please use a 5- point scale to rate the extent to which you agree with the statements in Section B of the questionnaire. 5=strongly agree and 1= strongly disagree. Your assistance in the completion of this questionnaire will be highly appreciated. The information recorded is purely for academic purposes and no real names will be used. Thank you.

SECTION A: Background Information

a. Name of the SME organization…….....

b. Province in which your organization Operates

1. Harare 2. Bulawayo

c. Industry SME operates in (eg manufacturing, mining, retail etc)……

d. Your gender

1. Male 2. Female

e. Age bracket

1. Below 24 years 2. 25-30 years 3. 31-34 years 4. 35-40 years
5. 41-44 years 6. 45-50 years 7. Over 51 years

f. What is your highest level of education?

1. Primary 2. Secondary 3. Tertiary
4. No Education

g. What is your position in your organization?

1. Owner 2. Managing on behalf of the Owner 3. Operational staff 4. Others (Specify)…….

h. What is your working experience in the organization?

1. One to two years 2. Two to four years 3. Five years and above

i. What is the major source of your funding?

1. Local Funding 2. Treasury 3. Foreign Funding 4. Individual(s) 5. Others (Specify)

j. How long has the organization been in operation?

1. Below 1 year 2. 1-5 years 3. 5-10 years 4. Over 10 years

SECTION B:

2.3.1 Efficiency

To what extent do you agree with the following statements? Select the option that best matches your opinion

	Strongly Agree (5)	**Agree (4)**	**Neutral (3)**	**Disagree (2)**	**Strongly Disagree (1)**
Logistics risk negatively affects the supply chain efficiency of SMEs organizations in Zimbabwe					
Collaboration risk negatively affects the supply chain efficiency of SMEs organizations in Zimbabwe					
Financial risk negatively affects the supply chain efficiency of SMEs organizations in Zimbabwe					
Overall, supply chain risk negatively affects t efficiency of SMEs organizations in Zimbabwe					
Working Capital negatively affects the supply chain efficiency of SMEs organizations in Zimbabwe					

2.3.2 Profitability

To what extent do you agree with the following? Select the option that best matches your opinion

	Strongly Agree (5)	**Agree (4)**	**Neutral (3)**	**Disagree (2)**	**Strongly Disagree(1)**

Logistics risk negatively affects the supply chain Profitability of SMEs organizations in Zimbabwe					
Collaboration risk negatively affects the supply chain Profitability of SMEs organizations in Zimbabwe					
Financial risk negatively affects the supply chain Profitability of SMEs organizations in Zimbabwe					
Working Capital negatively affects the supply chain profitability of SMEs organizations in Zimbabwe					

2.3.3 Effectiveness

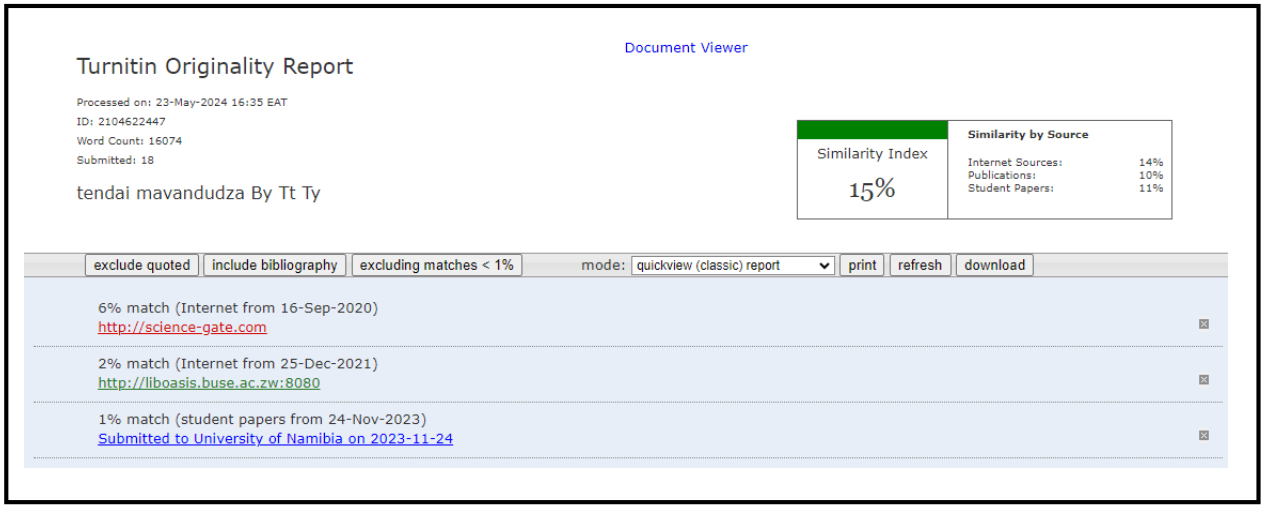
To what extent do you agree with the following statements? Select the option that best matches your opinion

	Strongly Agree (5)	**Agree (4)**	**Neutral (3)**	**Disagree (2)**	**Strongly Disagree (1)**
Logistics risk negatively affects the supply chain effectiveness of SMEs organizations in Zimbabwe					
Collaboration risk negatively affects the supply chain effectiveness of SMEs organizations in Zimbabwe					
Financial risk affects the supply chain effectiveness of SMEs organizations in Zimbabwe					
Overall, supply chain risk negatively affects effectiveness of SMEs organizations in Zimbabwe					
Logistics risk negatively affects the supply chain effectiveness of SMEs organizations in Zimbabwe					
Working Capital negatively affects the supply chain effectiveness of SMEs organizations in Zimbabwe					

Ranking from 0-100% , how do you think Supply Chain Risks negatively affects supply chain performance for SMEs in Zimbabwe……..%

Thank you very much for taking your time to complete this questionnaire.

Appendix 3: Plagiarism report



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