HIGHER SCHOOL OF MANAGEMENT AND DIGITAL ECONOMY

H.S.M.D.E

A Thesis Submitted in Partial Fulfilment of the Requirements for the degree of Masters

Speciality : Audit And Management Control

Title:

The impact of risk management on company performance

Case of: Netcom

Submitted by:

Mr: IBRIR Haithem

Supervised by:

Mme: ALLALEN Keltoum

Class (A) assistant teacher

Promotion:

June / 2023

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Dedication

With deep gratitude and heartfelt emotions, I would like to express my utmost appreciation to the exceptional man who has been the epitome of fatherhood, my dearest father Yousef. You have not only been a precious gift from God but also the very reason behind my existence, accomplishments, and unwavering respect.

And because no acknowledgment can never truly capture the extent of her influence, I extend my profound gratitude to the extraordinary woman, my beloved mother Lamia. Your enduring strength, selflessness, and unwavering support have shielded me from suffering and have tirelessly worked towards my happiness. No words can adequately express the depth of my appreciation.

To my dear sisters Khawla, Aya, and the ever-joyful little Nour, you possess a unique ability to infuse our family with boundless joy and happiness. Your love and constant encouragement have been instrumental in my journey, and I am forever grateful for your presence in my life.

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Abstract

The topic of risk management and its impact on company performance is of significant importance in today's business landscape. This research examines the relationship between risk management and company performance, focusing on a specific case study, Netcom, a cleaning establishment in the Algiers Province. The study aims to determine how risk management practices impact company performance and identify the best risk management practices that companies, including Netcom, can adopt to mitigate potential risk. The study utilizes a comprehensive risk management framework, including risk identification, assessment, mitigation, and monitoring. The findings reveal that effective risk management positively impacts company performance, as evidenced by the correlation between risk management dimensions and company performance indicators.

Key words: Risk management, Company performance, Risk identification, Risk assessment, Risk Mitigation, Risk monitoring, Financial risk, Operational risk, Principal components analysis

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List of abbreviations

ISO: International Organization for Standardization

PMI: Project Management Institute

ERM: Enterprise Risk Management

COSO: Committee of Sponsoring Organizations of the Treadway Commission

PMI: Project Management Institute

IRM: The institute of risk management

NIST: National Institute of Standards and Technology

IEC: International Electrotechnical Commission

ROI: Return of investment

EPS: Earnings per share

CROs: Chief Risk Officers

ROA: Return on Assets

HR: Human Resources

PCA: Principal Component Analysis

$\chi 2$: chi-square

SPSS: Statistical package for the social sciences

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General Introduction

General Introduction

The topic of risk management and its impact on company performance is of significant importance in today's business landscape. With increasing complexity and uncertainty, companies face numerous risks that can hinder their success. By understanding and effectively managing these risks, companies can safeguard their interests, minimize financial losses, and capitalize on opportunities. The ability to implement robust risk management practices is crucial for companies aiming to thrive in a dynamic and competitive environment. This research sheds light on the importance of risk management and its role in enhancing company performance, offering valuable insights for organizations across industries.

The selection of this topic is driven by several factors. Firstly, risk management has emerged as a critical process for companies to navigate the ever-changing business landscape. As risks continue to evolve in complexity and magnitude, it becomes imperative to explore the impact of risk management on company performance. Secondly, the research aims to contribute to the existing literature by focusing on a specific case study, Netcom, allowing for a comprehensive analysis of risk management practices in a real-world context. Lastly, by investigating the relationship between risk management and company performance, this research provides practical recommendations to improve risk management practices, benefiting both Netcom and other companies facing similar challenges.

The aim of this research is twofold. Firstly, it seeks to examine the relationship between risk management and company performance, specifically focusing on Netcom as a case study. By analysing the effectiveness of risk management practices employed by Netcom, the research aims to uncover insights into how risk management impacts overall company performance. Secondly, the research aims to identify and explore the best risk management practices that companies, including Netcom, can adopt to mitigate the impact of potential risks on their operations and financial performance. By achieving these objectives, this research aims to contribute to the existing knowledge base on risk management and provide practical recommendations for companies to enhance their risk management strategies.

In recent years, risk management has become a priority for all sectors of the economy, so companies can protect their interests while achieving their goals. Through risk management, organizations can ensure that it will achieve the desired results, reduce the impact of threats to acceptable levels, and increase opportunities to seize opportunities (Hopkin, 2012).

Risk management is a critical process for businesses in today's increasingly complex and uncertain world. Effective risk management practices can help organizations reduce uncertainty, prevent financial losses, and enhance their overall performance (lam, 2014).

Risk management is defined as the process of identifying, assessing, and mitigating risks that could affect an organization's objectives. It involves a systematic approach to identifying potential risks, evaluating their likelihood and impact, and implementing measures to manage or mitigate them (ISO, 2023).

àCompany performance is essential in the business world as it determines the success or failure of a company. The performance of a company is defined as its ability to achieve its objectives while maintaining financial stability (KPMG, 2022). There are various ways to measure the performance of a company, including profitability, liquidity, solvency, efficiency, and growth (PwC, 2017). High-performing companies are those that can effectively manage their resources and operations to maximize profits, maintain a strong financial position, and create value for their stakeholders.

This research aims to focus on determining: "**How can the risk management impact the company performance taking Netcom as a case of study**". My concerns are focused on the following secondary question:

- ✓ Does risk management impact company performance at Netcom?

Based on risk management dimensions, these questions were developed:

- ✓ Does risk identification impact company performance at Netcom?
- ✓ Does risk assessment impact company performance Netcom?
- ✓ Does risk management mitigation impact company performance Netcom?
- ✓ Does risk management monitoring impact company performance Netcom?

By answering these research questions, this study seeks to contribute to the existing literature on the impact of risk management on company performance and provide practical recommendations for Netcom to improve its risk management practices.

Hypotheses:

Based on the research objectives, the following hypotheses will be tested:

Hypothesis 1: Effective risk management has a positive impact on company performance at Netcom.

Hypothesis 2: Risk identification impact company performance at Netcom.

Hypothesis 3: Risk assessment impact company performance Netcom.

Hypothesis 4: Risk mitigation impact company performance at Netcom.

Hypothesis 5: Risk monitoring impact company performance at Netcom.

The research methodology employed in this study was a descriptive and empirical quantitative approach. Quantitative data collection and analysis techniques, including surveys, interviews, and observations, were utilized to gather numerical information from a representative sample. This quantitative method facilitated systematic exploration of data relationships, patterns, and trends, enhancing the reliability and applicability of the research findings.

Regarding my work plan, Its divided it as follows:

Chapter 1: The first chapter includes some theoretical notions about the risk management in general and Company performance The two terms are integrated to give some important notions about the risk management. Then, the chapter mentioned the contribution of Risk management in company performance. Where the Integration of risk management and its theories to provide important notions about risk management and its impact on company performance was discussed.

Chapter 2: This chapter will provide an overview of Netcom, a cleaning establishment of the Algiers Province, and its risk management practices. The chapter will discuss how the company is implementing risk management, including the types of risks involved and the different types of risk management practices used.

Chapter 3: The third chapter, will explain and review the empirical research on the association between risk management and company performance, with a focus on Netcom. The chapter examines Netcom's risk management practices, such as risk identification, risk assessment, risk mitigation, and risk monitoring. The chapter analyses the relationship between Netcom's risk management practices and its performance. The chapter also discusses the limitations of the existing research and provides recommendations for future research.

The study contributes to the existing literature on risk management and provides practical implications for Netcom to enhance its risk management practices and improve its financial and operational performance.

CHAPTER 1: Introduction to Risk Management and its Impact on Performance

Chapter Overview

This chapter provides a foundation for the study by defining key concepts and explaining the relationship between risk management and organizational performance. The chapter also highlights the importance of effective risk management practices and their impact on organizational performance. The chapter sets the stage for the empirical analysis of Netcom's risk management practices and their impact on the company's performance in subsequent chapters. The chapter also discusses the principles of risk management and the standards and regulations that guide effective risk management practices. Moreover, the current state of research on risk management and its impact on organizational performance. It is organized into the following sections:

In the Risks and Risk Types section, I defined risk and provide an overview of different types of risk, including financial, operational, strategic, and reputational risks.

The Characterizing Risk Management section discusses the definition and explanation of risk management and provides an overview of risk management processes, including risk identification, risk assessment, risk mitigation, and risk monitoring. I also highlighted the importance of effective risk management practices.

The Principles of Risk Management discusses the four principles of risk management - risk avoidance, risk reduction, risk transfer, and risk acceptance. It also provides examples of how these principles can be applied in different contexts.

The Risk Management Standards and Regulative give an overview of risk management standards and regulations, including ISO 31000 (International Organization for Standardization) and COSO ERM. It explains how these standards and regulations can guide effective risk management practices.

The Organizational Performance section defines and explains organizational performance and provides an overview of different measures of organizational performance, including financial and non-financial measures.

In the Integration of Risk Management with Company Performance section, I discussed the relationship between risk management and organizational performance and how effective risk management practices can contribute to improved company performance.

Finally, the Research Gaps and Challenges in Risk Management section provides an overview of the current state of research on risk management and its impact on companies performance.

Section 1: Introduction to Risk Management

Risk is an inherent part of any organization's operations, and understanding and managing risks is essential for achieving objectives and maintaining resilience. This section explores the definition of risk in different contexts, such as risk management, project management, and finance, highlighting the importance of embracing uncertainty and adopting systematic approaches to risk identification, assessment, and mitigation.

1. Risk and risk type

Risk is an inherent aspect of life and business, representing the possibility of uncertain outcomes that could result in losses or opportunities. Understanding risk and its various types is crucial for individuals and organizations to make informed decisions and effectively manage potential challenges. By categorizing risks into distinct types, we can identify and address specific vulnerabilities, enhance preparedness, and optimize strategies for success.

1.1 Risk Definition

Risk can be defined in various ways depending on the context in which it is used.

In the context of risk management, the International Organization for Standardization (ISO) provides a comprehensive definition of risk as the effect of uncertainty on objectives (ISO, Risk management — Guidelines, 2023). This definition goes beyond the conventional understanding of risk as a negative event and emphasizes the broader concept of uncertainty and its impact on the achievement of objectives.

Uncertainty is an inherent aspect of any organization's operations and decision-making processes. It encompasses various factors such as market fluctuations, technological advancements, regulatory changes, economic conditions, natural disasters, and human behaviour These uncertainties introduce potential risks that can either hinder or enhance an organization's ability to achieve its objectives. By acknowledging the influence of uncertainty on objectives, the ISO definition highlights the importance of understanding, assessing, and managing risks in a proactive and systematic manner. Risk management involves identifying potential threats and opportunities, evaluating their potential impact, and implementing appropriate strategies to mitigate negative consequences and capitalize on positive outcomes. Effective risk management enables organizations to navigate the complex and ever-changing business landscape with confidence.

It allows them to make informed decisions, allocate resources efficiently, and safeguard their reputation. By considering the potential effects of uncertainty on objectives, organizations can develop robust risk management frameworks that foster resilience, innovation, and sustainable growth. ISO 31000:2018 provides a globally recognized framework for risk management that can be tailored to the specific needs and context of any organization. It emphasizes the integration of risk management into the organization's overall governance, strategy, and decision-making processes. This holistic approach encourages a proactive and continuous assessment of risks, promoting a culture of risk awareness and accountability at all levels of the organization.

In conclusion, the ISO definition of risk as the effect of uncertainty on objectives underscores the critical role of risk management in organizations. By embracing uncertainty and adopting a systematic approach to identify, assess, and manage risks, organizations can enhance their ability to achieve objectives, adapt to changing conditions, and thrive in a dynamic and competitive environment.

In addition to the definition provided by the International Organization for Standardization (ISO), the Project Management Institute (PMI) offers another perspective on risk. According to PMI, risk is defined as an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives (PMI, 2017). This definition zooms in on the specific context of projects and highlights the potential impact of risk on project outcomes. Projects are unique endeavours with defined objectives, timelines, and resources allocated to achieve specific results. However, they operate within an environment of uncertainty, where various factors can influence their success or failure. The PMI definition recognizes that risks in projects can be events or conditions that may occur, and when they do, they have the potential to impact project objectives.

The positive or negative effect of risk on project objectives acknowledges that risks can present both opportunities and threats. While some risks may pose challenges and hinder project progress, others may present unexpected opportunities for innovation, growth, or improved outcomes. Effective project risk management involves not only identifying and mitigating negative risks but also identifying and capitalizing on positive risks to enhance project success.

By considering the impact of risk on project objectives, organizations and project teams can proactively manage risks throughout the project lifecycle. This includes conducting thorough risk assessments, developing risk response strategies, and monitoring risks on an ongoing basis. The goal is to minimize the likelihood and impact of negative risks and maximize the realization of positive risks. The PMI approach to risk management aligns with the discipline of project management and recognizes that risk is an inherent part of the project landscape. It emphasizes the need for project managers and teams to be vigilant, adaptable, and proactive in addressing risks to ensure project success. By integrating risk management into project planning and execution, organizations can enhance their ability to deliver projects on time, within budget, and with the desired outcomes.

In the realm of finance, a distinct perspective on risk emerges, particularly when it pertains to investments. Within this context, risk is defined as the potential for an investment's actual return to deviate from its expected return (Investopedia, 2021). This definition homes in the inherent uncertainty surrounding the potential financial outcomes of an investment. Investing involves allocating capital with the expectation of generating a return.

However, the future performance of investments is subject to various factors that are beyond an investor's control. These factors can include economic conditions, market fluctuations, industry trends, regulatory changes, and company-specific events. The definition emphasizes that risk in investments lies in the unpredictability of the actual return compared to the expected return. Expected return refers to the anticipated gain or loss an investor foresees based on their analysis, projections, and market conditions. It serves as a benchmark against which the actual return is measured. The disparity between the expected and actual return reflects the element of risk associated with the investment. If the actual return exceeds the expected return, it represents a positive outcome, often referred to as a gain. Conversely, if the actual return falls short of the expected return, it signifies a negative outcome, commonly known as a loss.

Understanding and managing investment risk is vital for investors seeking to make informed decisions and protect their capital. Different investment options carry varying degrees of risk, with higher-risk investments typically offering the potential for higher returns but also exposing investors to greater losses. Investors must assess their risk tolerance, financial goals, and time horizon to determine an appropriate investment strategy that aligns with their objectives.

Risk in the finance industry is not solely limited to the potential for losses. It can also encompass opportunities for higher-than-expected returns. This aspect of risk is often referred to as the risk-return trade-off, where investors weigh the level of risk, they are willing to accept in pursuit of potentially greater rewards. Balancing risk and return are a fundamental principle in investment decision-making. Financial professionals, such as portfolio managers, financial advisors, and analysts, play a critical role in assessing and managing investment risk. They employ various risk management techniques, including diversification, asset allocation, hedging strategies, and thorough analysis of investment opportunities, to mitigate risk and optimize portfolio performance.

By acknowledging the inherent uncertainty in investment outcomes, the definition of risk in the finance industry underscores the importance of conducting thorough research, analysis, and due diligence before making investment decisions. It reminds investors that risk is an integral aspect of investing and should be carefully considered and managed to align with their financial objectives and risk tolerance.

1.2 Risk Types

It is important to note that there are various types of risks that organizations can face. Some common types of risks include financial risk, operational risk, strategic risk, and reputational risk.

1.2.1 Financial risk

Financial risk refers to the potential for financial loss or volatility arising from various factors, including market fluctuations and credit defaults. It encompasses a range of risks that can impact an organization's financial well-being, liquidity, solvency, and profitability. Examples of financial risks include interest rate risk, which arises from changes in interest rates and affects borrowing costs and investment returns. Currency risk stems from exposure to foreign exchange rate fluctuations, impacting the value of assets and liabilities denominated in different currencies. Credit risk, also known as default risk, arises from the potential for borrowers or counterparties to fail to meet their financial obligations. Managing financial risk is a critical consideration in financial decision-making as organizations strive to safeguard their financial health and optimize performance (Hillson, 2020).

1.2.2 Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, or systems within an organization. It encompasses risks associated with human errors, system failures, supply chain disruptions, regulatory non-compliance, and other operational inefficiencies. Operational risk can significantly impact an organization's efficiency, productivity, and reputation. It is crucial for organizations to identify, assess, and manage operational risks effectively to maintain operational resilience and protect their overall business objectives (Hillson, 2020).

1.2.3 Strategic Risk

Strategic risk refers to the risk of loss resulting from failed business strategies and the dynamic nature of the business environment. It encompasses risks associated with market shifts, competition, technological advancements, changing customer preferences, and geopolitical factors. Strategic risks can significantly impact an organization's long-term success, competitiveness, and viability. To mitigate strategic risks, organizations need to continually evaluate and adapt their strategies, anticipate emerging threats, and seize opportunities to maintain their strategic advantage (Hillson, 2020).

1.2.4 Reputational Risk

Reputational risk pertains to the potential damage to an organization's reputation, brand, or image. It can result from negative publicity, customer dissatisfaction, product failures, ethical lapses, or social media backlash. Reputational risk can have far-reaching consequences, impacting customer trust, investor confidence, employee morale, and regulatory relationships. Proactive management and protection of reputation are essential for organizations to maintain stakeholder trust and sustain long-term success (Hillson, 2020).

1.2.5 Environmental Risk

Environmental risk refers to the potential for harm or adverse effects on the environment resulting from an organization's activities, products, or services. It encompasses risks associated with pollution, resource depletion, climate change, habitat destruction, and non-compliance with environmental regulations (Hillson, 2020).

To effectively protect assets and achieve objectives, organizations must understand and manage these different types of risks. This involves identifying and assessing risks, prioritizing them based on their potential impact and implementing appropriate risk mitigation strategies. Risk management strategies may include risk avoidance, transferring risks through insurance or contracts, reducing risks through process improvements or control mechanisms, or accepting certain risks within defined parameters. By implementing strong risk management practices in accordance with the ISO 31000:2018 standard, organizations can enhance their resilience, adaptability, and overall performance in the face of uncertainty and change.

2. Characterizing Risk Management

Risk management refers to the process of identifying, assessing, and mitigating risks that an organization may face in achieving its objectives (Peltier, 2016). It is a systematic approach to managing risks and involves a series of processes that help organizations identify, assess, and respond to risks. The objective of risk management is to minimize the impact of negative events and maximize the opportunities for positive outcomes (Peltier, 2016).

Risk management processes include risk identification, risk assessment, risk mitigation, risk monitoring, risk communication, and risk review and continuous improvement (Hillson, 2020).

2.1 Risk identification

Risk identification is a critical step in the risk management process, as it involves recognizing and documenting potential risks that an organization may encounter. Various techniques can be employed to identify risks, including brainstorming sessions, conducting risk assessments, using checklists, and reviewing historical data or industry best practices. The goal is to create a comprehensive inventory of risks that could potentially impact the organization's objectives, operations, or stakeholders (Muray, 2007)**.**

2.2 Risk assessment

Once risks are identified, the next step is risk assessment, which involves evaluating the likelihood and impact of each risk. Qualitative and quantitative analysis methods can be used to assess risks. Qualitative analysis relies on expert judgment and assigns subjective ratings to risks based on their severity, likelihood, and other relevant factors. Quantitative analysis, on the other hand, involves numerical calculations and statistical models to estimate the probability and potential financial or operational impacts of risks. By assessing risks, organizations can prioritize them based on their significance and allocate appropriate resources for mitigation. (Muray, 2007)

2.3 Risk mitigation

Risk mitigation is the process of developing and implementing strategies to reduce the likelihood or impact of identified risks. It involves taking proactive measures to minimize the negative consequences associated with risks. Risk mitigation strategies can take different forms depending on the nature of the risks and the organization's context. Risk avoidance aims to eliminate or bypass risks altogether by avoiding activities or situations that may expose the organization to potential harm. Risk reduction focuses on implementing controls and safeguards to minimize the likelihood or impact of risks. Risk sharing involves transferring some of the risk to external parties, such as insurance or contractual agreements. Risk transfer, on the other hand, involves transferring the entire risk to another party, typically through insurance. (Muray, 2007).

2.4 Risk monitoring

Risk monitoring is an ongoing process that ensures the effectiveness of risk management strategies. It involves continuously tracking and evaluating identified risks to determine if they are being managed adequately. Regular monitoring allows organizations to detect changes in the risk landscape, identify emerging risks, and assess the effectiveness of mitigation measures. By staying vigilant and responsive to evolving risks, organizations can make timely adjustments to their risk management approach and maintain their resilience in dynamic environments (Muray, 2007).

2.5 Risk communication

Risk communication involves effectively conveying information about risks to relevant stakeholders. It ensures that stakeholders are aware of potential risks and understand the organization's risk management strategies (Muray, 2007).

2.6 Risk review and continuous improvement

Risk review and continuous improvement involve periodically evaluating the effectiveness of risk management practices, learning from past experiences, and enhancing risk management strategies and processes (Muray, 2007).

Effective risk management practices are essential for organizations to achieve their objectives and avoid negative consequences, also effective risk management practices can help companies improve their financial performance, increase stakeholder confidence, and enhance their reputation. In addition, effective risk management practices can help organizations identify and capitalize on opportunities for growth and innovation (Peltier, 2016).

3. Principles of Risk Management

In the dynamic landscape of modern business, risk management principles serve as invaluable guides to navigate the complex web of uncertainties. By identifying, assessing, and prioritizing potential risks, organizations can proactively minimize, monitor, and control the probability and impact of unfortunate events. Let's delve into the four key principles of risk management: risk avoidance, risk reduction, risk transfer, and risk acceptance, each offering a unique approach to fortify organizational resilience (Tom, 2015).

3.1 Risk avoidance

Risk avoidance is the process of identifying and avoiding risk altogether. This principle involves the implementation of processes, systems, and procedures to eliminate the likelihood of an event happening. This can be achieved by ceasing activities that pose a risk to the organization, such as discontinuing a product line or shutting down a facility (Michel Crouhy , Dan Galai , Robert Mark , 2017).

3.2 Risk reduction

Risk reduction aims to decrease the likelihood or impact of a risk. This principle is implemented by the organization taking steps to reduce the probability of a risk occurring, such as implementing new safety measures or improving infrastructure. Risk reduction can also involve putting in place strategies to mitigate the impact of an event if it occurs (Hillson, 2020).

3.3 Risk transfer

Risk transfer involves the transfer of risk from one party to another. This principle is often used by organizations to manage risks that are outside of their control or that they are not well equipped to handle. Insurance is a common example of risk transfer, as it involves transferring the risk of financial loss to an insurance company in exchange for a premium payment (Michel Crouhy , Dan Galai , Robert Mark , 2017)

3.4 Risk acceptance

Risk acceptance is the principle of acknowledging that risk is inherent in business activities and that some risks cannot be fully mitigated. This principle is applied when an organization has weighed the cost and benefit of risk mitigation and determined that it is not feasible or cost-effective. Risk acceptance involves identifying the risks that an organization is willing to accept and developing strategies to manage the impact of those risks (Hillson, 2020).

In practice, organizations typically apply a combination of these principles to manage risks effectively. For example, an organization may avoid certain risks altogether, reduce the likelihood of others, transfer some risks to a third party, and accept the risks that cannot be eliminated or managed in other ways. The selection and application of risk management principles depend on the organization's objectives, risk appetite, and the nature of the risks it faces (Hillson, 2020).

In conclusion, risk is a multifaceted concept that encompasses uncertainty and its impact on objectives. Organizations must adopt proactive and systematic risk management practices to navigate the complexities of the business landscape. By embracing the principles of risk identification, assessment, mitigation, monitoring, communication, and continuous improvement, organizations can enhance their resilience, seize opportunities, and safeguard their long-term success. Effective risk management is a key driver of informed decision-making, efficient resource allocation, and sustainable growth in today's dynamic and competitive environment.

Section 2: Risk Management Measures and Integration

Risk management measures play a critical role in organizations' ability to identify, assess, and mitigate risks. This section explores three essential risk management measures: risk exposure, risk appetite, and risk tolerance levels. By effectively implementing these measures, organizations can proactively manage risks and enhance their overall resilience.

1. Risk Management Measures

Risk management measures are essential components of an effective risk management framework within organizations. These measures help organizations identify, assess, and mitigate risks to achieve their objectives while minimizing potential negative impacts. In this section, we will explore three crucial risk management measures: risk exposure, risk appetite, and risk tolerance levels.

1.1 Risk Exposure

Risk exposure refers to the extent to which an organization is vulnerable to potential risks and their potential impact on its operations, finances, reputation, and overall performance. It involves identifying and quantifying the potential risks that an organization may face, evaluating their likelihood of occurrence, and assessing their potential consequences. By understanding the organization's risk exposure, decision-makers can prioritize risks, allocate resources effectively, and develop appropriate risk mitigation strategies (IRM, 2023).

1.2 Risk Appetite

Risk appetite represents the level of risk that an organization is willing to accept in pursuit of its strategic objectives. It reflects the organization's risk-taking preferences and determines the boundaries within which the organization operates in terms of risk exposure. Risk appetite is influenced by various factors, including the organization's industry, competitive landscape, regulatory environment, and stakeholder expectations. Establishing a clear risk appetite enables the organization to align its risk management practices with its strategic goals and make informed decisions about risk acceptance, avoidance, or mitigation (COSO, 2023).

1.3 Risk Tolerance Levels

Risk tolerance levels define the acceptable degree of variation in achieving organizational objectives while considering the potential risks involved. It sets the threshold at which the organization is willing to tolerate deviations from its desired outcomes. Risk tolerance levels are typically determined by considering factors such as the organization's financial capacity, market conditions, legal and regulatory requirements, and stakeholder expectations. By defining risk tolerance levels, organizations can ensure consistency in risk decision-making and prioritize resources for managing risks that exceed the established thresholds (ISO, Risk management — Guidelines, 2023)**.**

These risk management measures collectively contribute to an organization's ability to proactively manage risks and enhance its overall resilience. By assessing risk exposure, defining risk appetite, and establishing risk tolerance levels, organizations can effectively identify and prioritize risks, allocate resources, and implement risk mitigation strategies aligned with their strategic objectives.

2. Risk Management Standards and Regulations

Risk management standards and regulations provide guidance and frameworks for effective risk management practices. These standards and regulations can be used as a reference point for organizations to develop and implement their risk management processes. One of the most widely recognized standards for risk management is the ISO 31000:2018 standard, which provides a framework for managing risk at the organizational level (ISO, Risk management — Guidelines, 2023).

The ISO 31000 standard outlines the principles and guidelines for effective risk management and provides a systematic approach for organizations to identify, assess, treat, and monitor risks. It emphasizes the importance of context in risk management and encourages organizations to consider their internal and external environments when managing risk. The standard also emphasizes the need for continual improvement and the integration of risk management into the organization's governance and decision-making processes (ISO, Risk management — Guidelines, 2023).

Another widely recognized framework for risk management is the COSO ERM (Enterprise Risk Management) framework. This framework provides guidance for organizations to implement effective risk management practices at the enterprise level. The COSO ERM framework consists of eight components, including internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring (COSO, 2023).

The COSO ERM framework emphasizes the importance of risk management as an integral part of an organization's governance and decision-making processes. It highlights the need for a comprehensive approach to risk management that considers the organization's internal and external environments. The framework also emphasizes the need for effective communication and reporting of risks to stakeholders, including senior management and the board of directors (COSO, 2023).

In addition to ISO 31000 and COSO ERM, there are other risk management standards and regulations that provide guidance and frameworks for effective risk management practices. These include the (NIST) National Institute of Standards and Technology, Cybersecurity Framework, the Basel Accords for the banking industry, and the IEC 62305 (International Electrotechnical Commission) standard. By adhering to these standards and regulations, organizations can ensure that their risk management practices are in line with industry best practices and regulatory requirements (NIST, 2023).

By adhering to these standards and regulations, organizations can ensure that their risk management practices align with industry best practices and regulatory requirements. This enables them to establish comprehensive, systematic, and integrated risk management processes that contribute to their overall governance and decision-making processes.

Overall, risk management standards and regulations serve as essential frameworks for organizations, providing guidance and structure for the development and implementation of effective risk management practices. By following these standards and regulations, organizations can enhance their ability to identify, assess, and mitigate risks, ultimately leading to better-informed decision-making and improved overall performance.

3. Organizational Performance

Organizational performance refers to the extent to which an organization achieves its objectives and goals. It can be seen as the output of the organization's activities and processes, which are designed to create value for its stakeholders (Pierre J. Richard, Timothy M. Devinney, George S. Yip, Gerry Johnson, 2015). The concept of organizational performance is multidimensional and encompasses various aspects of organizational effectiveness, such as financial performance, customer satisfaction, employee engagement, and social responsibility.

Measuring organizational performance is essential for assessing the success of an organization and identifying areas for improvement. There are different measures of organizational performance that organizations can use to evaluate their performance. These measures can be broadly classified as financial and non-financial indicators (KPMG, 2017).

Financial indicators are used to evaluate an organization's financial performance and include metrics such as revenue, profit margin, return on investment (ROI), and earnings per share (EPS). These indicators are often used to assess an organization's short-term financial viability and its ability to generate profits and sustain growth. Financial performance indicators are commonly used in the business world to compare organizations within an industry or sector (Robert S. Kaplan, David P. Norton, 1996).

Non-financial indicators, on the other hand, are used to evaluate an organization's performance in areas other than finance, such as customer satisfaction, employee engagement, environmental sustainability, and social responsibility. These indicators are often used to assess an organization's long-term success and its ability to create value for its stakeholders. Non-financial performance indicators are becoming increasingly important in today's business environment, as organizations are being held accountable for their impact on society and the environment (KARL V. LINS, 1989).

The choice of performance measures used by an organization depends on its objectives and stakeholders. For example, a for-profit organization may place more emphasis on financial indicators, while a non-profit organization may place more emphasis on non-financial indicators such as social impact. The use of multiple measures is often recommended, as it provides a more comprehensive view of an organization's performance (Randall S. Schuler, Susan E. Jackson, 1987).

Effective performance management is essential for achieving organizational goals and improving performance. It involves setting performance objectives, measuring performance, providing feedback, and taking corrective actions. Effective performance management practices can help organizations align their activities with their objectives, identify areas for improvement, and enhance their overall performance.

4. Integration of Risk Management with Company Performance

Effective risk management practices can significantly contribute to improved organizational performance. The integration of risk management with organizational performance is crucial for businesses to achieve their strategic objectives and remain competitive in today's dynamic and uncertain business environment. Organizations that implement effective risk management practices can minimize the negative impact of risks and take advantage of opportunities, leading to better decision-making and improved overall performance (Hillson, 2020).

The relationship between risk management and organizational performance is multifaceted. Effective risk management practices can reduce the likelihood and potential impact of risks, leading to more stable and predictable operations. This, in turn, can improve organizational performance by minimizing disruptions and increasing efficiency. Moreover, effective risk management can enhance the organization's reputation, stakeholder trust, and investor confidence, leading to increased competitiveness and financial performance (COSO, 2023).

Organizations that integrate risk management with their performance management systems can identify, measure, and monitor risks in a systematic and proactive manner. This can provide valuable insights into the organization's overall risk exposure, risk appetite, and risk tolerance levels. By aligning risk management with strategic planning and decision-making processes, organizations can ensure that risks are adequately considered and managed throughout the organization. This can improve the effectiveness and efficiency of operations and help organizations achieve their objectives (ISO, Risk management — Guidelines, 2023).

In summary, the integration of risk management with organizational performance is essential for businesses to achieve their strategic objectives and remain competitive in today's dynamic and uncertain business environment. Effective risk management practices can contribute to improved organizational performance by minimizing disruptions, increasing efficiency, enhancing reputation and stakeholder trust, and providing valuable insights into risk exposure, risk appetite, and risk tolerance levels. Therefore, organizations should prioritize the integration of risk management with their performance management systems to achieve sustainable and long-term success (PwC, 2015).

5. Research Gaps and Challenges in Risk Management

5.1 Overview of the Previous Studies

In terms of previous studies on the impact of risk management on organizational performance, (Don Pagach, Richard S Warr, 2010) conducted a study titled "The Effects of Enterprise Risk Management on Firm Performance". This study examined the impact of adopting Enterprise Risk Management (ERM) principles on the long-term performance of companies. The researchers analysed the financial characteristics, assets, and market evolution of a sample of 106 companies that announced they were hiring Chief Risk Officers (CROs). The findings of the study indicated that companies that adopted ERM principles experienced a decline in stock price volatility. Furthermore, the use of CROs increased asset opacity and reduced market value and profits compared to revenue volatility, in comparison to similar companies that did not specify CRO in the industry group. Additionally, the researchers found a negative impact between changes in a company's market value and changes in profits. These results provide insight into the potential benefits and drawbacks of implementing risk management practices, specifically ERM, on a company's financial performance. However, it is important to note that the study was limited to a specific sample of companies and may not be generalizable to other industries or contexts.

Another study on the impact of risk management practices on organizational performance was conducted by (Wang, 2017) in their research titled "The impact of enterprise risk management on firm performance: Evidence from China." The study aimed to investigate the relationship between enterprise risk management (ERM) practices and firm performance in Chinese firms. Using a sample of 207 publicly listed companies in China, the authors found that firms with higher ERM maturity had better financial performance and a lower level of systematic risk. They also found that ERM maturity had a positive moderating effect on the relationship between strategic risk management and firm performance, indicating that firms with higher ERM maturity were better able to capitalize on strategic risks to improve performance.

Similarly, in a study conducted by (Adaileh, 2020), the impact of risk management practices on organizational performance in Jordanian insurance companies was investigated. The research aimed to analyse the relationship between risk management practices and performance indicators in the insurance sector of Jordan. The data for the study were collected from 120 managers working in various insurance companies through a questionnaire. The questionnaire responses were analysed using descriptive analysis and correlation analysis, while regression analysis was employed to examine the impact of risk management practices on organizational performance.

The findings of the study revealed several significant insights. Firstly, it was observed that risk management practices had a positive impact on organizational performance. Among the different risk management practices, risk mitigation was found to be the most influential factor in enhancing performance, followed by risk identification, risk assessment, and risk control. On the other hand, the implementation of risk management showed the least impact on organizational performance. These results indicate the importance of implementing effective risk mitigation strategies and highlighting potential risks in insurance companies to optimize their overall performance.

Based on the study's findings, the researchers provided recommendations for insurance companies in Jordan. They suggested that companies should adopt cost-effective measures to identify risks in a timely manner and effectively mitigate them. Additionally, it was recommended that insurance companies focus on educating their employees about the significance of risk management practices and continuously evaluate and adapt their risk management strategies to remain responsive to the evolving work environment. The study acknowledged its limitations and suggested that future research should include a larger sample size and a longer data collection period to validate the current model and measurement instrument used.

In her master's thesis titled "Impact of Enterprise Risk Management on Companies' Financial Performance and Value during Crisis: European Non-Financial Sectors - Energy and Telecommunication," (Rakauskaite, 2016) explored the influence of implementing Enterprise Risk Management (ERM) on the market value and performance of companies in the energy and telecommunication sectors following the crisis of covid-19. The study aimed to examine the changes in these factors after the implementation of ERM.
The theoretical framework and research design of the study established the main conceptual

relationships between ERM, market value (measured by Tobin's Q), and enterprise performance (measured by ROA). Empirical results were obtained from publicly listed European Energy (51 companies) and Telecommunication (21 companies) sectors, using balanced data from two periods: 2003-2006 (pre-crisis) and 2011-2014 (post-crisis). The presence of ERM was determined based on annual reports indicating the implementation of an ERM system. The findings indicated that the impact of ERM on companies' value and performance changed after the crisis. Post-crisis, investors began to recognize the existence of ERM as a positive indicator of mature management practices, leading to an increase in the market value of companies, particularly in the Energy sector. However, the impact of ERM on profitability showed a different pattern. Prior to the crisis, there was a significant effect in the Energy sector, but after the crisis, this effect diminished.

In a study titled "The impact of risk management on project success with the moderating role of managerial competency," (Irfan, 2020). The main objective of this research is to examine the impact of the interplay between risk management and project success, with a specific focus on the IT sector in Pakistan. The research approach adopted for this study was quantitative and deductive, drawing on the methodology proposed by Sekaran (2003) for determining the sample size. A total of 227 respondents, including employees from IT industry organizations in Pakistan, were included in the sample. The empirical findings reveal a positive correlation between risk management and project performance. Furthermore, the study highlights the positive moderating role of management competence in enhancing the relationship between risk management and project performance. These findings have practical implications for project-based organizations, as they provide insights and strategies to elevate performance levels and enable employees to achieve project success.

5.2 Overview of the current state of research

Research on risk management has gained significant attention in recent years due to the growing recognition of its importance in organizational performance. Numerous studies have been conducted to explore the relationship between risk management practices and their impact on various aspects of organizational performance.

One area of research focuses on understanding the effectiveness of different risk management strategies and frameworks. Scholars have examined the adoption and implementation of risk management practices, such as risk assessment methodologies, risk mitigation strategies, and risk monitoring systems. These studies have sought to identify the key factors that contribute to successful risk management implementation and the resulting impact on organizational performance (Muray, 2007).

Another stream of research has investigated the role of risk culture and risk awareness in organizations. Researchers have explored the influence of organizational culture on risk management practices, examining how risk-aware cultures contribute to more effective risk identification, assessment, and response. These studies highlight the importance of fostering a risk-aware culture throughout all levels of an organization and its impact on improving risk management outcomes (Power, 2009)

Furthermore, researchers have explored the relationship between risk management and financial performance. Studies have examined the impact of risk management practices on financial indicators, such as profitability, stock returns, and credit ratings. These investigations have provided insights into the financial benefits associated with effective risk management implementation, highlighting the potential value creation and risk reduction effects (Luis Otero-González, Luis-Ignacio Rodriguez-Gil, Pablo Durán-Santomil, Araceli Tamayo-Herrera, 2020).

In addition to financial performance, research has also examined the relationship between risk management and non-financial outcomes. Scholars have investigated the impact of risk management practices on areas such as operational performance, project success, reputational risk, and stakeholder satisfaction. These studies have shed light on the broader benefits of risk management beyond financial metrics, emphasizing the importance of a comprehensive and integrated approach to managing risks (FLAMMER, 2013).

Moreover, recent research has focused on the integration of risk management with strategic decision-making. Scholars have explored how risk management practices can support strategic planning, identify emerging risks, and inform strategic choices. These studies emphasize the need for risk management to be embedded within the strategic management process, ensuring that risks are considered in decision-making and that risk management activities align with organizational objectives (Zeki Simsek, Ciaran Bernard Heavey, John F. Veiga, David Souder, 2009).

While there have been significant advancements in the field of risk management research, several gaps and challenges remain. Future research can explore areas such as the integration of emerging technologies in risk management, the behavioural aspects of risk decision-making, the management of global uncertainties, the linkages between risk management and sustainability, cross-sector and cross-disciplinary approaches to risk management, and the integration of long-term and strategic perspectives in risk management (Kasperson, Roger E. Renn, Ortwin Slovic, Paul Brown, Halina S. Emel, Jacque Goble, Robert Kasperson, Jeanne X. Ratick, Samuel, 1988)

By addressing these research gaps and challenges, scholars can further enhance our understanding of risk management, contribute to the development of best practices, and provide valuable insights for organizations seeking to improve their risk management processes and ultimately enhance their performance.

Risk management measures, including risk exposure, risk appetite, and risk tolerance levels, are crucial for organizations to identify, prioritize, and manage risks. By integrating these measures into their risk management framework, organizations can align their risk management practices with their strategic objectives and make informed decisions. These measures contribute to improved risk decision-making, resource allocation, and overall performance.

Conclusion

In conclusion, effective risk management is a crucial aspect of organizational performance. This chapter has provided a foundation for the study by defining key concepts and explaining the relationship between risk management and organizational performance.

Throughout the chapter, it has been highlighted the importance of effective risk management practices and their impact on organizational performance. Risk management helps organizations identify, assess, mitigate, and monitor risks that could negatively impact their objectives and goals. By adopting robust risk management processes, organizations can enhance decision-making processes and increase the likelihood of achieving desired outcomes.

The chapter discussed the principles of risk management, including risk avoidance, risk reduction, risk transfer, and risk acceptance. These principles serve as guiding principles for organizations to effectively manage risks in different contexts.

Furthermore, this chapter has provided an overview of risk management standards and regulations, such as ISO 31000 and COSO ERM. These standards and regulations offer guidance on best practices for risk management, ensuring that organizations adhere to recognized frameworks and approach

In conclusion, this chapter has provided a comprehensive overview of risk management and its impact on organizational performance. We have discussed the various types of risks, including financial, operational, strategic, and reputational risks, emphasizing the importance of identifying and addressing them proactively. The chapter has also highlighted the risk management processes of identification, assessment, mitigation, and monitoring, underscoring their role in enhancing decision-making and achieving desired outcomes. Moreover, we have explored the principles of risk management, such as risk avoidance, reduction, transfer, and acceptance, along with their practical application in different contexts.

CHAPTER 2: Overview of Netcom's Risk Management Practices

Chapter Overview

This chapter highlights the importance of effective risk management practices within the leading waste management company in the Algiers province Netcom. It explores key areas where risk management plays a vital role in ensuring Netcom's success and sustainability, including financial stability, asset protection, regulatory compliance, operational efficiency, decision-making, and proactive risk monitoring.

The Overview of Netcom provides a comprehensive understanding of the company, encompassing its history, organizational structure, operations, and the roles and responsibilities of its structures. This chapter highlights the significance of effective risk management at Netcom and its profound impact on the company's overall performance.

The importance of risk management at Netcom is emphasized, underscoring its critical role in various key areas essential for the company's success. These areas include ensuring financial stability, protecting assets, complying with regulations, improving operational efficiency, making informed decisions, and proactively monitoring emerging risks. By prioritizing effective risk management practices, Netcom ensures its financial health, maintains a safe work environment, and fosters sustainability as a leading waste management company in the Algiers province.

The types of Risks section provide a comprehensive overview of the specific risks Netcom faces in its operations. It covers financial, operational, legal, and reputational risks, all of which are relevant to Netcom's line of work.

Netcom's risk management framework outlines its key components, including risk identification, assessment, mitigation, monitoring, and reporting. This well-structured and comprehensive framework effectively addresses the organization's risk management needs.

The chapter also discusses the challenges and limitations that Netcom may encounter in its risk management efforts. These challenges, such as limited resources, a complex organizational structure, resistance to change, lack of data, and external factors, provide a realistic perspective on the potential obstacles Netcom may face in effectively managing risks.

Section 1: Overview of Netcom

The history of Netcom dates back to its establishment in 1995 as a public industrial and commercial establishment responsible for cleaning and collecting household waste in the Wilaya of Algiers. Over the years, Netcom has evolved and expanded its operations to cover 26 municipalities and serve a population of 1.5 million inhabitants. This introduction provides an overview of Netcom's history and its role in waste management.

1. History of Netcom

The establishment "NETCOM" was created by ministerial decree n°446 of June 7th, 1995, bearing the name of "establishment for cleaning and collecting household waste". It is a public industrial and commercial establishment responsible for cleaning and collecting household waste, placed under the supervision of the governor of the Wilaya of Algiers and endowed with legal personality and financial autonomy.

This establishment carries out a public service mission, in accordance with a specification defining its rights and obligations towards its supervisory authority. NETCOM is managed by a board of directors and managed by a director.

NETCOM's territorial jurisdiction covers a perimeter of 26 municipalities covering an area of 152 km2 and serving an estimated population of 1.5 million inhabitants (2008 census), divided as follows:

- Administrative district of Bab El Oued includes five (05) municipalities: Bab El Oued, Bologhine, Casbah, Oued Koriche and Rais Hamidou;
- The administrative district of Sidi M'hamed includes four (04) municipalities: Sidi M'hamed, El Madania, El Mouradia and Alger Centre;
- The administrative district of Hussein Dey includes four (04) municipalities: Hussein Dey, Kouba, Belouezdad and Megharia;
- The administrative district of El Harrach includes four (04) municipalities: El Harrach, Oued Smar, Bourouba and Bach Djarah;
- The administrative district of Bouzereah includes four (04) municipalities: Bouzereah, Beni Messous, El Biar and Ben Aknoun;
- The administrative district of Bir Mourad Rais includes five (05) municipalities: Bir Mourad Rais, Djasr Kasentina, Birkhadem, Saoula and Hydra.

- The public service missions entrusted to NETCOM are as follows:
- Sweep, collect and transport household waste in the twenty-six (26) municipalities of the Wilaya of Algiers;
- Manage the fleets of rolling stock owned by NETCOM.

2. Structure of Netcom

Netcom has about twenty structures (departments, units, school, centre...) all directly under the authority of the director of the institution, which is a heavy organizational structure (see current organizational chart below).

Netcom has an organizational chart adapted to its historical conception of the practical management of its activities.

However, this chart is not formalized and officially displayed with a clear definition of the missions and prerogatives of the central structures and units, which can be the source of overlapping prerogatives.

Management tools adapted to its organization and growing size are being implemented, but the internal and external information system is still not well structured and modernized.

Management procedures exist at the level of structures and units, but they do not cover all functions.

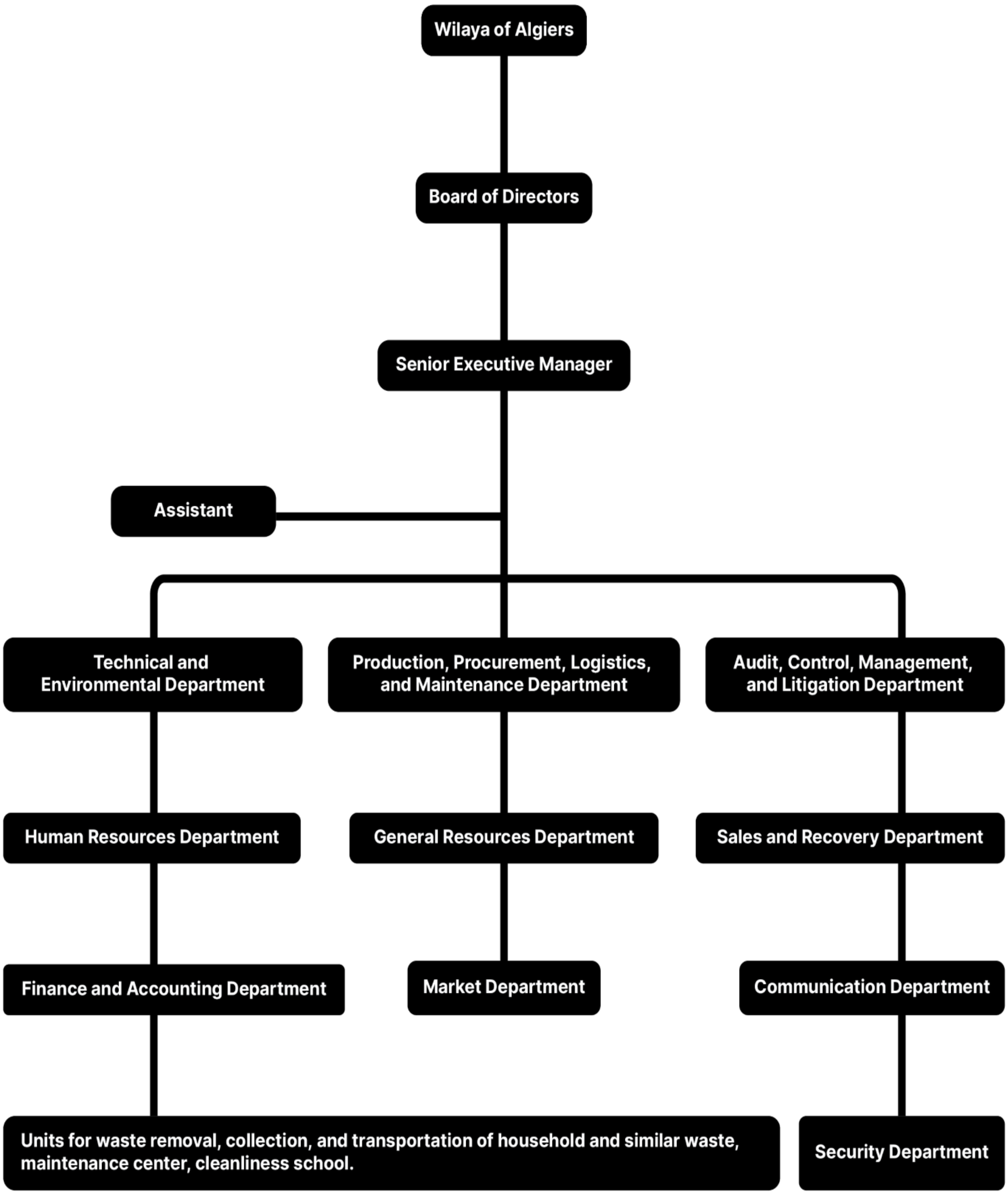
They are not completely formalized (written) to standardize the overall management of the institution while allowing the audit structure to fully exercise its mission of verifying the state of application of internal management systems and procedures.

The current organization is based more on acquired practices adapted and corrected according to the evolution of the size of the institution and the internal and external constraints encountered.

The central structure managers have autonomy and broad powers to accomplish their mission and make the necessary decisions in a timely manner, without too much reference to their hierarchy, creating flexibility in the tasks' handling.

However, these powers are not officially formalized within a precise definition of the missions and prerogatives of the central structures and units, with a charter of responsibilities for their managers.

Figure 1: Organizational Chart of Netcom



Source: Document provided by Netcom

3. Operation of Netcom

3.1 Human resources of NETCOM

The workforce of NETCOM, as of the end of September 2022, consists of 4,999 employees:

- 24 senior executives.
- 84 top-level executives (holding organic positions).
- 128 junior executives (not holding organic positions).
- 387 supervisory agents.
- 4,376 operational agents.

3.2 Material Resources and Operating Equipment

The fleet of rolling stock of NETCOM consists of hundreds of elements covering activities such as collection, support for collection, washing, sweeping, etc.

Digital Status of Operating Rolling Stock:

Table 1 Digital Status of Operating Rolling Stock

N°	Mission	Type	Quantity		Total	Rate
			NET COM	APC		
1	Collection and cleaning	Ampli Roll	25	1	26	4,62%
2		Open bin	60	5	65	11,55%
3		Compacting bin	210	51	261	46,36%
4		Garbage truck	19	0	19	3,37%
5		Micro bin	27	14	41	7,28%
6		Mini bin	27	0	27	4,80%
7	Mechanical sweeping activity	weeper	27	4	31	5,51%

8	Sanitation	Bulldozer	2	0	2	0,36%
9		Loader	4	0	4	0,71%
10		Forklift	2	0	2	0,36%
11		Compactor	1	0	1	0,18%
12		Mini loader	1	0	1	0,18%
13		Grader	2	0	2	0,36%
14		Backhoe loader	5	0	5	0,89%
15	Washing	Tank truck	11	0	11	1,95%
16		Street sweeper	5	0	5	0,89%
17		Tractable tanker	1	0	1	0,18%
18	Support for collection	Tractor-trailer	11	0	11	1,95%
19		Tractable bin	25	0	25	4,44%
20	Break of load	Open bin (20T)	16	0	16	2,84%
21		Ampli Roll (39T)	7	0	7	1,24%
Total			**488**	**75**	**563**	**100,00%**

Source: Document provided by Netcom

Netcom employs risk management to ensure optimal operation of its rolling stock. Through proactive risk identification, assessment, mitigation, and monitoring, Netcom safeguards operational integrity and enhances performance.

3.3 Material Resources and Operating Equipment

Table 2 Investment Status by Categories Acquired by NETCOM as of 31/12/2022

Label	Account Number	Balance as of 31/12/2022	Rate
Automobile equipment	2182435	4 301 984 608,72	53,93%
Concession lands	221000	1 634 543 304,00	20,49%
Concession constructions	223000	594 035 627,00	7,45%
Automobile equipment concession	228435	460 770 346,84	5,78%
Dumping equipment	2182440	384 220 218,80	4,82%
Cleaning equipment	2152431	218 508 957,31	2,74%
Concession equipment	228440	57 232 796,00	0,72%
Equipment and tools	2152430	37 435 309,94	0,47%
Computer equipment	2182447	33 378 690,78	0,42%
Cabins and tents	2132500	29 792 000,00	0,37%
Spare parts	2182462	28 399 618,97	0,36%
Office furniture	2182445	23 303 625,97	0,29%
Office equipment	2182459	23 275 945,10	0,29%
Equipment and tools	2182446	20 188 382,20	0,25%
Refurbishment arrangements	2152430	19 417 995,80	0,24%
Complex installations	2122472	15 998 411,35	0,20%
Cleaning equipment concession	2152420	15 336 781,30	0,19%
Safety equipment	228431	14 000 974,00	0,18%

Cycles and motorcycles	2182432	10 132 220,00	0,13%
Radio network	2182436	9 891 924,67	0,12%
Cabins and tents concession	2182448	8 205 070,00	0,10%
Equipment and tool concession	228500	7 600 010,00	0,10%
Household furniture and equipment	228430	6 045 302,34	0,08%
Computer software and related	2132451	5 626 227,93	0,07%
Small tools	204000	4 794 415,38	0,06%
Advertising equipment	2152434	4 644 693,21	0,06%
Donkeys	2182451	2 882 159,27	0,04%
Mobile phone	2182461	1 938 558,12	0,02%
Reproduction equipment	2182463	1 520 000,00	0,02%
Timekeeping systems	2182449	671 786,84	0,01%
Small tool concession	2182423	551 000,00	0,01%
Social furniture and equipment	228434	295 510,96	0,29%
Total		**7 976 622 472,80**	**100,00%**

Source: Document provided by Netcom

Netcom's investment portfolio as of December 31, 2022, showcases a diverse range of categories. The table provides an overview of the acquired investments along with their respective balances and rates.

Netcom's investment status is carefully managed to optimize returns and ensure a well-balanced portfolio.

3.4 Main Physical Activities for the Year 2022

- Quantity of waste evacuated: 406,072 tons/year
- Manual sweeping: 1,071 km2/year
- Mechanical sweeping: 41,571 km/year
- Streets washed: 2,305 km/year
- Selective sorting: 124 tons/year of bread, 1,871 tons/year of cardboard, and 16 tons/year of plastic
- Bins washed: 20,680 units/year
- Production of plastic bags: 923,000 units/year

3.5 Annual Operating and Revenue Budget (2022)

The total annual budget of NETCOM for the year 2022 amounted to over 6,400 million Algerian dinars (DA) for operations.

This overall budget consists of more than 98% of definitive allocations from the Wilaya (administrative region), while NETCOM's revenue from services and sales of cardboard and plastic waste does not exceed 112 million DA.

Digital Status of Operating Rolling Stock:

Table 3 Breakdown of the Operating Budget for the Year 2022

Operating Expense Categories	Amount
Salary expenses	3 307 000 000,00
Recruitment salary expenses (200 employees)	138 440 000,00
Impact of increase (15%)	181 000 000,00
Contagion allowance (12 months)	470 000 000,00
Total salary expenses	**4 096 440 000,00**
Consumables purchased subtotal	**756 200 000,00**
Spare parts and various components	250 000 000,00
Batteries	10 000 000,00

Tires and inner tubes	45 000 000,00
Fuel	75 000 000,00
Lubricants	55 000 000,00
Raw materials for plastic bags	25 000 000,00
Clothing	65 000 000,00
Small tools	15 000 000,00
Cleaning products	7 000 000,00
Ramadan catering expenses	18 000 000,00
Consumables for cavalry	6 000 000,00
Pharmaceutical and para-pharmaceutical products	1 200 000,00
Consumables for pre-collection equipment (plastic bins of various capacities, city baskets and plastic brooms)	100 000 000,00
Office supplies	16 000 000,00
Water	8 000 000,00
Supplies for the base camp	60 000 000,00
External services subtotal	**1 499 000 000,00**
Repairs and renovations of rolling stock (3)	250 000 000,00
Repairs and renovations of the plastic bag production unit	10 000 000,00
Access rights to the Controlled Landfill Site (4)	500 000 000,00
Rental of trucks, machinery, and handling equipment (5)	400 000 000,00
Insurance for movable and immovable assets	120 000 000,00
Telephone fees	10 000 000,00
ANEP advertising and communication	35 000 000,00

Electricity	11 000 000,00
Rent and lease charges	6 000 000,00
Supplies for maintenance work on real estate assets	75 000 000,00
Subscription for radio network and GPS (6)	25 000 000,00
Study and training expenses	22 000 000,00
Communication expenses	35 000 000,00
Other external services subtotal	**1 500 000,00**
Vehicle inspections	1 500 000,00
Taxes and similar payments subtotal	**13 010 000,00**
TAP/IBS (Tax on Professional Activities)	3 010 000,00
Vehicle vignettes	10 000 000,00
Other charges subtotal	**68 850 000,00**
Other charges	68 850 000,00
Total operating expenses	**6 435 000 000,00**

Source: Document provided by Netcom

Net (lam, 2014)com's operating budget for 2022 covers various aspects, including salary expenses, consumables, external services, taxes, and other charges. This breakdown helps in effectively managing and allocating resources to support the company's operations throughout the year.

3.6 Material Resources and Operating Equipment

Table 4 Projected Budget of Revenues for the Year 2022

Revenue Category/Client Category	Projected Budget 2022
Ministries and Sovereign Institutions	55 000 000,00
Ministry	5 000 000,00
Public and Private Companies	26 000 000,00
Hotel Establishments	20 000 000,00
University/Institute/Residence	4 000 000,00
Embassies	2 500 000,00
Public and Private Hospital Establishments	17 000 000,00
Government Agencies and Administrations	12 500 000,00
Subtotal 1 (Service Provision)	**137 000 000,00**
Sale of Recovered Cardboard and PET	18 000 000,00
Sale of Garbage Bags	10 000 000,00
Subtotal 2 (Product Sales)	**28 000 000,00**
Overall Total	**165 000 000,00**

Source: Document provided by Netcom

It should be noted that the revenue generated from the services provided and the sale of recyclable waste by NETCOM accounts for only 2.56% of the projected budget. The remaining 97.43% is covered by operating subsidies allocated by the supervisory authority, the "Wilaya of Algiers," in exchange for the services provided to local communities (26 municipalities within NETCOM's scope of operation).

Evolution of revenue over the past five (05) years:

Table 5 Evolution of revenue over the past five (05) years

Year	Revenue generated	Revenue collected	Collection rate	Remainder to be collected
2018	115 316 398,25	110 725 766,14	**96,02%**	**3,98%**
2019	118 475 165,14	115 553 404,73	**97,53%**	**2,47%**
2020	128 399 131,15	118 158 295,19	**92,02%**	**7,98%**
2021	131 098 739,84	123 238 590,40	**94,00%**	**6,00%**
2022	117 639 946,5	115 321 506,12	**98,03%**	**1,97%**

Source: Document provided by Netcom

Effective risk management practices are essential for managing the operation of NETCOM. They ensure the safety of employees, optimize operational efficiency, uphold environmental standards, and maintain financial stability. By identifying, assessing, and mitigating risks across various aspects of the company's operations, risk management practices contribute to its overall success.

4. Roles and Responsibilities of Netcom's Structures

The NETCOM establishment consists of different structures, each with its own missions.

4.1 Missions of the Board of Directors and Management

The Netcom establishment is governed by a Board of Directors and Management, which includes:

- The Wali (Governor) or their representative, as the President.
- Two representatives from the People's Assembly of the Wilaya (Province), as members.
- The executive directors responsible for the areas related to the establishment's objectives, as members.
- The Director of the establishment for cleanliness and household waste collection of the Wilaya of Algiers, as a member.

- The Chief Accountant of the establishment for cleanliness and household waste collection of the Wilaya of Algiers, as a member.
- The Board of Directors and Management, in accordance with applicable laws and regulations, has the following missions:
- Deliberating on the organization, functioning, and internal regulations of the establishment.
- Approving the organizational structure and annual staff table.
- Establishing the statutes and remuneration conditions for the personnel.
- Reviewing the management plans and the activity report of the previous fiscal year.
- Approving the establishment's action plan.
- Examining the budget and accounts, including the projected revenue and expenditure statements and the financial balance sheet.
- Determining the general conditions for entering into agreements, contracts, and other transactions by the establishment.
- Reviewing the annual management report.
- Approving loans, donations, and bequests received by the establishment.
- Establishing the internal regulations of the Board.
- Deciding on the transfer or expansion of activities.
- Approving twinning, cooperation, and exchange agreements.

4.2 Missions of the establishment's management

The management of the establishment is represented by its director and has the following main missions:

- Ensuring the proper functioning of the establishment and the preservation of its assets.
- Developing the establishment's budget project and ensuring its execution. The director acts as the authorizing officer.
- Exercising hierarchical authority over the establishment's personnel.

4.3 Missions of the Technical and Environmental Department

The missions of the Technical and Environmental Department, defined internally, are as follows:

- Establishing technical sheets by municipality and determining the needs in terms of human resources, equipment, and pre-collection facilities.

- Monitoring daily reports from operational units.
- Monitoring the accounting files of service providers engaged in leasing.
- Modernizing methods for monitoring execution operations.

4.4 Production, Procurement, Logistics, and Maintenance Department

The missions of the Production, Procurement, Logistics, and Maintenance Department:

- Production, which involves the manufacturing of bags at the establishment's factory located in Oued Smar. The quantities produced only cover the establishment's own needs. The capacity of this unit is limited, mainly due to the age of its equipment.
- Logistics, which involves providing the units with material resources (spare parts, lubricants, batteries, ballets, rakes, tires, etc.) based on expressed needs and availability.
- Maintenance of all the material resources of the units, with each unit having a responsible person for corrective operations and another for preventive maintenance and servicing (in addition to an operations manager).

4.5 Mission of the Sales and Collection Department

The Sales and Collection Department defines, develops, and oversees the commercial strategy to increase the establishment's sales and revenue. It performs the following tasks:

- Sets the budget revenue forecasts.
- Monitors the achievement of the sales figures.
- Determines the pricing structure for sales.
- Identifies relevant commercial targets.
- Ensures and monitors debt collection.
- Prospects non-conventional waste-generating clients.

4.6 Mission of the Market Department

- Monitoring equipment budget projects with the services of the Wilaya of Algiers until obtaining the subsidy decision.
- Initiate the procedures.
- Develop tender documents

4.7 Missions of the General Resources Department

The main missions of the General Resources Department are as follows:

- Ensure the organization and optimization of resource and service provision while guaranteeing compliance with regulations and standards.
- Manage and implement the policy for managing services and resources.
- Propose and obtain approval from the establishment's management for orientations regarding the management of services and resources.
- Develop and monitor the budget.
- Lead and motivate teams in coordination with the department.

4.8 Missions of the Human Resources Department

8The missions of the department and its services are carried out according to procedures that are not always written. The department is responsible for most of the personnel management within the establishment. Recruitment, promotions, disciplinary actions, career and file management, payroll, etc., for all staff members are centralized in the Human Resources Department. The department takes care of the following main aspects:

4.8.1 Administrative management of the establishment's personnel

- Management of recruitment, promotions, employment contracts, and maintenance of administrative records.
- Issuance of decisions and administrative documents.
- Application of salary scales and job classifications.
- Maintenance of legal registers and preparation of activity reports.

4.8.2 Organization and management of human resources in the establishment

- Implementation of the collective agreement and internal regulations.
- Monitoring, updating, and implementation of regulatory texts.

4.8.3 Payroll management for the establishment's personnel

- Processing of statements received from the structures and units of the establishment.
- Execution of payroll operations after verification by HR and finance managers.

4.8.4 Management of social affairs for the establishment

- Management of files related to family benefits.
- Preparation of retirement files.
- Management of reimbursement of medical expenses and benefits.

4.8.5 Management of legal affairs for the establishment

- Prevention and handling of contentious matters related to labor relations.
- Management of disciplinary actions.

4.8.6 Management of occupational health

The department maintains a monthly dashboard that includes data related to personnel movements. This data is transmitted monthly to the Technical and Environmental Department for consolidation and dissemination to the relevant structures of the province.

4.9 Missions of the Audit, Management Control, and Legal Department

The missions of the department encompass audit, management control, and legal matters. As presented to us, these missions are as follows:

4.9.1 Regarding audit, the department's missions consist of

- Developing analyses of the documents made available to the department.
- Identifying risks and deficiencies in relation to regulatory provisions and current procedures
- Proposing recommendations, effective procedures, and management tools to reduce costs and improve performance.
- Participating in the management and provision of decision-making elements to the management

4.9.2 In terms of management control, the department's missions consist of

- Contributing to formalizing major priorities and translating them into measurable objectives.
- Participating in the development and monitoring of objectives.
- Identifying any discrepancies that may arise from actual achievements compared to the objectives.
- Contributing to the improvement of the establishment's performance.

- Continuously managing tools and procedures.
- Optimally managing the organization to achieve the objectives set by the establishment and reduce costs.

4.9.2 Concerning legal matters, the department's missions consist of

- Ensuring legal monitoring and maintaining relationships with legal advisory firms of the establishment.
- Preparing substantive files for litigation cases and making them available to lawyers.
- Monitoring pre-litigation cases and various formal notices received by the establishment.
- Filing complaints and monitoring regulatory violations.
- Implementing judgments and rulings of competent courts.
- Representing the establishment before labor inspection authorities.
- Preparing payment files for the fees of legal advisory firms representing the establishment.

4.10 Missions of the Finance and Accounting Department

The missions of the Finance and Accounting Department cover the following areas:

4.10.1 In terms of accounting

- Ensuring the proper functioning and reliability of the accounting management system.
- Verifying the consolidation of all accounting entries.
- Preparing the company's balance sheets and income statements.
- Analysing accounts.
- Handling tax declarations, preparing the tax balance sheet, and related declarations.
- Regarding investment management, ensuring the tracking of investments and depreciation in the accounting system.

4.10.2 In terms of day-to-day financial management

- Conducting analysis and control of treasury operations (revenue and expenses).
- Monitoring the cash position and bank relationships.

4.10.3 In terms of strategic financial management

- Developing financing programs necessary for various expenditure needs of the establishment.
- Supervising the preparation of the annual and multi-year cash flow plan.
- Monitoring the evolution of operational parameters (main cost items, debt collection, etc.).
- Monitoring financial expenditure and taking necessary measures to avoid overdraft situations.

4.10.4 In terms of control

- Ensuring the regularity of operations related to financial expenditure.
- Performing control and reconciliation of bank drafts prepared by the treasury and accounting departments.
- Creating summaries of treasury and accounting operations.
- Controlling received subsidies for operations, equipment and updating their utilization.
- Updating the consumption of equipment credits and remaining balances.
- Controlling and monitoring the preparation of summaries of operations regarding the restructuring of equipment credit balances.
- Controlling the financial and budgetary situations periodically transmitted to the supervisory authority.

5. Netcom's Structure Roles in Risk Management

5.1 Board of Directors and Management

- Deliberate on the organization, functioning, and internal regulations of the establishment, including risk management policies and procedures.
- Review management plans and activity reports, which may include risk management strategies.
- Approve the establishment's action plan, which should incorporate risk management goals and initiatives.
- Consider the report of statutory auditors, which may include an evaluation of risk management practices.

5.2 Technical and Environmental Department

- Monitor daily reports from operational units, which may highlight any risks or issues related to waste collection and disposal.
- Develop programs for specific missions (e.g., holidays, summer season) considering potential risks and implementing appropriate measures.
- Conduct daily control and inspection missions in the field to identify and mitigate operational risks.

5.3 Production, Procurement, Logistics, and Maintenance Department

- Procure and manage equipment, including trucks and maintenance resources, ensuring that safety and reliability requirements are met.
- Monitor and maintain material resources of the units, emphasizing preventive maintenance and servicing to minimize operational risks.
- Coordinate logistics and allocate resources based on identified needs, considering risk factors and ensuring efficient operations.

5.4 Sales and Collection Department

- Define and oversee the commercial strategy, considering potential risks and opportunities for revenue generation.
- Establish sales agreements and pricing structures, considering both profitability and risk exposure.

5.5 Market Department

- Initiate acquisition processes, ensuring compliance with regulations and risk-related requirements.
- Develop specifications documents and initiate tender calls, taking into account risk mitigation measures during the selection process.

5.6 General Resources Department

- Ensure compliance with regulations and standards, including risk management requirements across all resource and service provisions.

- Manage resources, services, and investments, including maintenance of buildings and premises, considering safety and security risks.

5.7 Human Resources Department

- Manage personnel and maintain administrative records, including recruitment, promotions, and disciplinary actions, in accordance with legal requirements and risk considerations.
- Implement collective agreements and internal regulations, ensuring compliance with labour-related laws and regulations.
- Manage payroll operations accurately and securely, minimizing risks associated with financial transactions.

5.8 Audit, Management Control, and Legal Department

- Conduct audits and identify risks and deficiencies in relation to regulatory provisions and procedures, proposing recommendations for risk mitigation and improved performance.
- Participate in the development and monitoring of objectives, identifying discrepancies and suggesting measures for performance improvement.
- Ensure legal monitoring, handle litigation cases, and represent the establishment in legal matters, reducing legal and compliance risks.
- Collaborate with management to provide decision-making elements based on audit findings and control processes.

5.9 Finance and Accounting Department

- Conduct financial analysis and control treasury operations, ensuring compliance with financial regulations and minimizing financial risks.
- Identify and evaluate risks associated with various aspects of Netcom's operations, including financial and operational risks.
- Manage accounting functions, including balance sheets, income statements, and tax declarations, ensuring accuracy and compliance.
- Develop financing programs and monitor operational parameters.
- Ensure continuous legal monitoring to stay updated with relevant laws and regulations and assess their impact on Netcom's risk management practices.

- Contribute to the development and implementation of risk management policies and procedures, ensuring alignment with industry standards and regulatory requirements.

5.10 Establishment's Management

- Management ensures effective risk policies and procedures.
- Management develops and implements strategies to minimize risks

Netcom operates with a complex organizational structure and various departments that contribute to its overall functioning. From the Board of Directors and Management to the Finance and Accounting Department, each structure has specific roles and responsibilities. Effective risk management practices are crucial for Netcom to ensure employee safety, operational efficiency, environmental compliance, and financial stability. By implementing risk management strategies across its operations, Netcom can continue to provide essential waste management services to the communities it serves.

Section 2: Netcom and Risk Management

Netcom, the premier cleaning establishment responsible for waste management in the Algiers province, recognizes the significance of risk management in its operations. This section explores the importance of risk management at Netcom, emphasizing its role in ensuring financial stability, protecting assets, ensuring compliance, improving operational efficiency, enhancing decision-making, and fostering a proactive risk-aware culture.

1. Importance of Risk Management at Netcom

Risk management plays a crucial role in ensuring the smooth functioning and long-term sustainability of organizations. Netcom, being the premier cleaning establishment responsible for collecting and managing household waste in the Algiers province, understands the significance of effective risk management in its daily operations. Given the dynamic nature of the waste management industry and the potential risks associated with it, Netcom places great emphasis on prioritizing risk management practices to mitigate threats, optimize resource allocation, and maintain a resilient waste management environment. This section delves into the importance of risk management at Netcom, highlighting its pivotal role in identifying, assessing, and mitigating potential risks to ensure successful waste management operations while upholding its position as a reliable public company.

1.1 Financial Stability

Financial stability is a critical aspect that Netcom, as a public company, must prioritize. Risk management plays a pivotal role in identifying financial risks, such as budgetary constraints, cost overruns, and revenue fluctuations. By closely monitoring and addressing these risks, Netcom can safeguard its financial health and optimize resource allocation. This allows the company to meet its financial obligations, invest in necessary resources, and sustain its operations effectively. Moreover, a robust risk management framework ensures that Netcom remains cost-effective, enabling it to provide its services while minimizing the costs.

1.2 Protecting the organization's assets

Protecting the organization's assets is a primary objective of Netcom's risk management strategy. By proactively identifying potential risks, such as accidents, equipment failures, or reputational damage, Netcom can take necessary steps to mitigate these risks and protect its valuable assets. This includes safeguarding its dedicated workforce, ensuring they have the necessary training and safety protocols in place, and regularly monitoring and maintaining their well-being. By implementing comprehensive risk management measures, Netcom demonstrates its commitment to creating a safe and secure work environment.

1.3 Ensuring compliance with regulations

Compliance with regulations is of utmost importance in the waste management industry, which is subject to various laws and regulations governing waste collection, transportation, and disposal. Netcom recognizes that effective risk management is instrumental in ensuring compliance with these regulations. By closely monitoring and assessing potential compliance risks, Netcom can implement appropriate measures to meet the necessary regulatory standards. This not only helps avoid costly fines and legal action but also fosters trust among stakeholders and enhances Netcom's reputation as a responsible and law-abiding company.

1.4 Improving operational efficiency

Risk management also contributes to improving operational efficiency at Netcom. By systematically analysing the organization's processes and procedures, risk management identifies potential inefficiencies that could lead to increased costs or decreased productivity. Through risk mitigation strategies, such as implementing streamlined workflows, adopting innovative technologies, or enhancing employee training programs, Netcom can enhance operational efficiency and drive cost savings. This not only benefits the company but also translates into better service quality for its customers and the community at large.

1.5 Enhancing decision-making

Informed decision-making is another significant advantage that effective risk management brings to Netcom. By diligently assessing and understanding the risks facing the company, Netcom gains valuable insights that guide its strategic decision-making process. These insights help Netcom make informed choices about resource allocation, investment decisions, and operational priorities. By considering potential risks and evaluating their potential impact, Netcom can navigate challenges more effectively and seize opportunities with confidence, ensuring the long-term success and growth of the organization.

1.6 Proactive Risk Monitoring and Adaptation

Netcom's commitment to risk management extends beyond the scope of traditional risk identification and mitigation. As a responsible public company, Netcom embraces a comprehensive approach to risk management that includes proactive measures to address emerging risks, adapt to evolving industry trends, and stay ahead of potential challenges. By fostering a risk-aware culture, promoting continuous improvement, and investing in advanced risk assessment tools, Netcom demonstrates its dedication to creating a resilient and sustainable waste management environment in the Algiers province.

In conclusion, risk management is of paramount importance for Netcom, the leading cleaning establishment and public company in the Algiers province. By prioritizing risk management practices, Netcom protects its assets, ensures compliance with regulations, improves operational efficiency, makes informed decisions, and maintains financial stability. Through a comprehensive and proactive approach to risk management, Netcom demonstrates its commitment to providing reliable and sustainable waste management services, contributing to the cleanliness and well-being of the Algiers province and its residents.

2. Types of Risks Involved in Netcom's Operations

Netcom, as a cleaning establishment in the Algiers province, faces various types of risks in its operations. These risks encompass different aspects, including financial, operational, legal and environmental.

2.1 Financial Risks

Netcom, being a public company and a leading establishment for cleaning and waste management in the Algiers province, faces various financial risks that require careful attention and management. Understanding and mitigating these risks is crucial to ensure the financial stability and sustainability of Netcom. Some key financial risks include:

Netcom's annual revenue budget heavily relies on definitive allocations from the Wilaya, which are subject to changes in government policies, budget cuts, or reallocation of funds. Uncertainties in government funding can significantly impact Netcom's financial stability and operational capabilities. To mitigate this risk, Netcom should establish effective communication channels with relevant government authorities, actively engage in budget discussions, and diversify its revenue streams to reduce dependence on government funding.

2.1.2 Fluctuations in Revenue from Services

Netcom generates revenue from waste management services provided to households and commercial establishments. However, the revenue from these services may fluctuate due to factors such as changes in customer demand, market competition, or economic downturns. Netcom should closely monitor market trends, conduct regular customer satisfaction surveys, and explore opportunities to expand its service offerings to mitigate the impact of revenue fluctuations.

2.1.3 Revenue from Waste Sales

Netcom also generates revenue by selling recyclable materials such as cardboard and plastic waste. However, the revenue generated from these sales is relatively low compared to the overall operational costs. Fluctuations in recycling market prices can impact Netcom's revenue and profitability. To address this risk, Netcom should focus on developing strategic partnerships with recycling companies, exploring new markets for waste sales, and implementing effective pricing strategies to optimize revenue generation.

2.1.4 Cost Overruns and Expense Management

Managing costs and expenses is crucial for maintaining financial stability. Netcom faces the risk of cost overruns due to factors such as fuel prices, maintenance and repair costs, and inflation. It is essential for Netcom to implement efficient cost management practices, including regular monitoring of expenses, negotiating favourable contracts with suppliers, optimizing resource utilization, and exploring opportunities for cost-saving initiatives.

2.1.5 Capital Investment and Debt Management

Netcom's operations may require significant capital investments in infrastructure, vehicles, and equipment. Managing capital expenditure and debt obligations is crucial to maintain financial health. Netcom should conduct thorough financial analysis and feasibility studies before making substantial investments. Effective debt management practices, such as monitoring debt levels, optimizing debt repayment schedules, and exploring favourable financing options, will help minimize financial risks associated with debt.

2.2 Operational Risks

Netcom's operations involve a wide range of activities related to sweeping, collecting, and transporting household waste in the 26 municipalities of the wilaya of Algiers. The scale and complexity of these operations expose Netcom to various operational risks that require careful management and mitigation. Some key operational risks include:

2.2.1 Delays in Waste Collection

Efficient waste collection is vital to maintaining a clean and healthy environment. However, factors such as heavy traffic, road closures, and unpredictable weather conditions can lead to delays in waste collection. These delays not only disrupt the waste management schedule but can also result in overflowing bins and unsightly surroundings. Netcom must closely monitor and manage its operations to minimize delays and ensure timely waste collection.

2.2.2 Equipment Breakdowns

Netcom relies on a fleet of vehicles, including garbage trucks, for waste collection and transportation. The breakdown of essential equipment can significantly impact operations and lead to service disruptions. Regular maintenance and inspections are crucial to identify potential issues and address them promptly. By implementing proactive maintenance programs, Netcom can reduce the risk of equipment breakdowns and maintain operational efficiency.

2.2.3 Accidents and Occupational Hazards

Waste management operations involve numerous hazards, both for the workforce and the general public. Workers involved in waste collection and handling face risks such as slips, trips, falls, and exposure to hazardous materials. Additionally, vehicular accidents pose a significant risk during waste transportation. Netcom must prioritize the health and safety of its employees by implementing rigorous training programs, providing personal protective equipment, and enforcing strict safety protocols. Regular safety audits and inspections can help identify potential risks and take preventive measures to mitigate accidents.

2.2.4 Inefficient Routing and Resource Allocation

Effective logistics management is crucial for optimizing waste collection routes and resource allocation. Inefficient routing can result in increased fuel consumption, longer travel times, and unnecessary costs. It is essential for Netcom to leverage advanced technology and data analytics to optimize routing and resource allocation. By implementing route optimization software, real-time tracking systems, and data-driven decision-making, Netcom can enhance operational efficiency, reduce costs, and minimize environmental impact.

2.2.5 Emergency Response and Disaster Management

Waste management operations must be prepared to handle emergencies and unforeseen events such as natural disasters, major spills, or public health crises. Netcom should develop robust emergency response plans that outline protocols for addressing various types of emergencies. Regular training sessions, drills, and coordination with local authorities and emergency services are crucial to ensure an effective and prompt response during such incidents.

Netcom, a cleaning establishment in the Algiers province, faces financial and operational risks. Effective management of financial risks such as government funding uncertainties, revenue fluctuations, and cost overruns is crucial for Netcom's stability. Operational risks, including delays in waste collection and equipment breakdowns, must be mitigated through efficient operations and maintenance programs. It is observed that Netcom lacks consideration of legal and environmental risks in its operations, which should be addressed to ensure compliance and minimize liabilities. By enhancing its risk management framework, Netcom can strengthen its operational resilience.

3. Netcom's Risk Management Framework

Netcom has developed a comprehensive risk management framework to address the various types of risks it faces in its operations. This framework is designed to ensure the smooth functioning of the organization, mitigate potential threats, and maintain a resilient waste management environment. The risk management process at Netcom is driven by the Audit, Management Control, and Legal Department, in collaboration with other relevant departments. The framework consists of the following key components:

3.1 Risk Identification

- The Audit, Management Control, and Legal Department, in collaboration with other departments, conduct a thorough analysis of Netcom's operations to identify potential risks.
- Risks are categorized into different types, including financial and operational risks, based on their nature and impact on the organization.
- The risk identification process takes into account internal and external factors that could affect Netcom's performance and objectives.

3.2 Risk Assessment

- Identified risks are assessed to determine their likelihood of occurrence and potential impact on Netcom's operations.
- The assessment considers factors such as the probability of risk occurrence, potential consequences, and the organization's risk tolerance.
- Risk assessment techniques, such as qualitative and quantitative analysis, are employed to evaluate the significance of each risk.
- Once risks are identified and assessed, appropriate mitigation strategies are developed.
- The Audit, Management Control, and Legal Department, along with relevant departments, collaborate to design and implement risk mitigation measures.
- Mitigation strategies may include implementing internal controls, establishing standard operating procedures, enhancing safety protocols, and ensuring compliance with regulations.
- The effectiveness of risk mitigation measures is regularly monitored and reviewed to ensure their continued relevance and adequacy.

3.3 Risk Mitigation

- Once risks are identified and assessed, appropriate mitigation strategies are developed.
- The Audit, Management Control, and Legal Department, along with relevant departments, collaborate to design and implement risk mitigation measures.
- Mitigation strategies may include implementing internal controls, establishing standard operating procedures, enhancing safety protocols, and ensuring compliance with regulations.
- The effectiveness of risk mitigation measures is regularly monitored and reviewed to ensure their continued relevance and adequacy

3.4 Risk Monitoring and Reporting

- Netcom maintains a continuous monitoring process to track and assess risks on an ongoing basis.
- Regular reports on risk management are generated and shared with the Board of Directors and Management.
- The Audit, Management Control, and Legal Department play a key role in monitoring risks, conducting audits, and providing recommendations for risk mitigation and improved performance.

- Risk monitoring also involves gathering feedback from operational units and analysing daily reports to identify emerging risks and take timely corrective actions.

Netcom's risk management framework provides a structured approach to identify, assess, mitigate, monitor, and communicate risks throughout the organization. By implementing this framework, Netcom aims to ensure financial stability, protect its assets, comply with regulations, improve operational efficiency, enhance decision-making, and proactively address emerging risks.

4. Challenges and Limitations of Netcom's Risk Management

While Netcom recognizes the importance of risk management in its operations, there are several challenges and limitations that the organization faces. These challenges can affect the effectiveness of risk management practices and pose potential obstacles to achieving the desired outcomes. It is crucial for Netcom to be aware of these challenges and take proactive measures to address them. The following are some of the key challenges and limitations that Netcom may encounter in its risk management efforts:

4.1 Limited Resources

Netcom operates within a limited budget and resources, which can constrain its ability to invest in robust risk management systems and tools. Insufficient financial resources may hinder the implementation of advanced risk assessment technologies or the hiring of specialized risk management personnel. As a result, Netcom may face difficulties in conducting comprehensive risk assessments, monitoring risks effectively, and implementing appropriate risk mitigation measures.

4.2 Complex Organizational Structure

Netcom's organizational structure, as described earlier, is extensive and consists of numerous departments and units. This complexity can create challenges in terms of coordination and communication regarding risk management practices. The lack of a formalized organizational chart and clearly defined responsibilities may lead to overlapping roles and responsibilities, making it difficult to establish accountability for risk management. Clear lines of communication and well-defined roles and responsibilities within the organization are essential for effective risk management.

4.3 Resistance to Change

Implementing risk management practices often requires changes in organizational culture, processes, and mindset. Resistance to change from employees and stakeholders can hinder the adoption and implementation of risk management strategies. It may be challenging to convince employees at all levels to embrace risk management practices and integrate them into their daily routines. Overcoming resistance to change requires effective communication, training, and a strong commitment from top management to foster a risk-aware culture.

4.4 Lack of Data and Information

Risk management relies heavily on accurate and up-to-date data and information. Netcom may face challenges in obtaining relevant data from various sources within the organization and external stakeholders. Incomplete or outdated information can lead to incomplete risk assessments and inaccurate risk mitigation strategies. Netcom should invest in data management systems, establish data collection processes, and collaborate with relevant stakeholders to ensure access to reliable and timely information for effective risk management.

4.5 External Factors

Netcom operates in an environment that is subject to external factors beyond its control. These factors, such as changes in government policies, regulatory requirements, or market conditions, can introduce new risks or alter existing risk landscapes. Adapting to and managing these external risks requires continuous monitoring, flexibility, and the ability to respond promptly. Netcom should stay informed about industry trends, engage in dialogue with regulatory authorities, and actively participate in risk management networks and forums to address external risks effectively.

Netcom's risk management faces challenges: limited resources, complex structure, resistance to change, lack of data, and external factors. To overcome, allocate resources wisely, improve communication, address resistance, invest in data management, and adapt to external risks. Enhancing risk management will lead to successful risk mitigation.

In conclusion, risk management is crucial for Netcom to maintain its position as a reliable public company and provide sustainable waste management services. By prioritizing risk management practices, Netcom can effectively identify, assess, and mitigate risks, ensuring smooth operations while upholding financial stability, asset protection, regulatory compliance, operational efficiency, informed decision-making, and proactive risk monitoring and adaptation. Netcom's commitment to comprehensive risk management contributes to a resilient waste management environment in the Algiers province.

Conclusion

In conclusion, the chapter on Risk Management at Netcom sheds light on the critical role of effective risk management practices within Netcom. By understanding and addressing various risks, Netcom ensures its overall success and sustainability. The comprehensive overview of Netcom provides a deep understanding of the company, emphasizing the profound impact of risk management on its performance. From financial stability to asset protection, regulatory compliance to operational efficiency, and informed decision-making to proactive risk monitoring, risk management is a key driver in Netcom's ability to thrive in the waste management industry. By prioritizing effective risk management practices, Netcom safeguards its financial health, maintains a safe work environment, and establishes itself as a reliable and responsible organization.

However, managing risks at Netcom does come with its fair share of challenges and limitations. Limited resources, a complex organizational structure, resistance to change, lack of data, and external factors present obstacles that Netcom must navigate. By acknowledging these challenges, Netcom can develop strategies to overcome them and strengthen its risk management efforts. With a well-structured risk management framework in place, Netcom is equipped to identify, assess, mitigate, monitor, and report risks effectively. By embracing a proactive and adaptive approach, Netcom remains vigilant to emerging risks, adapts to industry trends, and fosters a risk-aware culture. Overall, by effectively managing risks and addressing challenges, Netcom ensures its continued success as a leading waste management company in the Algiers province.

CHAPTER 3: Analysis of Netcom's Risk Management and its Impact on Company Performance

Chapter Overview

This chapter is used to investigate and analyse the impact of risk management on the performance of Netcom. The chapter also discusses the research design, which aimed to identify effective risk management practices that can improve company performance. It is organized into the following sections:

In the research methodology section. The approach used in this study was explained. It begins with defining the research purpose and conducting a literature review to gain a better understanding of the research topic. The primary data were collected through a structured questionnaire administered to staff members involved in the risk management process at Netcom. Secondary data were obtained from various sources such as books, academic journals, and articles. The collected data were analysed using quantitative methods, employing statistical tools such as Microsoft Excel software and SPSS (Statistical package for the social sciences).

The data analysis techniques used in this study are discussed in a section. The analysis approach was guided by the research objectives and aimed to identify the impact of risk management on Netcom's performance. Quantitative analysis was conducted using Microsoft Excel software and SPSS. Principal Component Analysis (PCA) was employed as a key analytical tool to investigate the relationship between risk management and company performance. PCA helped uncover underlying patterns and structures within the dataset and assess the relative importance of different risk management practices.

The findings discussion section discusses the results that highlight the significant role of risk management practices in Netcom's performance. The findings align with prior research emphasizing the importance of risk management in enhancing company performance. Specifically, the study underscores the importance of risk mitigation and proactive risk management measures in driving overall performance.

Section 1: Research Methodology

This Section explains the research methodology that was used in this study to achieve its objectives, which is, to investigate and analyse the impact of risk management on the performance of Netcom. In this study, a mixed-method approach was used to collect data from both primary and secondary sources.

1. Study Design

The study design used in this thesis is to investigate the impact of risk management on company performance. Netcom the cleaning establishment of the Algiers province was the case of study. This study design was chosen because it allows the conduct of an in-depth examination of the impact of risk management on Netcom. Since the cleaning industry faces a range of risks such as employee safety risks, environmental risks, health risks, and financial risks a case study design was particularly appropriate as it will enable to investigate of how the implementation of risk management could have a differential impact on the performance of Netcom in this industry.

The case study design allowed the collection of a considerable amount of data about Netcom's risk management and examines how it impacts the company's performance. The conduction of a detailed case study, Allowed the gain of a deeper understanding of the specific challenges faced by Netcom in implementing risk management and how these challenges could be addressed.

In terms of data collection, the case study design facilitated the collection of rich qualitative data which helped to answer the research questions in depth. The data collected through individual and group interviews, observations, and document analysis provided valuable insights into the implementation and impact of risk management at Netcom. The study design allowed me to collect data from different sources, analyse the data about a wide range of variables, and generate insights about the relationships between these variables.

Additionally, the case study design enabled to conduct triangulation of data sources, by comparing different data sources to ensure the consistency and validity of the findings. For instance, the data gathered from interviews were compared to secondary data from documents such as annual reports to identify any discrepancies between the two sources and to establish corroboration for the research findings.

Overall, the case study design used in this thesis was appropriate as it enabled the collection of data from different sources, triangulating findings, and conducting an in-depth examination of the implementation of risk management and its impact on the performance of Netcom. The design facilitated a comprehensive investigation of the relationship between risk management and the performance of Netcom in the cleaning industry in Algiers province.

2. Data Collection Method

In this study, a mixed-method approach was used to collect and analyse data from both primary and secondary sources. The mixed-method approach allowed me to triangulate the data collected from different sources to ensure the validity and reliability of the findings. This section discusses the data collection method used in this thesis.

2.1 Primary Data

The primary data was collected through a structured questionnaire that targeted staff members at Netcom. The questionnaire was designed to collect data on the implementation of risk management at Netcom and how these practices have impacted the company's performance. The questionnaire was designed using close-ended questions with rating scales and a few open-ended questions to enable respondents to provide additional information.

To ensure our research study's accuracy and robustness, the questionnaire's validity was verified through content validity. The content validity was established by reviewing relevant literature such as books, articles, research papers, theses, dissertations, and company profiles,

The questionnaire was distributed to the staff members at Netcom, including managers and staff, who were involved in the implementation of risk management. The questionnaire was administered in both hard copy and online formats to facilitate a maximum response rate.

In addition to the questionnaire, I conducted individual and group interviews with key informants at Netcom to provide a rich understanding of the challenges facing the company in implementing risk management. The interviews were semi-structured and open-ended, which allowed the participants to express their views on the implementation of risk management and how it impacted the performance of Netcom.

Moreover, I observed Netcom's operations and procedures to understand the company’s risk management in practice. Observations were also useful in identifying the actual use and compliance of risk management policies and procedures within the organization.

2.2 Secondary Data

The secondary data sources in this study comprised academic journals, books, articles, and annual reports of Netcom. These sources provided relevant information on the theoretical framework of risk management and how it had been implemented across different industries. The secondary sources were particularly useful in providing contextual information to the research findings and generating insights into the comparative analysis between Netcom and other companies.

The literature review provided valuable information on the latest trends in risk management, which helped in the design of the questionnaire and identification of the most appropriate risk management to investigate.

Overall, the mixed-method approach used in this study allowed for the triangulation of data from different sources to ensure the validity and reliability of the findings. The primary data collection methods provided rich qualitative data that revealed the impact of risk management on Netcom, and how it has impacted the company’s performance. The secondary data sources provided important contextual information to the research, and it helped to structure and create the questionnaire.

3. Data Analysis Techniques

In this study, the mixed-method approach used to collect data from primary and secondary sources allowed the facilitate data analysis techniques. The data analysis approach employed in this thesis was guided by the research objectives and questions, which sought to identify the impact of risk management on the performance of Netcom. This section discusses the data analysis techniques used in this study.

3.1 Quantitative Analysis

The quantitative data collected through the structured questionnaire were analysed using Microsoft Excel software And SPSS.

The research employed Principal Component Analysis (PCA) as a key analytical tool to investigate the relationship between risk management and the overall performance of Netcom. The primary objective of the analysis was to understand the extent to which effective risk management contributes to the success and performance of the company.

By utilizing PCA, the research aimed to uncover the underlying patterns and structure within the dataset consisting of variables related to risk management practices, including risk identification, risk assessment, risk mitigation, risk monitoring, and company performance metrics. The central focus of the research was to identify the key drivers or factors within the realm of risk management that significantly impact the overall performance of companies.

Through the analysis, the research sought to assess the relative importance of each one of the risk management practices in explaining the variation in company performance.

Furthermore, by projecting the data onto the principal components, the research aimed to create a new coordinate system that would provide a clearer representation of how individual risk management practices in the dataset relate to the identified principal components. This process allowed to assess and compare the quality of the contribution of each practice to the principal components and identify any notable patterns or trends.

Ultimately, the research analysis using PCA aimed to provide valuable insights into the impact of risk management on company performance. By uncovering the key risk management practices that influence a company’s success, my research aimed to contribute to a better understanding of how companies can optimize their risk management strategies to enhance overall performance and mitigate potential risks effectively.

The main goal of the analysis, based on the information discussed in this section, was to investigate the relationships between risk management practices and company performance, quantify the impact of each practice, and provide actionable insights for companies to improve their risk management processes.

3.2 Integration of Quantitative Data

The integration of the quantitative data in this study facilitated the triangulation of the data and allowed for a more holistic and comprehensive analysis of the impact of risk management on the performance of Netcom. The data integration was conducted by comparing the findings from both data sources to generate a more reliable and valid set of findings based on multiple data sources.

Additionally, the findings from both data sources were used to triangulate the data to identify the themes. The integration of the data provided a more comprehensive understanding of the impact of risk management on the performance of Netcom.

In conclusion, the research methodology section utilized a case study design to investigate the impact of risk management on Netcom's performance. The study employed a mixed-method approach, collecting primary data through questionnaires, interviews, and observations, and secondary data from academic sources and annual reports.

Section 2: Practical Part

This section presents the results of a research study that assessed the impact of risk management on company performance taking Netcom as a case study. Through a questionnaire, participants provided feedback on different risk management practices' effectiveness and the company's financial and non-financial performance. Descriptive statistics and hypothesis testing were conducted to analyse the data obtained.

The study's findings provide crucial insights into the effectiveness of risk management practices and their impact on the company’s performance.

The study's findings provide crucial insights into the effectiveness of risk management practices and their impact on the company’s performance.

1. Analysing results

This section presents the analysis of the questionnaire results, which aimed to assess participants' perceptions across five variables: Risk identification, Risk assessment, Risk mitigation, Risk monitoring, and Company performance. The questionnaire consisted of six questions for each variable, and the responses were measured on a scale of 1 to 5.

The analysis provides insights into participants' views and perceptions regarding these key aspects, offering valuable information for the overall evaluation of the research study.

1.1 Questionnaire Results

Table 6: Risk Identification Questionnaire Results

Person	Q1	Q2	Q3	Q4	Q5	Q6
1	3	3	4	5	4	3
2	4	4	4	4	4	4
3	4	4	3	3	4	3
4	5	4	4	3	3	4
5	4	4	4	4	4	4
6	3	3	3	3	3	3
7	4	3	4	4	2	4
8	4	4	3	4	4	2
9	4	4	4	4	4	4
10	3	3	3	3	3	3
11	5	4	4	4	4	4
12	5	4	4	3	3	4
13	4	5	2	3	4	4
14	4	4	4	4	4	4
15	5	4	4	4	4	4
16	4	4	4	4	4	4
17	4	4	2	4	3	4
18	5	4	5	5	5	4
19	3	3	3	3	3	3
20	3	4	3	4	4	4
21	5	5	5	5	5	5
22	4	3	5	3	3	3
23	4	4	4	4	4	4
24	4	5	4	5	5	5
25	5	5	5	4	4	4
26	5	5	5	5	5	5
27	4	4	4	4	4	4
28	5	5	5	5	5	5
29	4	3	5	3	3	3
30	5	4	5	4	5	4

Source: Made by the student In Microsoft Excel

This table presents the respondents' answers to the questions in the risk identification section of the questionnaire.

Table 7: Risk Assessment Questionnaire Results

Person	Q7	Q8	Q9	Q10	Q11	Q12
1	4	4	4	4	4	4
2	5	4	4	4	4	4
3	3	4	3	4	4	4
4	4	4	4	4	4	4
5	5	5	5	4	4	4
6	3	4	3	4	4	2
7	5	5	5	4	4	4
8	4	4	3	4	4	2
9	4	5	4	5	5	5
10	3	4	3	4	4	4
11	4	4	4	4	4	4
12	4	3	5	3	3	3
13	3	3	4	5	4	3
14	3	4	3	4	4	4
15	4	4	4	4	4	4
16	5	5	5	5	5	5
17	3	4	3	4	4	4
18	4	4	4	4	4	4
19	3	4	3	4	4	2
20	3	4	4	3	5	3
21	4	5	4	5	5	5
22	3	3	3	3	3	3
23	5	5	5	4	4	4
24	5	5	5	5	5	5
25	3	4	3	4	4	4
26	5	5	5	5	5	5
27	3	3	4	5	4	3
28	5	4	5	4	5	4
29	3	3	5	3	4	5
30	4	4	4	4	4	4

Source: Made by the student In Microsoft Excel

This table presents the respondents' answers to the questions in the risk assessment section of the questionnaire.

Table 8: Risk Mitigation Questionnaire Results

person	Q13	Q14	Q15	Q16	Q17	Q18
1	5	4	4	3	3	4
2	3	5	4	3	5	4
3	3	3	3	3	4	5
4	4	4	4	4	4	4
5	5	5	5	5	4	4
6	3	3	3	3	3	3
7	3	3	5	3	4	5
8	4	4	4	5	3	4
9	3	3	5	3	4	5
10	4	3	5	3	3	3
11	2	4	5	3	5	4
12	5	4	4	3	3	4
13	4	4	4	4	4	4
14	5	4	5	3	4	5
15	5	5	5	4	4	4
16	3	4	3	4	4	4
17	4	4	4	5	5	4
18	3	4	4	4	4	5
19	4	3	4	4	3	3
20	4	4	5	4	3	5
21	4	4	5	4	4	4
22	4	4	3	2	2	5
23	4	4	4	3	4	5
24	5	5	5	4	4	4
25	4	4	4	4	4	4
26	3	5	5	5	5	5
27	3	4	3	4	4	2
28	5	5	5	5	5	5
29	3	3	4	5	4	3
30	5	4	5	5	5	3

Source: Made by the student In Microsoft Excel

This table presents the respondents' answers to the questions in the risk mitigation section of the questionnaire.

Table 9: Risk Monitoring Questionnaire Results

Person	Q19	Q20	Q21	Q22	Q23	Q24
1	5	4	5	5	4	3
2	5	4	4	3	3	4
3	5	3	3	3	3	3
4	4	4	4	4	4	4
5	5	4	5	5	5	3
6	4	3	4	4	4	2
7	4	4	5	4	4	4
8	4	4	4	4	4	4
9	5	4	5	5	5	4
10	4	3	4	4	4	3
11	4	4	4	3	4	3
12	3	4	3	4	4	4
13	3	3	3	3	3	3
14	5	5	5	5	5	2
15	4	5	4	5	5	5
16	3	2	3	4	3	4
17	4	4	4	4	4	4
18	5	4	5	5	5	4
19	3	3	3	3	3	3
20	5	5	5	5	5	3
21	5	5	5	4	4	4
22	3	3	3	3	3	3
23	5	4	5	5	5	3
24	5	5	5	5	5	2
25	4	3	4	4	3	3
26	5	4	5	5	5	4
27	4	3	4	4	4	3
28	5	5	5	5	5	3
29	3	3	3	3	4	5
30	5	4	5	5	5	4

Source: Made by the student In Microsoft Excel

This table presents the respondents' answers to the questions in the risk monitoring section of the questionnaire.

Table 10: Company Performance Questionnaire Results

Person	Q25	Q26	Q27	Q28	Q29	Q30
1	4	4	4	4	4	4
2	3	3	4	5	4	3
3	4	4	4	4	4	4
4	5	4	4	3	3	4
5	5	5	5	5	5	3
6	4	4	4	3	4	2
7	2	3	3	4	5	4
8	5	4	4	4	4	4
9	4	4	3	5	3	3
10	4	4	3	3	3	5
11	5	4	4	3	3	4
12	3	4	3	3	3	5
13	4	3	4	4	4	2
14	3	5	5	5	4	5
15	5	4	5	5	5	4
16	5	5	5	5	5	5
17	4	4	4	4	4	4
18	5	4	4	5	5	4
19	3	3	3	3	3	3
20	5	3	5	5	5	5
21	4	4	4	4	4	4
22	3	3	3	3	4	5
23	4	4	4	4	4	4
24	5	5	5	5	5	5
25	4	4	4	4	4	4
26	5	4	4	5	5	4
27	4	4	3	4	4	2
28	5	5	5	5	5	5
29	5	4	4	3	3	4
30	5	4	4	5	5	4

Source: Made by the student In Microsoft Excel

This table presents the respondents' answers to the questions in the Company Performance section of the questionnaire.

1.2 Calculating the average response of the sub-variables for every person

Upon conducting a thorough analysis of the intercorrelation among the sub-variables presented in the tables, it was observed that substantial correlations ranging from 0.95 to 1 were consistently observed. These findings indicate a strong positive correlation between the sub-variables, suggesting that they collectively align towards a common direction.

Consequently, by calculating the average response of the sub-variables for every person, we can derive the corresponding response for each variable in an integrated manner.

Table 11: Mean Responses of Sub-Variables

Person	Risk identification	Risk Assessment	Risk Mitigation	Risk Monitoring	Company Performance
1	3.66	4	3.83	4.33	4
2	4	4.16	4	3.83	3.66
3	3.83	3.66	3.5	3.33	4
4	3.83	4	4	4	3.83
5	4	4.5	4.66	4.5	4.66
6	3	3.33	3	3.5	3.33
7	3.5	4	3.83	4.16	3.5
8	3.5	3.5	4	4	4.16
9	4	4.66	3.83	4.66	3.66
10	3	3.66	3.5	3.66	3.5
11	4.16	4	3.83	3.66	3.83
12	3.83	3.5	3.83	3.66	3.5
13	3.66	3.66	4	3	3.5
14	4	3.66	4.33	4.5	4.5
15	4.16	4	4.5	4.66	4.66
16	4	5	3.66	3.16	5
17	3.5	3.66	4.33	4	4
18	4.66	4	4	4.66	4.5
19	3	3.33	3.5	3	3
20	3.66	3.66	4.16	4.66	4.66
21	5	4.66	4.15	4.5	4
22	3.5	3	3.33	3	3.5
23	4	4.5	4	4.5	4
24	4.66	5	4.5	4.5	5
25	4.5	3.66	4	3.5	4
26	5	5	4.66	4.66	4.5
27	4	3.66	3.33	3.66	3.5
28	5	4.5	5	4.66	5
29	3.5	3.83	3.66	3.5	3.83
30	4.5	4	4.5	4.66	4.5

Source: Made by the student In Microsoft Excel

1.3 Correlation Matrix

In this study, a Principal Component Analysis (PCA) was conducted to explore the underlying structure of the dataset, all necessary conditions were verified to ensure the appropriateness of the analysis. Firstly, the values of the variables were standardized to eliminate any scale-related biases. This process involved transforming the mean responses of each variable to have a mean of zero and a standard deviation of one. By standardizing the values, the relative importance of each sub-variable was preserved, allowing for a more meaningful interpretation of the results.

Next, the correlation matrix was calculated based on the standardized values. The correlation matrix provides valuable insights into the relationships between the sub-variables, revealing the extent to which they are linearly associated. This step was crucial in understanding the interdependencies among the variables and identifying potential underlying factors that drive the overall performance. By examining the correlation matrix, we can assess the strength and direction of the relationships, aiding in the identification of dominant patterns and associations within the dataset.

With the standardized values and correlation matrix in hand, the PCA analysis is poised to uncover the latent factors that contribute to the observed variability in the dataset. By extracting the principal components, we can identify the key dimensions that explain the majority of the variance in the original variables.

Table 12: Correlation Matrix

Variable	Risk Identification	Risk Assessment	Risk Mitigation	Risk Monitoring	Company Performance
Risk Identification	1.000	0.744	0.713	0.770	0.768
Risk Assessment	0.744	1.000	0.879	0.825	0.902
Risk Mitigation	0.713	0.879	1.000	0.923	0.896
Risk Monitoring	0.770	0.825	0.923	1.000	0.942
Company Performance	0.768	0.902	0.896	0.942	1.000

Source: Made by the student In SPSS

Please note that the numbers have been rounded for better readability, but the full precision of the correlations has been retained in the calculations.

1.4 Bartlett test for the correlation matrix

Table 13: Bartlett test

Statistic	Value	p-value
Bartlett's χ2	78.436254	0.0001

Source: Made by the student In SPSS

The p-value is less than 0.05, which means that the null hypothesis can be rejected. This suggests that the correlation matrix is not an identity matrix and that there is a significant correlation between the variables. The Bartlett test is a statistical test that is used to test the hypothesis that the correlation matrix is an identity matrix. The null hypothesis of the test is that the correlation matrix is an identity matrix, and the alternative hypothesis is that the correlation matrix is not an identity matrix. The test statistic for the Bartlett test is χ2. The p-value for the test is the probability of obtaining a χ2 statistic that is at least as large as the observed χ2 statistic, assuming that the null hypothesis is true.
If the p-value is less than 0.05, then the null hypothesis can be rejected. This means that there is a significant correlation between the variables in the correlation matrix.

1.5 The eigenvalues and eigenvectors

After obtaining the correlation matrix and conducting the Bartlett test to assess the suitability of the data for factor analysis, the next step in the research analysis is to calculate the eigenvalues and eigenvectors. These calculations will help the determination of the principal components of the variables under consideration. Examining the eigenvalues, which represent the amount of variance explained by each component, Will allow identifying the most significant components that contribute the most to the overall variation in the data. The corresponding eigenvectors provide insights into the linear combinations of the original variables that form these principal components. This process of eigenvalue-eigenvector analysis will enable me to select the key components that capture the essence of the data and will guide subsequent analyses in my research on the impact of risk management on company performance.

Table 14: The eigenvalues

Component	Total	Percentage of Variance	Cumulative
1	3.521	70.486%	70.486%
2	0.551	17.118%	87.604%
3	0.388	4.124%	91.728%
4	0.334	2.652%	94.380%
5	0.207	5.620%	100.000%

Source: Made by the student In SPSS

Table 15: The eigenvectors

	PC1	PC2	PC3	PC4	PC5
Risk identification	0.329	0.415	-0.4385	-0.6943	-0.3022
Risk Assessment	0.415	0.669	0.6863	-0.4039	0.2131
Risk Mitigation	0.669	0.565	-0.5563	0.1765	0.6071
Risk Monitoring	0.565	0.236	0.1184	0.5517	-0.5913
Company Performance	0.236	0.375	0.0366	-0.0055	-0.0805

Source: Made by the student In SPSS

The first two principal components account for 87.604% of the variation in the data. Therefore, we can choose to keep the first two principal components. This will allow us to reduce the dimensionality of the data while still retaining most of the variation.

The first principal component accounts for 70.486% of the variation in the data. This means that it captures the most important information in the data. The second principal component accounts for 17.118% of the variation in the data. This means that it captures some of the less important information in the data.

By keeping the first two principal components, we can reduce the dimensionality of the data from 5 to 2. This will make it easier to visualize and interpret the data.

As we can see, the variables risk identification, risk assessment, risk mitigation, risk monitoring, and company performance are all positively correlated with PC1. This suggests that these variables are all related to the first principal component. The first principal component accounts for 70.486% of the variation in the data. This means that it captures the most variation in the data. The variables risk identification, risk assessment, risk mitigation, risk monitoring, and company performance are all positively correlated with PC2. This suggests that this variable is also related to the second principal component. The second principal component accounts for 17.118% of the variation in the data. This means that it captures the second most variation in the data.

By projecting the data onto the principal components, it permits transforming the dataset into a new space where each dimension corresponds to a principal component. This allowed analysing and visualization of the data in a lower-dimensional space, highlighting the most significant patterns and relationships captured by the principal components.

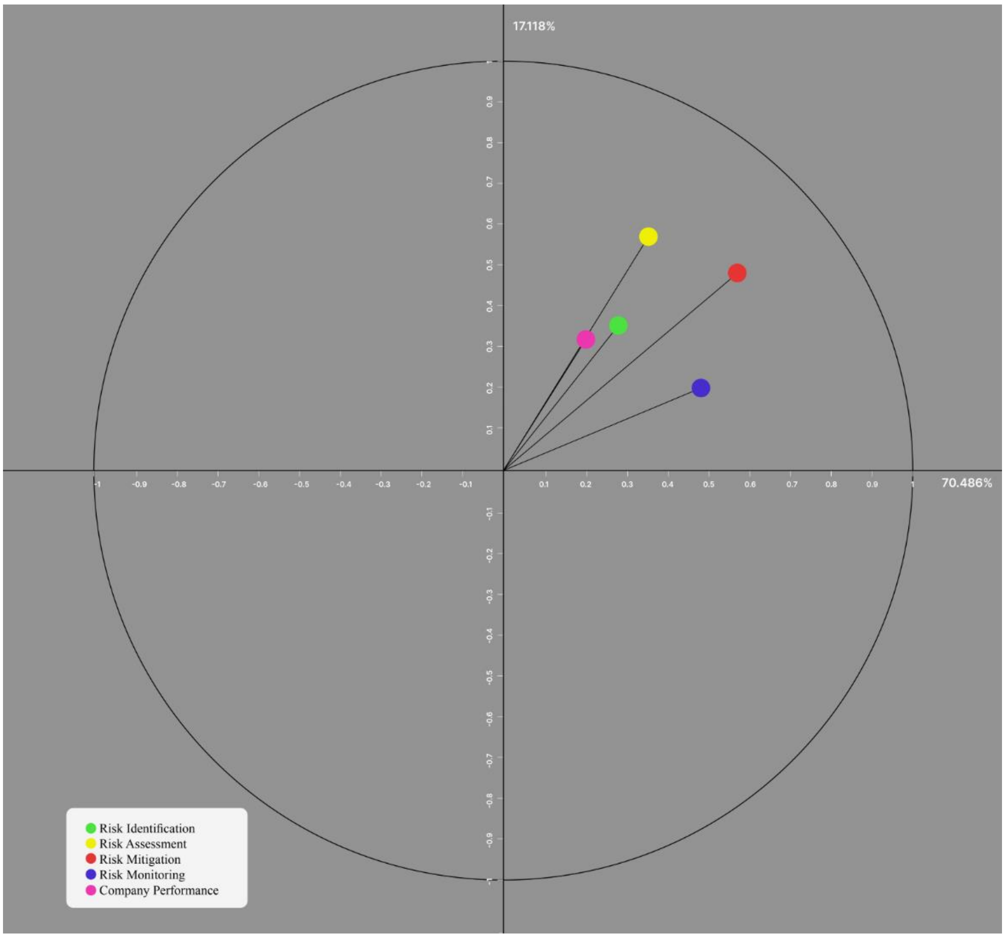
1.6 Variables projection into the main axes

Table 16: Projected Data into the main axe

Variable	PC1	PC2
Risk Identification	0.329	0.415
Risk Assessment	0.415	0.669
Risk Management Mitigation	0.669	0.565
Risk Monitoring	0.565	0.236
Company Performance	0.329	0.415

Source: Made by the student In SPSS

Figure 2: Correlation Circle



Source: Made by the student In Adobe Illustrator

Based on the correlation circle analysis, where the variables Risk Identification, Risk Assessment, Risk Mitigation, Risk Monitoring, and Company Performance are plotted, we observe that all five variables are located in the first quarter of the circle and are relatively close to each other. Additionally, they are slightly away from the centre point of the circle.

This pattern suggests that there is a positive correlation among these variables. The variables Risk Identification, Risk Assessment, Risk Mitigation, and Risk Monitoring are closely related to each other, indicating that they are interconnected in terms of assessing and mitigating risks. Furthermore, Company Performance is also positively correlated with these risk-related variables, suggesting that a company's performance is influenced by its ability to identify, assess, mitigate, and monitor risks effectively.

The fact that these variables are located away from the centre point indicates that they have a relatively higher variance and contribute more to the overall variation in the dataset.

This implies that these variables play a significant role in understanding and explaining the relationships within the data.

As a guess, these findings suggest that focusing on risk identification, assessment, mitigation, and monitoring is crucial for optimizing company performance. Companies that are proactive in managing risks and maintaining a strong risk management framework are likely to have better overall performance. It would be beneficial for decision-makers and stakeholders to prioritize these areas and allocate resources accordingly to mitigate potential risks and enhance company performance.

1.7 Analysing the individuals

Table 17: Individual Coordinates

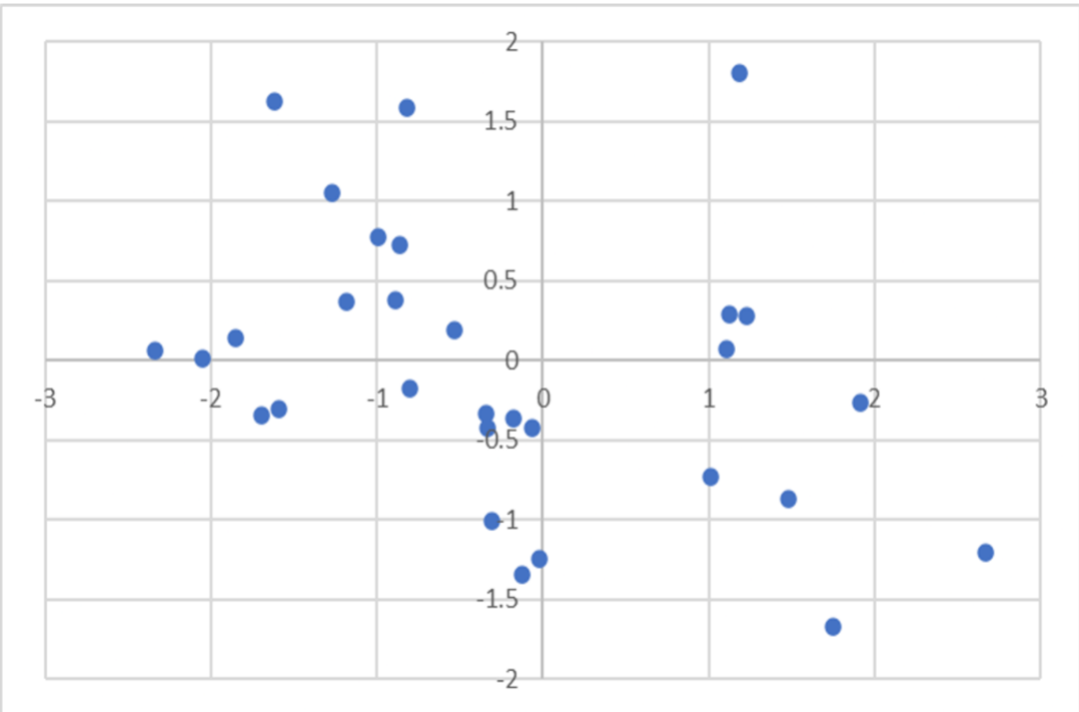
Person	PC1	PC2
1	-0.885	0.379
2	-0.022	-1.242
3	-0.335	-0.427
4	1.744	-1.671
5	-0.860	0.729
6	-0.303	-1.003
7	-1.695	-0.346
8	1.916	-0.263
9	-0.820	1.588
10	-0.124	-1.348
11	-0.339	-0.335
12	2.666	-1.202
13	-0.537	0.194
14	-2.050	0.016
15	-0.805	-0.181
16	-1.617	1.628
17	1.108	0.070
18	-0.994	0.773
19	-0.067	-0.419
20	-1.270	1.053
21	1.225	0.282
22	-1.179	0.372

23	1.011	-0.732
24	-2.336	0.066
25	1.126	0.288
26	-1.591	-0.303
27	-0.177	-0.367
28	1.183	1.801
29	1.477	-0.872
30	-1.855	0.142

Source: Made by the student In SPSS

These coordinates represent the positions of the individuals in the two-dimensional space defined by the first two principal components. They can be interpreted as the transformed values of the original variables, capturing the variation and relationships among the variables in a reduced-dimensional space.

Figure 3: scatter plot of inertia



Source: Made by the student In Microsoft Excel

1.8 Testing the quality of contribution

Table 18: The quality of contribution of individuals

Person	Quality of Contribution
1	0.012603
2	0.023722
3	0.004877
4	0.106656
5	0.01344
6	0.006243
7	0.026396
8	0.060503
9	0.044096
10	0.023385
11	0.001939
12	0.112751
13	0.004524
14	0.063691
15	0.006551
16	0.087487
17	0.019198
18	0.013073
19	0.000999
20	0.030964
21	0.022489
22	0.006801
23	0.02287
24	0.071358
25	0.021402
26	0.022092
27	0.000823
28	0.085195
29	0.045418
30	0.038455

Source: Made by the student In SPSS

The table displays the quality of contribution for each Individual in the dataset. The quality of contribution is a measure of how much everyone contributes to the variation captured by the first two principal components.

Analysing the results, we can observe that Individual 12 has the highest quality of contribution with a value of 0.112751 this indicates that Person 12's data points are located farthest from the origin in the principal component space, implying a significant impact on the overall variance explained by the first two components.

On the other hand, Person 27 has the lowest quality of contribution with a value of 0.000823 suggesting that their data points have the least impact on the variation captured by PC1 and PC2.

It is important to note that higher quality contribution values indicate individuals whose data points are more influential in shaping the principal components, while lower values suggest lesser influence.

2. Testing Results

The results of the PCA analysis in the study indicate that effective risk management has a positive impact on the company's performance. The first two principal components, which capture the variation in the data, related to effective risk management practices, accounted for the most variation in the data. This suggests that risk identification, risk assessment, risk mitigation, and risk monitoring all play a significant role in improving the company's performance. The findings are consistent with prior research emphasizing the importance of risk management on company performance.

The eigenvalues show how much variation each principal component accounts for. The eigenvectors show what the principal components are measuring. In this case, the first principal component accounts for 70.421% of the variation in the data. This means that it captures the most variation in the data. The second principal component accounts for 11.013% of the variation in the data. This means that it captures the second most variation in the data.

Both of the components, PC1 and PC2, have a positive correlation with risk identification. This suggests that risk identification is an important factor in effective risk management and that companies that are better at identifying risks are likely to have better company performance.

Both of the components, PC1 and PC2, have a positive correlation with risk assessment. While risk assessment is the most contributing variable in PC2. This suggests that it is an important factor in effective risk management and that companies that are better at assessing risks are likely to have better company performance.

Both of the components, PC1 and PC2, have a positive correlation with risk mitigation. While risk mitigation is the most contributing variable in PC1. This suggests that it is an important factor in effective risk management and that companies that are better at mitigating risks are likely to have better company performance.

Both of the components, PC1 and PC2, have a positive correlation with risk monitoring. This suggests that risk monitoring is an important factor in effective risk management, and that companies that are better at monitoring risks are likely to have better company performance. Because it allows companies to track and review risks ensuring that, they are being effectively managed. By monitoring risks, companies can identify and address emerging risks before they cause problems.

3. Findings Discussion

Regarding the risk management practices employed by Netcom, the study reveals that they play a crucial role in the company's performance. This implies that Netcom prioritizes measures to reduce or eliminate the impact of risks before they occur which emphasizes the significance of risk management on the company’s performance.

The study findings highlight the critical role of risk mitigation in driving Netcom's overall performance. By prioritizing measures to reduce or eliminate the impact of risks before they occur, Netcom demonstrates its proactive approach to risk management. This strategic emphasis enables the company to identify and address potential risks in a timely manner, safeguarding its operations, resources, and long-term success.

Furthermore, the study indicates that risk monitoring, risk assessment, and risk identification are also important components of Netcom's risk management practices, albeit to a slightly lesser extent. These findings suggest that Netcom recognizes the value of continuously monitoring potential risks, categorizing risks for further analysis, and identifying risks inherent in its operations. However, it is worth noting that the implementation of risk management practices at Netcom could be further improved.

The findings of this study underscore the importance of risk management practices in ensuring the financial stability, operational efficiency, and overall performance of Netcom.

In conclusion, the results of the study indicate a significant relationship between risk management and company performance at Netcom. Through the examination of various risk management dimensions, including risk identification, risk assessment, risk management mitigation, and risk management monitoring, the study found that effective risk management practices positively impact company performance.

Conclusion

This Chapter of the research focused on investigating the impact of risk management on the performance of Netcom, a cleaning establishment in the Algiers province. In Section 1, the research methodology was discussed, highlighting the study design, data collection methods, and data analysis techniques employed. A mixed-method approach was utilized, combining primary data collected through questionnaires, interviews, and observations, with secondary data obtained from academic sources and annual reports. The case study design facilitated an in-depth examination of the implementation of risk management at Netcom, considering the specific challenges faced by the company in the cleaning industry.

Section 2 presented the practical case and the results obtained from the research study. The analysis of questionnaire responses provided insights into participants' perceptions regarding risk identification, assessment, mitigation, monitoring, and company performance. Descriptive statistics and hypothesis testing were employed to analyse the data. The integration of quantitative and qualitative data allowed for a comprehensive analysis of the impact of risk management on Netcom's performance. The findings revealed the effectiveness of risk management practices and their influence on the company's performance.

Overall, the research study employed a rigorous methodology to investigate the relationship between risk management and the performance of Netcom. By utilizing a mixed-method approach and conducting a comprehensive analysis, the study provided valuable insights into the effectiveness of risk management practices and their impact on company performance. These findings can contribute to a better understanding of how companies, such as Netcom, can optimize their risk management strategies to enhance performance and mitigate potential risks effectively.

General Conclusion

The findings of this research shed light on the impact of risk management on company performance at Netcom. The results highlight the importance of comprehensive risk management procedures for large companies like Netcom, which is considered a significant player in the industry due to its workforce size, years of operation, and revenue. However, it is important to note that these findings are specific to Netcom and cannot be generalized, as the study was implemented in one company.

The research has identified several key risks faced by Netcom, including financial risks such as government funding and budgetary constraints, fluctuations in revenue from services and waste sales, cost overruns, and capital investment and debt management. Operational risks such as delays in waste collection, equipment breakdowns, accidents and occupational hazards, inefficient routing, and resource allocation. These risks pose significant challenges to Netcom's financial stability, operational efficiency, and reputation.

Netcom has developed a comprehensive risk management framework to address these risks, which includes risk identification, risk assessment, risk mitigation, and risk monitoring and reporting. The framework involves collaboration among different departments, including the Audit, Management Control, and Legal Department, to ensure the smooth functioning of the company, mitigate potential threats, and maintain a resilient waste management environment.

Specifically, the findings suggest that a systematic and comprehensive approach to risk identification contributes to improved company performance. Thorough risk assessment processes help in identifying and prioritizing risks effectively, leading to better performance outcomes. The implementation of risk management mitigation strategies, such as risk transfer, risk reduction, and risk avoidance, was found to minimize the potential impact of identified risks and positively influence company performance. Additionally, regular monitoring and evaluation of risk management practices were found to enhance company performance by enabling timely adjustments and improvements to risk management strategies.

However, the study also identified several challenges and limitations faced by Netcom in its risk management efforts. These include limited resources, a complex organizational structure, resistance to change, a lack of data and information, and external factors beyond the company's control. Netcom must be aware of these challenges and take proactive measures to address them, such as investing in risk management systems and tools, improving communication and coordination within the company, fostering a risk-aware culture, and ensuring access to reliable and timely information.

In conclusion, this thesis underscores the significance of effective risk management practices for Netcom's financial stability, operational efficiency, and overall performance. By prioritizing risk identification, assessment, mitigation, and monitoring, Netcom can mitigate potential risks, protect its assets, comply with regulations, improve decision-making, and proactively address emerging risks. The findings of this study provide valuable insights for Netcom and other companies in the waste management industry to enhance their risk management strategies and drive sustainable success in a challenging and dynamic environment.

Hypotheses testing:

Based on the results obtained from Chapter 3, Hypothesis 1, which states that effective risk management has a positive impact on company performance at Netcom, has been approved. The analysis of the covariance matrix's eigenvalues and eigenvectors provided insights into the relationship between risk management and company performance.

Both PC1 and PC2 exhibited a positive correlation with company performance, implying that effective risk management practices, including risk identification, assessment, mitigation, and monitoring, can contribute to improved company performance. This finding supports the hypothesis that effective risk management has a positive impact on the performance of Netcom.

Therefore, based on the dimensionality analysis and the positive correlation between risk management and company performance, we can conclude that effective risk management practices have a favourable influence on the overall performance of Netcom.

Also based Chapter 3, Hypothesis 2, which suggests that risk identification impacts company performance at Netcom, is approved. The analysis demonstrated a positive correlation between risk identification and both principal components, PC1 and PC2. This implies that risk identification is a crucial aspect of effective risk management and that companies excelling in identifying risks are likely to experience better company performance. By identifying risks, companies can gain a deeper understanding of the threats they face and take appropriate measures to mitigate them. Therefore, the results confirm that risk identification significantly influences effective risk management and positively affects company performance at Netcom.

Hypothesis 3, which proposes that risk assessment impacts company performance at Netcom, is approved based on chapter 3. The analysis revealed that both principal components, PC1 and PC2, exhibit a positive correlation with risk assessment. Notably, risk assessment is identified as the most influential variable in PC2. These findings indicate that risk assessment plays a critical role in effective risk management and suggests that companies excelling in assessing risks are more likely to achieve better company performance. By conducting thorough risk assessments, companies can evaluate the likelihood and impact of each identified risk. This enables them to prioritize their efforts and allocate resources accordingly, leading to improved decision-making and overall performance. Therefore, the results confirm that risk assessment significantly influences effective risk management and positively affects company performance at Netcom.

The findings presented in Chapter 3 answer Hypothesis 4, which proposes that risk mitigation impacts company performance at Netcom, is supported by the results. The analysis reveals that both principal components, PC1 and PC2, demonstrate a positive correlation with risk mitigation. Notably, risk mitigation is identified as the most influential variable in PC1. These results suggest that risk mitigation is a crucial factor in effective risk management and indicate that companies adept at mitigating risks are more likely to achieve better company performance. By implementing appropriate strategies and measures to reduce the likelihood or impact of risks, companies can protect their assets and resources and enhance their chances of success. This emphasizes the significance of risk mitigation in the overall risk management framework and its positive impact on company performance at Netcom.

Based on the analysis presented in Chapter 3, Hypothesis 5, which proposes that risk monitoring impacts company performance at Netcom, is supported by the results. The examination of the principal components, PC1 and PC2, reveals a positive correlation with risk monitoring. This indicates that risk monitoring is a significant factor in effective risk management and suggests that companies proficient in monitoring risks are more likely to achieve better company performance. Risk monitoring enables companies to track and review risks, ensuring that they are being effectively managed. By closely monitoring risks, companies can proactively identify and address emerging risks before they escalate into significant problems. This highlights the importance of risk monitoring within the overall risk management framework and its positive impact on company performance at Netcom.

In conclusion, the results of the PCA analysis suggest that effective risk management and its practices have a positive impact on the company's performance. This is because both of the first principal components, which capture the variation in the data that is related to effective risk management, account for the most variation in the data.

Recommendations:

Netcom can enhance its risk management practices by focusing on Training and Development and Continuous Improvement. Currently, these elements are lacking in the company's risk management operations, indicating an area that can be improved. By investing in comprehensive training programs and fostering a culture of continuous improvement in risk management, Netcom can significantly strengthen its ability to effectively manage risks and enhance overall company performance.

In addition, the Research suggests that Netcom should broaden the scope of risks considered in its operations. While the company currently focuses on financial and operational risks, incorporating environmental and legal risks would provide a more comprehensive approach to risk management. Given the nature of Netcom's business, addressing these additional risk factors is crucial for ensuring long-term sustainability and compliance with relevant regulations.

In addition, Netcom needs to establish a robust risk review and continuous improvement within its risk management framework. By implementing a structured risk review process and fostering a culture of continuous improvement, Netcom can proactively identify areas for enhancement, refine risk management strategies, and implement necessary corrective actions. This approach will enable Netcom to stay agile, responsive, and proactive in addressing emerging risks and maintaining a strong risk management posture.

Furthermore, the findings highlight a contradiction within the company concerning human resources. Despite being a large company, Netcom faces a shortage of cleaning staff. This contradiction raises concerns about workforce adequacy and its potential impact on operational efficiency and employee satisfaction. Netcom must address this issue by allocating sufficient resources and ensuring appropriate staffing levels. Doing so would not only contribute to improved risk management practices but also positively impact the overall company's performance.

By implementing these recommendations, Netcom can enhance its risk management framework, strengthen its ability to mitigate risks effectively, and ultimately improve the company's performance.

Discussion of the limitations and challenges:

While risk management plays a crucial role in enhancing companies' performance, it is not without its limitations and challenges. Understanding these limitations and challenges is essential for implementing effective risk management practices

One limitation of risk management is the inherent uncertainty associated with predicting and assessing risks. The future is inherently uncertain, and companies must rely on historical data, expert judgment, and probabilistic models to anticipate and mitigate potential risks. However, these methods are not full proof and are subject to limitations in data availability, accuracy, and assumptions made during the risk assessment process.

Another challenge is the dynamic nature of risks and the need for continuous monitoring and adaptation. Risks are not static; they evolve over time, and new risks may emerge while existing risks may change in their nature or impact. Organizations must establish mechanisms for ongoing risk identification, assessment, and response to effectively manage evolving risks. This requires a proactive and agile approach to risk management, which may pose challenges in terms of resource allocation and organizational readiness.

Additionally, risk management practices may face challenges in terms of coordination and integration across different departments and functions within a company. Risk management is a multidisciplinary activity that requires collaboration and communication among various stakeholders, including risk managers, operational teams, finance, and departments. Ensuring effective coordination and information sharing can be a challenge, particularly in large companies with complex organizational structures and soloed decision-making processes.

Lastly, regulatory and compliance requirements add another layer of complexity to risk management. Organizations must navigate a complex landscape of industry-specific regulations, international standards, and legal obligations. Keeping up with regulatory changes, ensuring compliance, and aligning risk management practices with these requirements can be demanding and time-consuming, especially for organizations operating in highly regulated industries.

In conclusion, while risk management holds significant potential for improving companies performance, it is important to acknowledge and address the limitations and challenges associated with its implementation. By understanding these challenges and developing strategies to overcome them, companies can enhance their risk management practices and achieve more effective outcomes.

Identification of potential future research directions:

Integration of emerging technologies in risk management: With the rapid advancement of technologies such as artificial intelligence, machine learning, and big data analytics, there is a need to explore how these technologies can be effectively integrated into risk management processes. Future research can focus on investigating the potential benefits, challenges, and ethical considerations of using emerging technologies in risk assessment, risk monitoring, and decision-making. This research can help organizations harness the power of technology to improve risk management outcomes.

Behavioural aspects of risk management: While risk management involves the use of frameworks, models, and processes, it is ultimately influenced by human behaviour and decision-making. Future research can delve into the behavioural aspects of risk management, exploring how cognitive biases, risk perceptions, and individual and group behaviours impact the effectiveness of risk management practices. Understanding these behavioural dynamics can inform the development of strategies to mitigate biases and enhance risk management decision-making.

Long-term and strategic perspectives in risk management: Risk management often involves a focus on short-term risks and operational considerations. However, future research can explore the integration of long-term and strategic perspectives in risk management. This includes examining the linkages between risk management and strategic planning, exploring scenario-based approaches to long-term risk assessment, and investigating the role of risk management in supporting organizational agility and competitiveness in dynamic environments.

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Appendices

Thesis Questionnaire:

The purpose of this master thesis is to study “The Impact of Risk Management on Company Performance at Netcom”. This research contains 30 questions, which may take 10-15 minutes to answer it; therefore, I will be thankful to you for devoting your valuable time to answer it.

Your answers will be top confidential and will be used for research purposes only. Again, we appreciate your participation in this research. Please, if you have any questions or comments, please call .

Thank you for your fruitful cooperation.

Part 1: Demographic Data:

1) How long have you been working for Netcom t (InYears)?

☐ 1 – 5

☐ 2 – 10

☐ 10 - 20

☐ More than 20 years

What is your current job position at Netcom?

☐ Managerial/Executive Level

☐ Supervisory Level

☐ Technical/Operational Level

☐ Administrative/Support Level

☐ Other (Please specify) …………………………………

Part 2: Business information:

The following 30 questions tap into your perception about the actual implementation of risk management practices variables and organizational performance.

[1 = Weak, 2 = Moderate, 3 = neutral, 4 = Strong, 5 = Very Strong]. Answer based on your knowledge and experience about the statement

Section 1: Risk Identification

Statement	1	2	3	5	5
To what extent does Netcom have a systematic approach in identifying risks?					
How frequently does Netcom identify risks?					
How effectively are the identified risks at Netcom reported and documented?					
Does Netcom use any tools such as a risk rating system to classify risks?					
To what extent do the employees of Netcom understand the risks related to their daily work activities?					
To what extent is the risk identification process at Netcom monitored?					

Section 2: Risk Assessment

Statement	1	2	3	5	5
To what extent does your company assess the uncertainty of loss?					
Does your company use both quantitative and qualitative methods to assess risks?					
To what extent does your company use risk assessment to identify potential loss?					
How effective is your company in reducing the occurrence of risks identified?					
To what extent does your company assess every risk differently?					
To what extent does your company categorize risks into levels for further analysis?					

Section 3: Risk Mitigation

Statement	1	2	3	5	5
To what extent does your company ensure different types of risks?					
How effectively does your company eliminate catastrophic risks?					
To what extent does your company use risk assessment to identify potential loss?					
To what extent does your company provide training for employees on risk mitigation?					
To what extent does your company develop technical regulations to cover claims?					
How effective is your company in identifying and managing risks before they create problems?					

Section 4: Risk Monitoring

Statement	1	2	3	5	5
To what extent does your company ensure different types of risks are monitored?					
How effectively does your company monitor catastrophic risks?					
To what extent does your company estimate potential losses on an ongoing basis?					
To what extent does your company provide regular training for employees on risk monitoring activities?					
How does your company monitor risks?					
To what extent does your company track and report risk monitoring results to stakeholders, including management and Board members?					

Section 5: Company Performance

Statement	1	2	3	5	5
To what extent do you agree or disagree that the company effectively decreases risk to minimum levels?					
To what extent do you agree or disagree that the company adequately covers risk claims as required?					
To what extent do you agree or disagree that the company's risk management practices contribute to improving profitability?					
To what extent do you agree or disagree that the company's risk management practices improve its financial performance?					
To what extent do you agree or disagree that the company's risk management practices improve its operational performance?					
To what extent do you agree or disagree that the company's risk management practices contribute to improving the company performance?					

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