BINDURA UNIVERSITY OF SCIENCE EDUCATION

DEPARTMENT OF ACCOUNTING

INTERGRATING ENVIROMENTAL SUSTAINABILITY INTO COST MANAGEMENT: EVALUATING THE IMPLICATIONS AND BENEFITS TO ORGANIZATIONS-A CASE STUDY OF TOBACCO PROCESSORS ZIMBABWE

BY

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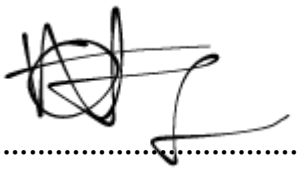
Signature…… 

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Dedication

To my beloved parents and fiancé, the unwavering support and love you have given me, has been my guiding light. This Research is dedicated to you. With heartfelt gratitude for your enduring presence in my life.

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Abstract

This research explores the integration of environmental sustainability into cost management practices at TPZ. The research investigates the financial and environmental impacts of sustainability initiatives on TPZ's operations, providing insights into the benefits and challenges faced when adopting environmentally sustainable cost management practices. The researcher used SPSS to analyze data, descriptive method was also adopted with a sample size of 24 subjects. In this study the researcher used primary data through questionnaires and interviews, and secondary data mostly from articles. The results showed a significant relationship between environmental sustainability and cost management in Tobacco industry.

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The successful completion of this project is a testament to the invaluable advice and support received from numerous unsung individuals. Their contributions played a vital role in ensuring the project's success, and it is only fitting to acknowledge their efforts.

First and foremost, I express my deepest gratitude to my supervisor, ..., whose guidance and expertise provided much-needed direction throughout this project. Her unwavering support was instrumental in navigating the myriad choices and challenges I encountered.

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CHAPTER I

INTRODUCTION

This chapter discusses the background of the study, statement of the problem, overall research aim, research objectives, research questions, significance of the study, assumptions, and delimitations and limitations of the study, definition of key terms and summary.

1.0 Background of the study

In recent years, TPZ has implemented various environmental sustainability initiatives, such as reducing water consumption, implementing waste management programs, and promoting sustainable agriculture practices among its farmers. However, the company still faces challenges in integrating environmental sustainability into its cost management practices.

The importance of integrating environmental sustainability into cost management cannot be overstated. Environmental costs, such as waste management and pollution control, can significantly impact a company's bottom line. Moreover, environmental sustainability initiatives can also generate cost savings, improve brand reputation, and enhance stakeholder trust. Despite the benefits, many companies, including TPZ, struggle to integrate environmental sustainability into their cost management practices. This is due to various reasons, including lack of data, limited resources, and inadequate knowledge of environmental cost accounting.

This study aims to evaluate the implications and benefits of integrating environmental sustainability into cost management at TPZ. The research will investigate the current environmental sustainability initiatives at TPZ, identify the environmental costs and benefits associated with these initiatives, and develop a framework for integrating environmental sustainability into cost management practices.

By exploring the case of TPZ, this study add value to the existing database on environmental sustainability and cost management, providing insights for companies in the tobacco industry and beyond.

The global landscape is experiencing a paradigm shift towards environmental sustainability. Organizations are coming to realize the importance of incorporating sustainable strategies into their business models. This shift can yield both environmental benefits and financial gains, while also boosting their reputation among customers and stakeholders. The manufacturing sector, particularly industries with a high resource footprint, is at the forefront of this movement. This study examined how environmental sustainability can be incorporated into cost management practices within the Zimbabwean manufacturing sector, focusing on a case study of Tobacco Processors Zimbabwe (TPZ)

The global business landscape is experiencing a paradigm shift towards environmental sustainability. Consumers are increasingly demanding sustainable practices from businesses, and regulations are becoming stricter. Integrating sustainability into cost management offers a strategic advantage, potentially leading to cost reductions, improved resource efficiency, and enhanced environmental performance (Kiani & Arasti, 2021). This integration necessitates a shift in how companies view costs, requiring them to account for both the direct and indirect

environmental impacts of their operations (Burritt et al., 2017)

In Zimbabwe, like in many other parts of the world, businesses are grappling with the dual challenge of meeting financial objectives while embracing environmental responsibility (Maponga & Zinyama, 2020). The integration of environmental sustainability into cost management processes offers a promising avenue to navigate this challenge. By incorporating sustainability considerations into cost management systems, organizations can not only reduce costs and improve resource efficiency but also enhance their environmental performance (Kiani & Arasti, 2021).

Because of the growing realization of the critical need for sustainable business practices, the integration of environmental sustainability into cost management strategies has received substantial attention in recent years (Smith, 2020). Organizations in a variety of industries are now faced with the challenge of balancing financial goals with environmental responsibilities (Lambooy et al., 2019). This integration necessitates a fundamental shift in how businesses view and manage their costs, as they must account for both the direct and indirect environmental impacts of their activities (Burritt et al., 2017). Key milestones and policy changes have significantly driven the integration of environmental considerations into cost management. For instance, the Kyoto Protocol (UNFCCC, 1997) have placed international pressure on businesses to reduce their carbon footprint. Furthermore, regional policies such as the European Union's Emissions Trading System (EU ETS), introduced in 2003, have established economic motivations for businesses to invest in environmentally friendly technologies and operations.

Traditionally, cost management has been largely concerned with reducing expenses, increasing efficiency, and increasing profitability. However, this narrow focus frequently overlooks businesses' long-term environmental costs and hazards, such as resource overuse, pollution, and climate change (Epstein et al., 2018). As a result, there is a growing realization that firms must adopt a more holistic approach to cost management that incorporates environmental sustainability concerns (Schaltegger et al., 2021).

According to Eccles et al (2020), organizations that effectively manage their environmental costs can improve their long-term financial performance and resilience. By incorporating environmental risks and opportunities into financial

planning and decision-making processes, organizations can identify cost-saving opportunities, develop innovative solutions, and improve their long-term financial performance and resilience.

Furthermore, incorporating environmental sustainability into cost-cutting measures can provide firms with a number of non-monetary benefits. TPZ can improve their reputation, brand image, and stakeholder trust by exhibiting a commitment to environmental stewardship (Delmas et al., 2021). As a result, enhanced consumer loyalty, improved employee morale, and improved interactions with investors and regulators should be expected (Linnenluecke et al., 2020). Organizations can also help to preserve natural resources, minimize pollution, and lessen the effects of climate change by aligning their operations with broader societal and environmental goals.

Similar to global trends, Zimbabwean businesses, including TPZ, grapple with the challenge of balancing financial objectives with environmental responsibility (Maponga & Zinyama, 2020). Integrating environmental sustainability into cost management presents a promising avenue for TPZ. By incorporating these considerations, TPZ can potentially reduce costs and improve efficiency while minimizing its environmental footprint.

The existing research on integrating environmental sustainability into cost management practices within the tobacco processing industry is limited. While studies exist on sustainability in broader agricultural contexts, a specific focus on TPZ and its cost management strategies in relation to environmental considerations is lacking. This research gap presents an opportunity to offer significant and impactful findings to the field.

1.1 Statement of the problem

Despite growing recognition of the value of environmental sustainability, many

organizations struggle to effectively incorporate it into their cost-cutting strategies. This lack of integration makes evaluating the implications and benefits of incorporating environmental sustainability difficult, preventing organizations from fully realizing the potential cost savings, increased resource efficiency, and improved environmental performance. As a result, in order to provide organizations with actionable insights and guidelines for sustainable and cost-effective decision-making, it is necessary to assess the barriers, opportunities, and strategies for integrating environmental sustainability into cost management at Tobacco Processors Zimbabwe, as well as to evaluate the implications and benefits thereof.

1.2 Overall research aim

Goal of the research is to investigate the financial and non-financial impacts of incorporating environmental sustainability into cost-cutting practices in TPZ, with a focus on identifying strategies and approaches that can effectively align financial goals with environmental responsibilities. This study seeks to analyze the challenges that TPZ face in managing environmental costs, as well as the potential barriers to adopting sustainable cost management practices. This investigation seeks to uncover and understand the integration of environmental sustainability into cost management and evaluate its implications and benefits within the context of TPZ.

1.3 Research objectives

- To identify the barriers and challenges that TPZ face when incorporating environmental sustainability into their cost-cutting practices.
- To assess the financial, resource efficiency, and environmental implications of incorporating environmental sustainability into cost management.
- To quantify the advantages of incorporating environmental sustainability into cost-cutting practices, such as cost savings, improved reputation, and stakeholder engagement.

1.4 Research Questions

- What are the main challenges and barriers that TPZ face when incorporating environmental sustainability considerations into their cost-cutting practices?
- What methodologies or frameworks are available to support this process, and how does TPZ measure and quantify environmental costs and risks associated with their operations?
- What are the financial ramifications of incorporating environmental sustainability into cost-cutting practices, and how does TPZ effectively align their financial goals with their environmental responsibilities?
- What are the non-financial benefits and opportunities that arise from integrating environmental sustainability into cost management, such as improved reputation, stakeholder relationships, and contributions to broader societal and environmental goals?
- What are the best practices, tools, and frameworks that TPZ adopted to successfully integrate environmental sustainability into their cost management practices?

1.5 Significance of the study

1.5.0 To the organization

The research presents TPZ with practical recommendations and best practices for effectively integrating environmental sustainability into their cost management practices. This can assist the organization in improving its long-term financial performance, reputation, stakeholder relationships, and contributing to broader environmental goals.

1.5.1 To the University

This research helps to advance academic excellence, reputation, thought leadership, institutional impact, student engagement, and community impact

1.5.2 To the researcher

This study held significant importance for the researcher due to the opportunities for personal and professional growth, contribution to knowledge, networking and collaboration opportunities, career advancement, and personal fulfilment that arose from conducting research. It enabled the researcher to have expanded their knowledge, made a significant impact, and advanced their academic and professional endeavours.

1.6 Assumptions

- That the organization has a basic understanding of environmental sustainability and how it relates to their operations and long-term success.
- That the organization recognize and consider their stakeholders' expectations.
- That TPZ has access to the necessary resources, both financial and human, to integrate environmental sustainability into their cost management practices.
- That the Organization is committed to incorporating environmental sustainability into their cost-cutting strategies.
- That TPZ has access to reliable and relevant data to measure and quantify environmental costs and risks associated with their operations

1.7 Delimitations of the study

1.7.0 Geographical Scope

The study was primarily centered on Tobacco Processors Zimbabwe.

1.7.1 Content

The study was a case study of TPZ on incorporating environmental sustainability.

1.7.2 Period of the study

The research was limited to only cover a period of 5 year (from 2019 to 2023)

1.8 Limitations of the research

The Challenges faced by the researcher are as follows

- Limited Generalizability: The study's results and conclusions exhibited limited external validity, owing to their situated nature within a specific industrial context, which consequently delimited their generalizability to disparate populations and contexts.
- Self-Reporting Bias: The questionnaire data were susceptible to self-reporting bias, as participants tended to provide responses that conformed to social norms or their perceived expectations, rather than their genuine experiences. This limitation compromised the data's accuracy and reliability, ultimately affecting the trustworthiness and validity of the study's conclusions.

- Access to Data: Limited access to certain proprietary or confidential information may restrict the depth of the analysis.
- Lack of Longitudinal Data: The research was conducted within a specific timeframe, which meant that it did not capture the long-term trends or changes in environmental sustainability and cost management practices. The absence of longitudinal data limited the ability to assess the effectiveness of sustainability practices over time.
- Measurement Challenges: Measuring and quantifying the environmental and cost-related variables accurately was challenging. Inaccurate or incomplete measurement of variables such as energy consumption, waste generation, or financial costs affected the precision and reliability of the findings.
- Potential Confounding Factors: There were other external factors or variables that influenced the integration of environmental sustainability into cost management practices, but were not accounted for in the research. These confounding factors introduced additional complexity and limited the ability to establish causality between the variables of interest.

1.9 Definition of key terms

- Environmental Sustainability: This approach entails harnessing resources efficiently, reducing environmental footprint, preserving biodiversity, and fostering a balanced coexistence with nature for the benefit of future generations.
- Cost Management: Involves the process of planning, controlling, and allocating resources to optimize costs within an organization. It includes activities such as budgeting, cost analysis, cost reduction strategies, and cost control measures.
- Integration: In the context the topic, integration encompasses the strategy of incorporation or embedding of environmental sustainability considerations into the various aspects of cost management practices within organizations.
- Sustainable Cost Management: Encompasses the adoption of environmentally conscious cost management techniques to support sustainable business operations. It involves factoring in the environmental effects and economic expenses linked to business practices and making decisions that balance economic efficiency and environmental responsibility.

1.10 Summary

This initial chapter has laid the foundation by introducing the research topic, providing context through a background study, identifying the research problem, and articulating the research questions, objectives, and limitations. The subsequent

chapter will undertake a comprehensive review of the literature, conduct an in-depth analysis of case studies, and present a detailed discussion of the research findings.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

Following the introduction and background provided in Chapter 1, this chapter presents a comprehensive review of the existing literature on integrating environmental sustainability into cost management. By focusing on the financial and non-financial implications and benefits for organizations, this review aims to provide a theoretical foundation and a deeper understanding of the topic, highlighting relevant concepts, theories, and empirical studies.

2.1 Conceptual framework

Figure 1.

Independent variable

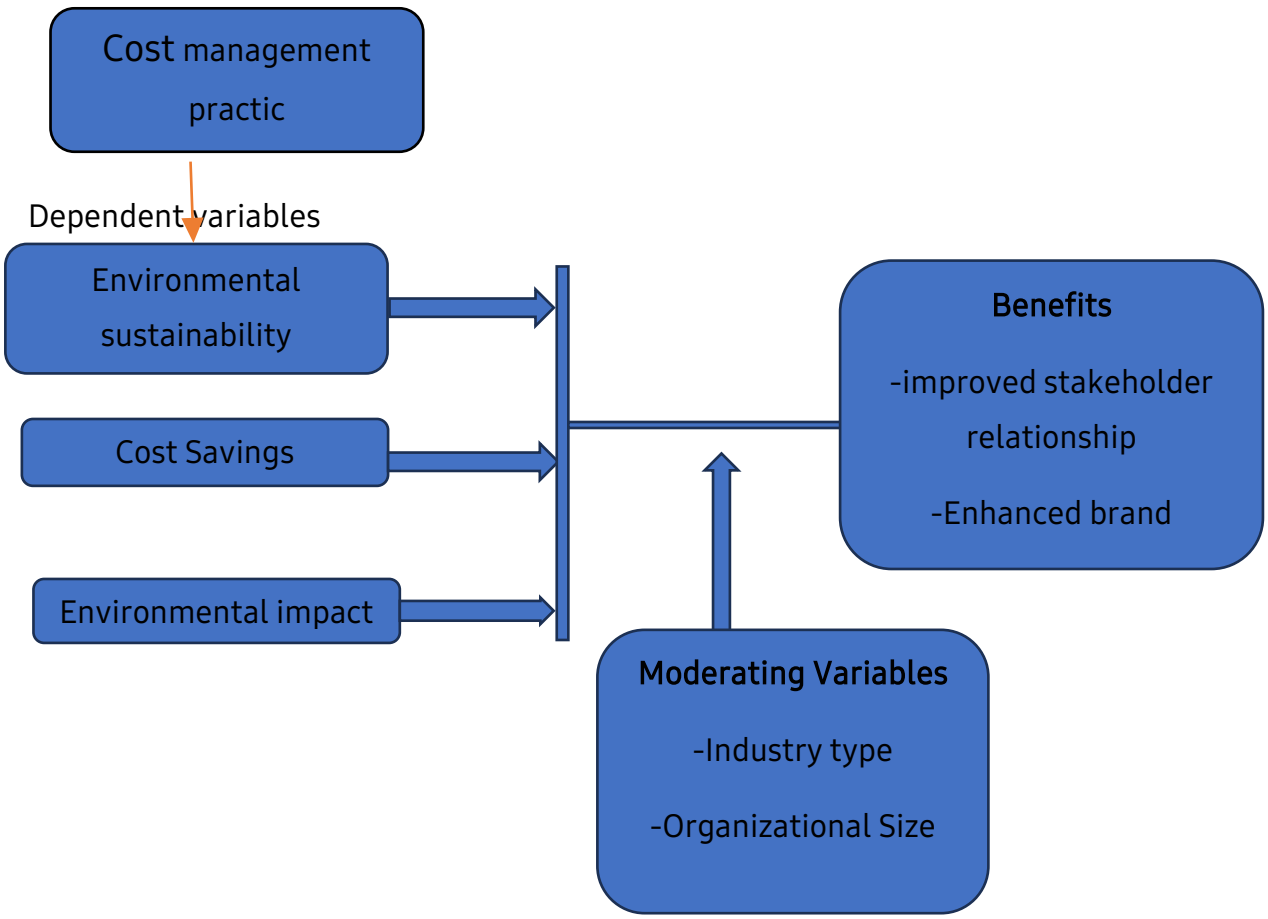


Figure 1 (Source: Author) illustrates the conceptual framework which identifies the independent and dependent variables within the research.

2.2 Theoretical framework

The theoretical underpinnings of incorporating environmental sustainability into cost management practices are rooted in environmental economics, sustainable development, and management accounting. These fields provide valuable insights and frameworks for understanding the relationship between environmental sustainability and cost management within organizations, guiding decision-making processes towards long-term sustainability.

2.2.1Triple Bottom Line (TBL) Theory: Expanding Business Horizons

One prominent theoretical framework that informs the integration of environmental sustainability into cost management is the TBL. Developed by Elkington (1997), often referred to as the "three Ps" (People, Planet, Profit), is a framework that balances economic goals with environmental and social responsibilities, incorporating triple-bottom-line thinking into business decision-making processes (Schaltegger et al., 2021). This theory recognizes that organizations should not solely focus on financial profitability but additionally, evaluate their effects on the natural world and human well-being as critical factors for long-term sustainability and success (Sweeney & Sweeny, 2023).

Within the context of cost management, the TBL theory compels organizations to go beyond traditional financial analyses and incorporate environmental costs associated with their activities. This includes expenses related to waste disposal fees, pollution control measures, and potential fines for non-compliance with environmental regulations (Jasmani et al., 2020). By integrating these costs, companies gain a more comprehensive understanding of their financial position and

can make informed decisions that optimize both profitability and environmental sustainability.

The TBL theory encourages organizations to expand their horizons and consider the broader implications of their actions. By incorporating environmental costs into cost management practices, organizations can identify hidden expenses and potential risks associated with their operations. This enables them to develop strategies to minimize environmental impacts, reduce resource consumption, and improve overall environmental performance.

Integrating environmental costs also facilitates the identification of opportunities for sustainable innovation and efficiency improvements. By analyzing the environmental impact of different activities and processes, organizations can identify areas where cost savings can be achieved through waste reduction, energy efficiency, and the adoption of sustainable practices (Gerybader et al., 2023). This approach not only helps organizations optimize their cost structures but also promotes environmental stewardship and responsible business practices.

Furthermore, the TBL theory recognizes that considering social factors is equally important. Organizations are encouraged to assess their social impact, such as employee well-being, community engagement, and ethical practices. By incorporating social considerations into cost management practices, organizations can strengthen their relationships with stakeholders, attract and retain talented employees, and build a positive brand reputation.

Jones and Parker (2018) highlight the significance of the triple bottom line framework in the context of sustainable cost management practices. This framework encourages organizations to go beyond traditional financial measurements and consider the environmental and social implications of their cost management decisions. It recognizes that the integration of environmental sustainability into cost

management requires a comprehensive understanding of the interconnectedness between economic, social, and environmental factors.

Drawing upon the triple bottom line framework, organizations can adopt sustainable cost management practices that optimize financial resources while minimizing environmental impact and addressing social responsibilities. This approach involves considering the full life cycle of products and services, implementing eco-efficient processes, and making informed decisions that balance economic viability with environmental and social considerations.

By incorporating the principles of sustainable development, environmental economics, and management accounting, the theoretical framework provides a robust foundation for understanding the importance of integrating environmental sustainability into cost management practices. It emphasizes the need for organizations to embrace a long-term perspective, considering the implications of their cost management decisions on both financial performance and the well-being of the planet and society.

In summary, the TBL theory expands business horizons by advocating for the integration of environmental and social considerations alongside economic factors. By incorporating environmental costs into cost management practices, organizations gain a more comprehensive understanding of their financial position, identify opportunities for sustainable innovation, and minimize environmental risks. Additionally, considering social factors promotes responsible business practices and enhances stakeholder relationships. By adopting the TBL framework, organizations can pursue a balanced approach that optimizes both profitability and environmental and social sustainability.

2.2.2 Natural Resource-Based View (NRBV): Leveraging Nature for Competitive

The Natural Resource-Based View (NRBV) is a strategic management theory that

proposes a firm's competitive advantage stems from the resources it possesses (Barney, 1991). These resources can be tangible (e.g., raw materials, equipment) or intangible (e.g., brand reputation, intellectual property). However, not all resources are equally valuable for achieving a competitive advantage. NRBV emphasizes the importance of resources that meet the VRIN criteria:

Valuable: The resource must contribute to the firm's ability to exploit market opportunities or neutralize threats (Barney, 2001).

Rare: The resource must be scarce among competitors, making it difficult for them to imitate (Barney, 1991).

Inimitable: The resource should be difficult for competitors to imitate due to its complexity, causal ambiguity (the difficulty of understanding how the resource creates value), or path dependence (the historical path that led to the resource's development) (Barney, 1991).

Non-substitutable: There should be no readily available substitutes for the resource that would erode its competitive advantage (Barney, 1991).

Advantage

The Natural Resource-Based View (NRBV) posits that organizations can gain a competitive advantage by effectively managing and leveraging their natural resources (Barney, 2020). In today's environmentally conscious marketplace, efficiently managing resources translates to a strategic edge. Integrating environmental sustainability into cost management practices aligns with NRBV by:

- Optimizing Resource Usage

By identifying areas of resource overuse and waste generation, companies can implement cost-saving measures that also reduce their environmental footprint (Asif et al., 2020).

- Reducing Waste

Minimizing waste disposal costs aligns with NRBV principles. Sustainable practices like recycling and exploring circular economy models can significantly reduce waste streams, leading to cost savings and improved resource efficiency (Bevilacqua et al.,

2023).

- Enhancing Resource-Based Capabilities

Effective environmental management can lead to the development of new capabilities and expertise in areas like renewable energy or sustainable materials. These capabilities can become a source of competitive advantage in the marketplace (Petts & Wright, 2022).

2.2.3 Life Cycle Costing (LCC): A Holistic View of Environmental Impact

LCC is a holistic cost management approach that evaluates the economic and environmental impacts of a product or service across its entire life cycle, from raw material extraction to disposal (Tschandl et al., 2022). By accounting for environmental costs, organizations can optimize both financial and sustainability outcomes, making informed decisions that support long-term success (Genovese et al., 2022). For example, LCC might reveal that a seemingly cheaper material with a higher environmental impact leads to higher disposal costs later in the product lifecycle. Integrating these costs into decision-making allows companies to choose options that are not only cost-effective in the short term but also minimize environmental impact throughout the product's lifespan (Jeswani et al., 2023).

Integrating environmental sustainability into cost management is a multifaceted approach that offers numerous benefits for organizations. By understanding and implementing the theories discussed above, companies can achieve cost savings, improve brand reputation, manage environmental risks, and gain a competitive advantage in the long run. This comprehensive approach to sustainability not only benefits the environment but also creates a strong foundation for long-term business success.

2.3 Empirical Studies

2.3.1 Roffé, M. A., & González, F. A. I. (2024). The impact of sustainable practices on the financial performance of companies: A review of the literature. Visión de futuro, 28(1), 221-240.Agentina

the United Nations' Sustainable Development Goals (SDGs) comprise a 17-point framework for fostering holistic sustainability, encompassing social, environmental, and economic aspects. While companies face challenges in implementing responsible practices due to associated costs, this article investigates the link between sustainable practices (SP) and financial performance (FP) through a systematic review of existing literature. The findings suggest that adopting sustainable practices yields financial benefits, conferring a competitive edge on businesses that integrate sustainability into their strategies. Therefore, sustainability not only aligns with ethical and environmental values but also presents an opportunity to enhance profitability and business competitiveness.

Sustainable practices and their impact on the financial performance of companies

Companies are cautious about implementing Sustainable Practices (SP) due to cost and profitability concerns, prioritizing financial performance in their sustainability efforts and SDG compliance.

Research has surged since the SDGs' adoption in 2015 to explore the impact on companies' Financial Performance (FP) (Vorontsova et al., 2022). Studies have yielded mixed results, with some finding a positive SP-FP correlation (Khan et al., 2023; Yousefian et al., 2023; Ghardallou, 2022), others detecting a negative relationship (Kim et al., 2022; Ensign et al., and Hedija, 2020), and some observing no significant short-term correlation (Fernando et al., 2021; Solari and Méndez Sáenz, 2020; Yang and Jang, 2020).

Notably, companies with strong SDG commitments tend to exhibit better long-term financial performance (Betti et al., 2018). By adopting sustainable practices and integrating SDGs, companies can enhance their reputation, efficiency, innovation, and risk management, leading to improved financial outcomes (Vorontsova et al., 2022)

In contrast, other studies have shown a negative correlation between SP and financial performance, arguing that pursuing the SDGs may require significant investment and operating costs, which can impact short-term profitability (Tijani et al., 2020). Furthermore, some researchers suggest that companies may engage sustainably merely by claiming to support the SDGs without implementing substantial changes (Whittingham et al., 2023), so caution must be exercised when reviewing this issue.

Overall, it is clear that the relationship between SP and FP in companies is complex and multifaceted. Further research is needed to clarify the nature and direction of this relationship, taking into account contextual factors such as industry type, company size, and geographical location, among others (Datta and Goyal, 2022; Muhmad and Muhamad, 2020).

2.3.2 Otekunrin Adegbola Olubukola, Samu Tafadzwa, Sifile Obert, Matowanyika Kudzanai (2021). Making Environmental Accounting Work: Case of the Zimbabwe

Mining Industry

his research explored the application of environmental accounting in Zimbabwe's mining industry. Using a mixed-methods approach, the study collected data from 52 respondents, including mining executives, government officials, and community leaders.

The results indicate that the government's efforts to promote environmental accounting are insufficient, hindered by political interference, inadequate resource allocation, and economic instability. The lack of effective laws, policies, and guidelines for environmental accounting, combined with inadequate monitoring, has led to unsustainable mining practices.

To address these challenges, the research suggests that government organizations must commit to independent monitoring, resource allocation, and research to develop and implement environmental accounting practices in the mining sector, ensuring a more sustainable future for Zimbabwe's environment.

2.3.3Nyakuwanika, M., van der Poll, H. M., & van der Poll, J. A. (2021). A conceptual framework for greener goldmining through environmental management accounting practices (EMAPs): The case of Zimbabwe

Gold mining significantly contributes to Zimbabwe's GDP, but it also poses environmental challenges. This paper reviews literature on mining's environmental impacts and proposes a framework integrating environmental management accounting practices (EMAPs) to address these challenges. EMAPs like MFCA, LCC, and ABC can provide insights into material usage and costs, promoting transparency and sustainability in the gold mining sector. While individual EMAPs have been studied, this work develops an integrated framework to promote green gold mining in Zimbabwe. The framework will be validated with industry stakeholders in future research.

2.3.4Shan, Shan, Munir Ahmad, Zhixiong Tan, Tomiwa Sunday Adebayo, Rita Yi Man Li, and Dervis Kirikkaleli. "The role of energy prices and non-linear fiscal decentralization in limiting carbon emissions: tracking environmental sustainability." Energy 234 (2021)

This study explores the intricate link between fiscal decentralization, energy prices, institutional quality, and GDP to understand their collective impact on carbon emissions and environmental quality. Using advanced econometrics and data from seven fiscally decentralized OECD nations, the research reveals a complex relationship, including a non-linear link between fiscal decentralization and carbon emissions, and the positive impact of institutional quality and energy price increases on reducing emissions. The findings highlight the need to strengthen fiscal decentralization, improve institutional quality, and promote renewable energy to combat environmental degradation and achieve sustainable development goals.

2.3.5Banerjee, S. (2022). Challenges and Barriers to Integrating Environmental Sustainability into Cost Management: A Look at Recent Research. Journal of Environmental Accounting and Management

Incorporating environmental sustainability into cost management practices offers significant benefits for organizations. However, this transition presents several challenges and barriers.

- Short-Term Focus vs. Long-Term Sustainability

Several studies highlight the challenge of short-term financial priorities overshadowing long-term environmental benefits. For instance, Fiksel et al. (2021) conducted a survey of manufacturing companies in North America and found that a focus on short-term cost reduction often hinders investments in sustainable technologies with longer payback periods. Similarly, Hahn et al. (2023) studied European firms and observed a disconnect between environmental goals and cost management practices. They argue that a lack of long-term vision can lead to missed opportunities to improve resource efficiency and reduce environmental costs over time.

- Lack of Awareness and Knowledge

Limited knowledge and awareness regarding environmental cost management practices pose a significant barrier. A study by Banerjee et al. (2020) in India found that many small and medium-sized enterprises (SMEs) lacked the knowledge and expertise to implement effective EMA practices. Similarly, Klassen & McLaughlin (2022) conducted research on US manufacturing firms and observed a gap in knowledge regarding the financial implications of environmental regulations. This lack of awareness can make it difficult for organizations to identify and implement cost-saving sustainability measures.

- Difficulty in Measuring Environmental Costs

Accurately measuring environmental costs associated with a product or service can be challenging. A study by Christmann & Taylor (2019) examined various cost accounting systems and found limitations in accurately capturing the full spectrum of environmental costs. Similarly, Geng et al. (2022) conducted research on Chinese

companies and highlighted the difficulty of assigning costs to environmental impacts like resource depletion or pollution. This lack of reliable data makes it difficult for organizations to make informed decisions regarding integrating environmental considerations into cost management.

- Lack of Integration Across Departments

Effective integration of environmental sustainability into cost management requires collaboration across different departments within an organization. However, research by Hahn et al. (2021) on German companies revealed a lack of communication and coordination between finance and sustainability departments. Similarly, Jasmani et al. (2021) conducted a study in Malaysia and observed a siloed approach towards environmental management, hindering its integration into cost-cutting initiatives. This lack of collaboration can create obstacles in implementing comprehensive sustainability programs that optimize both environmental and financial performance.

- Limited Access to Resources

Financial constraints and limited access to resources can hinder the adoption of sustainable practices. A study by Banerjee et al. (2020) on Indian SMEs found that many lacked the financial resources to invest in new technologies or processes needed to improve environmental performance. Similarly, Klassen & McLaughlin (2022) observed that smaller companies in the US manufacturing sector often struggle to allocate resources for dedicated environmental management personnel or specialized software for environmental cost accounting.

2.3.3 Bani-Mustafa, A., & Al-Hroot, Y. (2020). Methodologies and frameworks for integrating environmental sustainability into cost management: Evidence from Jordan. Journal of Environmental Accounting and Management, 8(3),

Bani-Mustafa and Al-Hroot (2020) investigated methodologies and frameworks available to support the integration of environmental sustainability into cost-cutting practices, focusing on evidence from Jordan. Their study highlighted the importance of adopting a lifecycle perspective and utilizing environmental management accounting (EMA) tools to identify and quantify environmental costs and risks. By

implementing frameworks such as the Triple Bottom Line approach, organizations were able to align financial goals with environmental responsibilities effectively. In a related study, Chikodzi and Mbohwa (2021) examined the adoption of cleaner production practices in Zimbabwe's manufacturing sector. Through a case study analysis, they identified several methodologies and tools employed by organizations to support sustainability initiatives, including Life Cycle Assessment (LCA), Environmental Management Systems (EMS), and ISO 14001 certification. However, they also noted challenges related to the availability of resources and technical expertise required to implement these frameworks effectively.

2.3.4 Chingombe, W., & Mbohwa, C. (2020). Financial Ramifications of Incorporating Environmental Sustainability into Cost-Cutting Practices. Journal of Sustainability Research

Recent empirical studies have explored the financial implications of incorporating environmental sustainability into cost-cutting practices. Chingombe and Mbohwa (2020) investigated the integration of environmental sustainability into cost management practices in Zimbabwean small and medium enterprises (SMEs). Their findings revealed that while initial investments in sustainability initiatives may be perceived as costly, organizations ultimately benefit from long-term cost savings and improved financial performance. Similarly, Hwenga and Mbohwa (2019) conducted a case study in the Zimbabwean mining sector to assess the financial ramifications of environmental management accounting practices. They found that organizations that effectively managed their environmental costs experienced improved operational efficiency, reduced regulatory compliance costs, and enhanced access to capital. These financial benefits outweighed the initial investments required to implement sustainable practices.

2.3.5

2.4 Gaps in Knowledge

While these studies provide valuable insights, there's still room for further exploration IN Industry-Specific Challenges, more research is needed to understand

the specific challenges faced by different industries when integrating environmental sustainability into cost management. Also, the Role of Government Policies, that is the impact of government policies and regulations on encouraging or hindering the adoption of sustainable cost management practices needs further investigation. Success Stories and Best Practices: Studies exploring successful cases where companies have overcome these barriers and achieved cost savings through sustainability can provide valuable learning opportunities for others. By addressing these challenges and conducting further research, organizations can develop more effective strategies for integrating environmental sustainability into cost management practices, leading to a win-win situation for both the environment and their bottom line.

Summary

This chapter focused on the literature review, exploring existing research and theories related to integrating environmental sustainability into cost management and evaluating the implications and benefits for organizations. The chapter provided a comprehensive understanding of the topic by examining various theories and empirical studies. In the next chapter, we will focus on the methodology employed in this study.

CHAPTER III

RESEARCH METHODOLOGY

3.0 INTRODUCTION

The preceding chapter reviewed the literature on environmental sustainability in cost management. The present chapter, presents the research methodology used to investigate the financial and non-financial impacts of integrating environmental sustainability into cost management at Tobacco Processors Zimbabwe (TPZ). The research design, data collection and analysis methods, sampling strategy, and ethical considerations are outlined in detail.

3.1 Research Design

A research design provides a structured framework for collecting and analysing data, ensuring a logical and systematic approach to achieving research goals. As noted by Creswell & Creswell (2017), a well-designed study ensures the collection of relevant and sufficient data to address research questions. This study adopted a mixed-methods approach, combining qualitative and quantitative methods within a descriptive design, to provide a comprehensive and detailed understanding of the research topic

3.1.1 Justification of Descriptive Research Design

Burns & Grove (2010), define descriptive research design as a methodology that seeks to observe and describe the attributes, behaviours, and phenomena of a specific subject or population without manipulating variables or establishing causal relationships. Its primary objective is to provide an accurate representation of the existing state of affairs, relationships, or trends, offering a snapshot of the subject under investigation (Nassaji, 2015). The main goals of descriptive research are to document and describe the current situation, identify patterns or trends, and lay the

groundwork for further analysis or investigation. This design typically involves collecting data through various methods, such as surveys, interviews, observations, or existing data sources, and analysing it using statistical or qualitative techniques, depending on the data nature and research questions (Loeb et al., 2017).

3.2 Techniques and Procedures

3.2.1 Target population

Target population according to Bryman (2016) is the defined criteria relevant to the researcher. These criteria include demographic factors, location and other attributes pertinent to the study (Kumar, 2019). In this study the target population was the TPZ employees, that are the executive directors, operations management and the human resources management.

3.2.2 Sampling technique

Is the creation of a representative subset (sample) from a dense population, enabling them to draw conclusions about the population based on the sample's characteristics (Cochran, 1977). Sampling techniques are essential in research as they allow studies to be conducted efficiently, without the need to survey the entire population, which is often unrealistic or impossible (Saunders, Lewis, & Thornhill, 2019). In this study, random sampling was employed to select participants from each subgroup, with the following elements in each stratum:

Human Resources management	5
Executive Directors	5
Operations management	20
	30

3.2.3 Stratified Random Sampling

This is a method that divides a population into distinct groups (strata) with similar attributes, and then randomly selects a representative sample from each group, ensuring a diverse and representative subset that reflects the population's variability. (Churchill, A., & Rao, S. P. (2019). The study selected an 80% sample from a total of 30 employees who worked in the HR management, executive management and operations management.

3.2.4 Advantages of Stratified random sampling

This method guarantees that the sample is inclusive of all important subgroups within the population.

3.2.5 Sample size

The 80% sample size yielded 24 sample subjects (30 * 80%). Using proportional representation, that is simple random sampling, each strata contributed sample elements as follows:

HR Management	(5/30*24)	4
Executive Directors	(5/30*24)	4
Operations Management	(20/30*24)	16
		24

3.3 Research Instruments

Primary data was collected from each sample subject through questionnaires and interviews. A questionnaire is a research tool comprising a set of questions or prompts used to gather information from respondents, essentially a written interview that enables researchers to collect data from a large number of participants in a consistent and efficient manner. 20 questionnaires were administered to the selected stratum at TPZ, these were mainly closed questionnaires. 4 interviews were held (1 from HR, 1 from Directors and 2 from Operations). The head of departments were purposively chosen interviews.

3.3.1 Questionnaires

A Pilot study was conducted to ensure the effectiveness of the research instruments. Hand

delivery to the sampled recipients was done and a collection date was agreed upon.

Completed questionnaires were gathered and responses were coded as appropriate.

3.3.1.1 Advantages of questionnaires

Cost-effective: A relatively inexpensive way to collect data from a large number of people.

Standardization: Ensured consistent data collection across respondents.

Anonymity: encouraged honest responses from participants.

Data analysis: Closed-ended questions allowed easy data quantification and statistical analysis.

3.3.1.2 Disadvantages of Questionnaires

Limited depth: did capture the nuances of people's experiences or opinions.

Response bias: Participants may have answered in a socially desirable way or misunderstand questions.

Low response rates: Not everyone who received a questionnaire completed it.

Limited follow-up: Limited opportunities to clarify ambiguous answers or ask follow-up questions.

3.3.2 Interviews

It's a qualitative research method used to gather information, opinions, and experiences from individuals. Semi-structured interviews were conducted that is a blend of structured and unstructured approaches, with a general guide but allowing for flexibility and follow-up questions.

3.3.2.1 Advantages of Interviews

Depth of information: Provided richer and more detailed data compared to other methods.

Flexibility: Allowed interviewer to adapt to the interviewee and ask follow-up questions.

Non-verbal cues: Interviewer observed non-verbal cues like body language, which provided additional insights.

Rapport building: established rapport with the interviewee, leading to more honest and detailed responses.

3.3.2.2 Disadvantages of Interviews

Time-consuming: Interviews are time-consuming to conduct and analyse.

Interviewer bias: The interviewer's biases or expectations influenced the questions asked and the interpretation of responses.

3.3.3 Data Collection Procedures

This is a systematic plan outlining the specific steps involved in gathering information for research or other purposes. It ensures data is collected in a consistent and reliable way, allowing for accurate analysis and interpretation. In this study the researcher used more of primary data sources and less of secondary data. The researcher used the official introductory letter from BUSE that she was a bona fide student and this helped her to get access to officials, who willingly cooperated. The researcher then hand delivered and distributed the questionnaires as hard copies and also personally collected the completed questionnaires.

3.3.3.1 Primary Sources

Is information collected firsthand by the researcher for a specific research purpose. It's essentially raw data that hasn't been analysed or interpreted by anyone else before. It was collected directly from the source, avoiding potential biases or

interpretations introduced by others. Researcher had more control over the data collection process, ensuring it aligns with their needs. The researcher used questionnaires and interviews as sources of primary data.

3.3.3.1. Advantages of Primary Data

High Relevancy: Directly addressed the researcher's specific needs and questions.

Increased Control: Provided the researcher with more control over data quality and collection methods.

Greater Depth: Allowed in-depth exploration of topic compared to secondary data sources.

3.3.3.2 Disadvantages of Primary Data

Time-consuming: Collecting primary data is time-consuming, especially for large-scale studies.

Costly: this involved significant costs for researcher time, materials, or participant incentives.

Resource-intensive: Required careful planning, execution, and analysis of the collected data.

3.4 Reliability and Validity

These are ways of ascertaining adequacy of research tools used in the research. Reliability refers to the consistency and dependability of the research findings (Polit & Beck, 2017). A reliable study would produce similar results if repeated under the same conditions. This ensures research findings can be trusted and replicated by other researchers, reducing the chance of random errors or biases impacting the results. It provides a foundation for drawing valid conclusions from the data. Validity is the accuracy and truthfulness of the research results (Creswell, 2014). A valid study measures what it claims to measure and reflects the real world. This ensures the research measures what it's supposed to and reflects the real world, helping researchers avoid misleading interpretations of the data. It increases the generalizability of findings to a wider population or context.

3.5 Data Presentation and analysis

Upon completing data collection, the researcher undertook data coding in conformity with SPSS version 20 specifications, and then employed diverse data presentation methods, including graphical and statistical analyses, to facilitate data analysis.

3.6 Research Ethics

Research ethics are a set of principles that guide researchers in conducting responsible and ethical studies. These principles seek to safeguard the interests and welfare of research subjects, maintain the authenticity and reliability of research findings, and foster confidence in research endeavours among the general public. All sources of information used were properly acknowledged in accordance with academic ethical expectations.

3.7 Summary

The chapter outlined the methodology, that consist the research design, target population and sampling techniques that were used by the researcher. The next chapter presented the analysis of the research findings.

CHAPTER IV

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

The chapter presented the data analysis and findings of the research, aiming to outline a comprehensive understanding of the research topic. Data was presented in graphs and tables, to enable a clear, readable manner for readers to see clearly the relationship in the data.

4.1 Analysis of responses

Table 4.1 below illustrates the summary of response rate

Table 4.1: Interview and questionnaire response rate

INSTRUMENT	ADMINISTERED	VALID RECEIVED	%

Interviews	4	4	100
Questionnaires	20	16	80

Source: Primary data (2024)

Table 4.1 illustrates a 100% interview response rate, all scheduled interviews were conducted. 20 questionnaires were distributed to the sample subjects and only 16 were correctly completed, and the remaining four were considered spoilt. Hagger (2003) states that to achieve a reliability of the research the researcher should achieve a 75% response rate.

4.2 Work experience respondents

Table 4.2

Experience

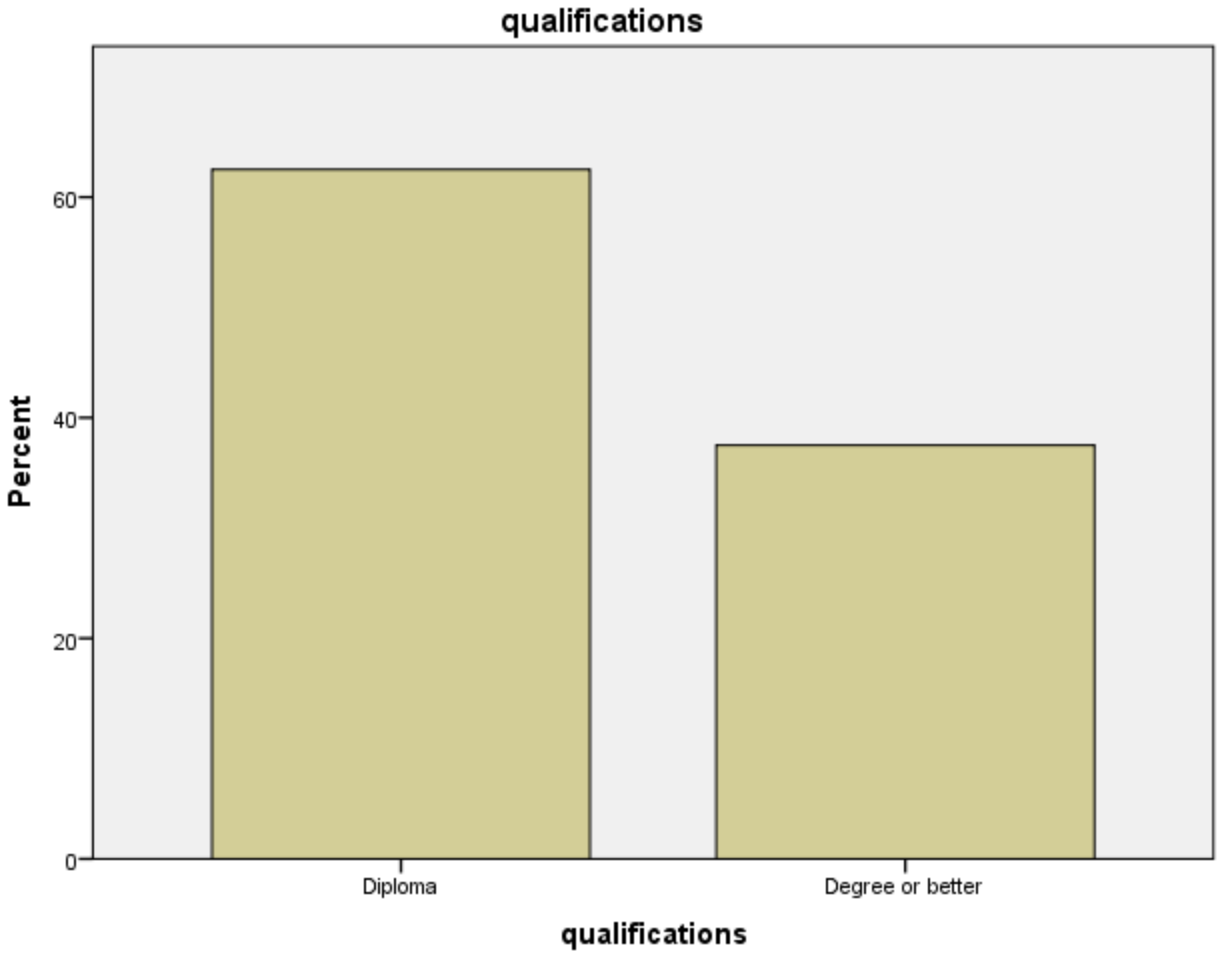
Years		Frequency	Percent %	Valid Percent%	Cumulative Percent%
Valid	1 to 5	3	18.8	18.8	18.8
	6 to 10	3	18.8	18.8	37.5
	11 to 15	5	31.3	31.3	68.8
	16 or more	5	31.3	31.3	100.0
	Total	16	100.0	100.0	

Source: Primary Source (2024)

In the above table a majority of the respondents (62.5%) have spent 11 and more years employed at TPZ. Therefore, their responses were valid and can be relied on, since they had more experience.

4.3 Educational qualifications of the respondents

Fig 2



Source: Primary data (2024)

The figure above illustrates that most of the respondents had professional qualifications in the form of degrees and diploma. This shows that they are literate and their responses can be relied on because they have an understanding of the topic.

4.4 Reliability Statistics

Table 4.3 Reliability

Dimension	Reliability coefficients (Alphas)	Number of items
Cost management practices	0.66	3

Environmental sustainability Practices and their benefits	0.68	8
Challenges faced and overcoming when integrating environmental sustainability	0.64	8
Implications of environmental Sustainability	0.69	4

Source: Primary data (2024)

Table 4.3 presents the reliability test results for the questionnaire, with Cronbach alpha values between 0.64 and 0.69, indicating moderate to good internal consistency. Reliability assesses the stability and consistency of a research instrument, with Cronbach's alpha values ranging from 0 to 1. As Hair et al. (2010) suggest, an alpha value of at least 0.60 is required for reliability. Given these results, the researcher chose to retain all questions, ensuring the instrument's reliability.

4.5 Cost Management practices at TPZ in line with environmental sustainability and their impact

4.5.1 Cost control measures

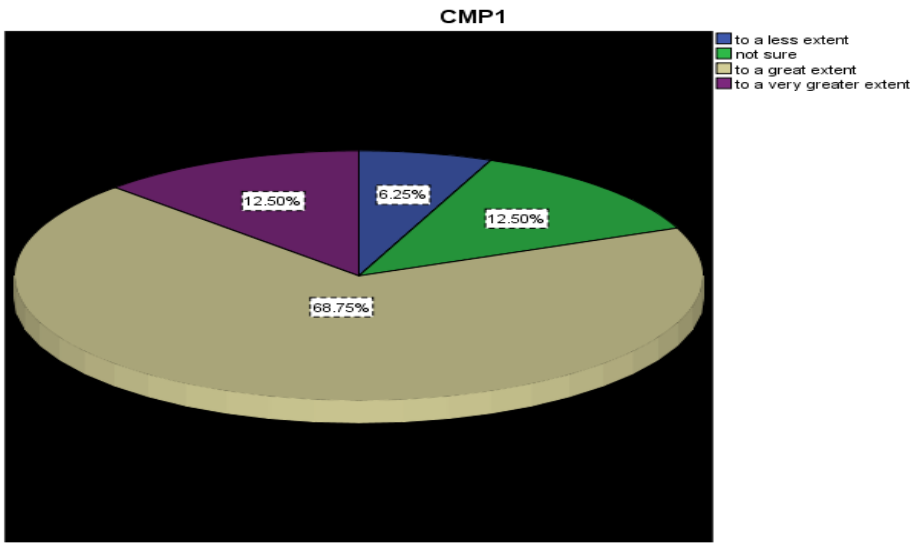
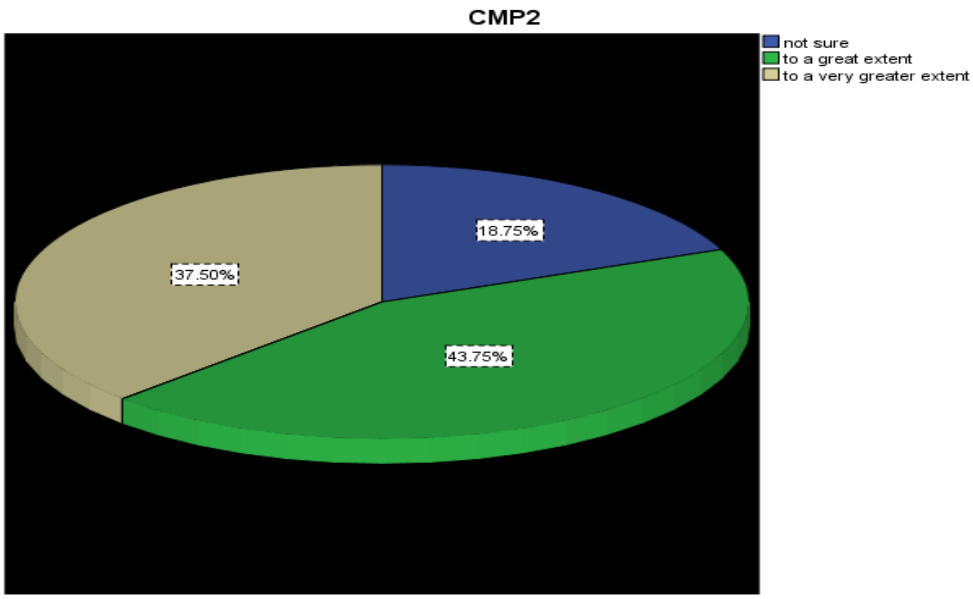


Fig 3; Source: Primary data (2024)

The majority (68.75%) response was that TPZ has cost control measures that are in line with environmental sustainability to a great extent. That is implementing cost saving initiatives like energy-efficient lighting.

4.5.2 Process improvement

Fig 4

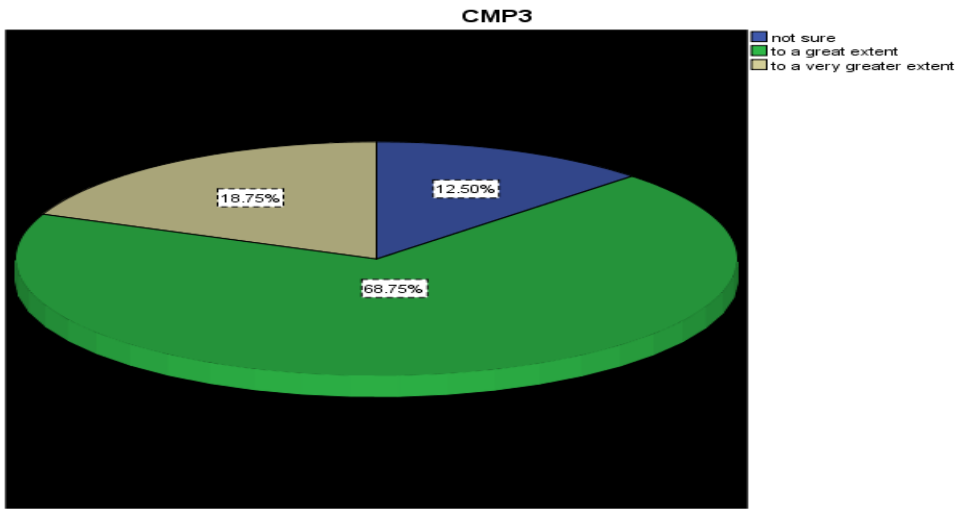


Source: Primary data (2024)

The chart above shows a majority (43.75%) response in agreement that process improvement is in line with environmental sustainability. For instance identifying and eliminating inefficiencie in processing operations which reduces waste and reduce costs.

4.5.3 Waste management

Fig 5

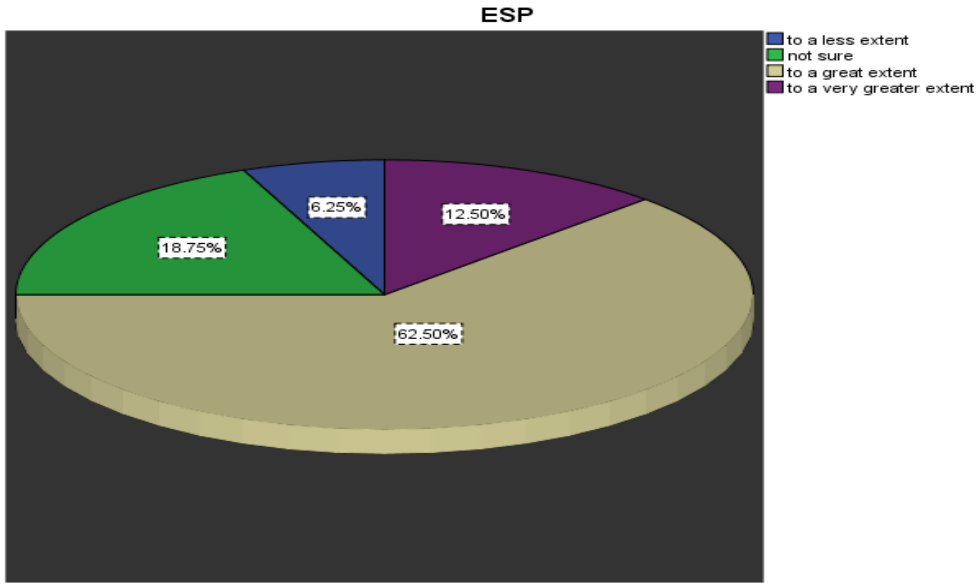


Source: Primary data (2024)

Fig 5 above illustrates a majority (68.75%) that waste management practices is being practiced as a cost management tool ata TPZ and is in line with environmental sustainability to a greater extent. For instance implementing recycling programsand minimizing waste production.

4.6 Environmental sustainability practices and their impact to cost management

Fig 6



Source: Primary data (2024)

A majority (62.50%) confirmed that there is a significant impact on cost management of TPZ when implementing environmental practices to a great extent. It proves that environmental sustainability practices can improve initial costs of a company.

4.6 Financial and non-financial Benefits of integrating environmental sustainability into cost management

Below chart illustrates that the environmental practices being practiced at TPZ have financial and non-financial benefits, and financial benefits having a majority of 62.5%. This means that integrating environmental sustainability has a positive impact to financial benefits and non-financial benefits to organizations.

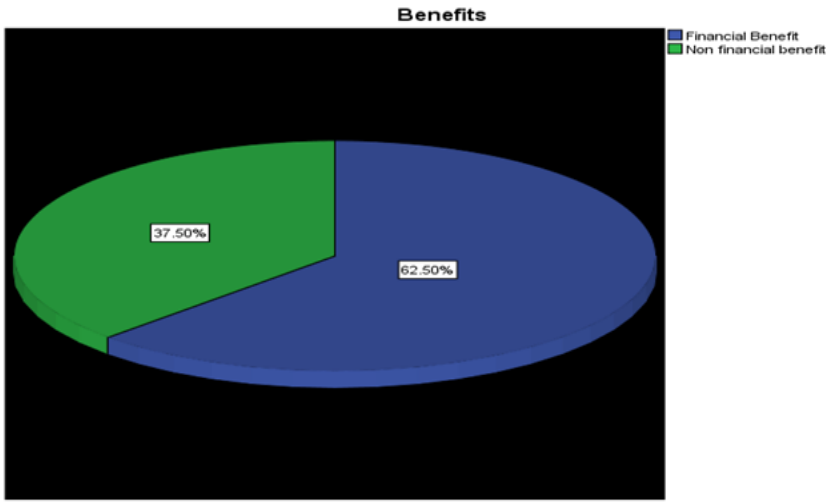


Fig 7; Source: Primary data (2024)

4.8 Challenges being faced when integrating environmental sustainability into cost management at TPZ

Table 4.4

Challenges

		Tally	Percent %	Valid Percent %	Cumulative Percent %
Valid	Initial investment cost	3	18.8	18.8	18.8
	Higher operational costs	4	25.0	25.0	25.0
	Limited resources	7	43.8	43.8	68.8
	Lack of data metrics	2	12.5	12.5	100.0
	Total	16	100.0	100.0	

Source: Primary data (2024)

The analysis above shows the challenges being faced by TPZ when integrating environmental sustainability. The highest limitation is limited resources with 43.8% and higher operational costs with 25%.

4.9 Suggestions on overcoming challenges being faced by TPZ

The table below shows the analysis on how TPZ has been trying to overcome the challenges they face when implementing environmental sustainability. The majority advocate for TPZ to conduct cost benefit analysis when quantifying the environmental sustainability practices into cost management, followed by phased implementation.

Table 4.5

OC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Invest in employee investment	1	12.5	12.5	12.5
	Develop Sustainability strategy	2	6.3	6.3	18.8
	Phased implementation	3	18.8	18.8	37.6
	Conduct cost benefit analysis	10	62.5	62.5	100.0
	Total	16	100.0	100.0	

Source: Primary data (2024)

4.10 Implications of Environmental Sustainability at TPZ

Table 4.6

Implications

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Shift from short term to long term thinking	2	12.5	12.5	12.5

	New performance metrics and reporting	4	25	25	37.5
	Integration of environmental costs into decision making	5	31.3	31.3	68.8
	Increased transparency and accountability	5	31.3	13.3	100.0
	Total	16	100.0	100.0	

Source: Primary data (2024)

The analysis above shows the implication of environmental sustainability, that are the effects of integrating environmental sustainability into cost management.

4.11 What are the effects of integrating environmental sustainability into cost management?

Four interviews were conducted specifically from the directors and they highlighted the impact on brand reputation, by declaring their dedication to ecological responsibility, the company bolstered its reputation and demonstrated a steadfast commitment to preserving the environment.. Also noted were the sustainable practices which have led to process improvement and increased efficiency. all the responses highlighted that environmental practices have a more positive impact and effects to the company in general. Also, these practices have positive financial effects or benefits, specifically on cost management.

4.12 What are the challenges faced and suggested solutions to integration of these sustainable practices?

The researcher acknowledged that initial investment cost can be costly which comes as a barrier to the integration, but emphasized the long-term benefit. Which can be overcome by phased implementation to cut the costs of the initial investment by dividing into phases. Mostly the company has faced resistance to change from the employees which can be tackled by investment in employee training. These findings led to the conclusions that TPZ is able to mitigate the challenges.

4.13 Summary

This chapter synthesized and discussed the research outcomes, addressing all research questions through data collected from questionnaires and interviews. The next chapter will condense the findings, interpret the results, and provide actionable recommendations..

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This final chapter presents a concise overview of the research outcomes, derived from the analysis in the preceding chapter. The findings are used to draw conclusions that align with the research objectives, providing a comprehensive summary of the study's results. This chapter concludes the research by offering recommendations and suggesting potential areas for future investigation, thereby providing a culmination of the research endeavour.

5.1 Summary of Research findings.

The research was aimed on analysing implications and benefits of integrating environmental sustainability into cost management using Tobacco Processors Zimbabwe as a case study. The objectives of the study were to: identify the barriers and challenges that TPZ face when incorporating environmental sustainability into their cost-cutting practice, assess the financial, resource efficiency, and environmental implications of incorporating environmental sustainability into cost management and quantifying the advantages of incorporating environmental sustainability into cost-cutting practices, such as cost savings, improved reputation, and stakeholder engagement.

The study employed a descriptive research design, which was well-suited for exploring the concept of interest. This design enabled the researcher to collect and analyse data in a way that facilitated meaningful interpretation and insight. The study utilized both primary and secondary data sources, with primary data collected through questionnaires and interviews, providing firsthand information from participants, and secondary data sourced from existing literature and resources. With 20 employees being selected firstly through stratification then randomly from each stratum.

The findings of the research were that, TPZ has incorporated environmental sustainability into its cost management, and also, they have put in place cost management practices that are in line with environmental sustainability. This incorporation has to a great extent benefited TPZ financially compared to non-financial benefits. The study reviewed that, the challenges being faced by TPZ hen implementing environmental sustainability practices is lack of resources, however

they also have an insight of how to overcome these challenges. The research also discovered that integration of environmental sustainability has positive impacts to the company, for instance increased accountability and transparency.

5.2 Conclusions

The following conclusions were derived from the research questions:

1. TPZ has put in place cost management practices that are in line with environmental sustainability, which help on integration of environmental sustainability into cost management,

2. Integration of environmental sustainability into cost management has impacted the company positively, that is there are more financial benefits compared to non-financial.

3. The main challenges faced by TPZ when integrating environmental sustainability into cost management can be addressed.

5.3 Recommendations

The following recommendations were made:

1. TPZ should explore new product lines that align with company's environmental goals for example organic tobacco products.

2. TPZ should develop a sustainable supply chain strategy, that is engaging with suppliers to implement sustainable practices and reduce the environmental impact from its supply chain.

3. TPZ can also develop a circular economy approach to encourage recycling, reuse of materials, reduce waste, and implement environmentally sustainable practices.

5.4 Recommendations for Further Studies

The researcher suggests that future researchers could explore the applicability of environmental sustainability practices, and investigate the impact of sustainability initiatives in other industries, such as Telecoms, and other manufacturing companies.

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APPENDIX 1

Introductory letter (On Questionnaire)

Bindura University of Science Education

P Bag 741, Bindura

To Whom it may concern

REF: Assistance to complete attached questionnaire.

I am a bona-fide student at Bindura University of Science Education (BUSE) studying towards attaining a Bachelor's Degree in Accounting. Subject to your permission, l intends to do research on a topic entitled Integrating environmental

sustainability into cost management: Evaluating the implications and benefits to organizations. A case study of Tobacco Processors Zimbabwe.

I am humbly appealing for your assistance in completing he blank spaces in the attached questionnaire. There's no right or wrong answer and your responses will be used for his study only and nothing can be traced to you. Strict confidentiality is therefore guaranteed. I thank you in advance for your cooperation in filling the questionnaire.

Yours faithfully .....

Cell: Email:

APPENDIX 2

QUESTIONNAIRE

INSTRUCTIONS

Where there are boxes, tick appropriately

Please attempt to answer all questions

Do not write your name on the questionnaire

SECTION A DEMOGRAPHICAL QUESTIONS

Please provide the following information

1. How long have you been employed by TPZ

1 to 5 years	

6 to 10 years	
11 to 15 years	
15 years or more	

2. Qualifications, please tick one

O level	A Level	Diploma	Degree of Better

3. Position in company

HR	Operations	Director

SECTION B

Instruction: please tick the appropriate box

1. What are the cost management practices used by TPZ and how do they impact on environmental sustainability?

Cost management practices in line with environmental sustainability	To a less extent	Not sure	To a great extent	To a very greater extent	To a zero extent
Cost control measures					
Process improvement					
Waste management					

2. What are the environmental practices being one by TPZ and what is their impact to cost management?

Environmental sustainability practices at TPZ	To a less extent	Not sure	To a great extent	To a very greater extent	To a zero extent
Reducing greenhouse emissions					
Water conservation					
Waste management					
Sustainable Agriculture					

3. What are the financial and non-financial benefits of the environmental practices?

Benefits	Financial	Non-financial
Cost savings through reduced energy and water usage		
Improved brand reputation		
Increased efficiency and productivity		
Increased competitiveness and market leadership		
Improved financial performance		

SECTION C

Please **rate by putting a mark of 1 to 5(1 for strongly disagree and 5 for strongly agree)** for the challenges being faced to integrate environmental sustainability into cost management and how to overcome them

1. What are the challenges being faced by TPZ when implementing environmental sustainability practices into cost management

a) Initial investment cost	
b) Higher operational costs	
c) Limited resources	
d) Lake of data and metrics	

2. How can these challenges be overcome

a) Conduct cost benefit analysis	
b) Develop sustainability strategy	
c) Invest in employee training	
d) Phased implementation	

3. Implications of environmental sustainability

a) Increased transparency and accountability	
b) Integration of environmental costs into decision making	
c) Shift from short term to long term thinking	
d) New performance metrics and reporting	

END OF QUESTIONNAIRE

APPENDIX 3

INTERVIEW GUIDE

Place of interview: .....

Time of interview: .....

Questions:

SECTION A: DEMOGRAPHICS

1. How long have you worked for TPZ?
2. What position do you hold at TPZ?

SECTION B: COST MANAGEMENT PRACTICES

1. Can you briefly explain cost management tools or practices that are being used by TPZ and do they support environmental sustainability?

SECTION C: ENVIRONMENTAL SUSTAINABILITY PRACTICES AND THEIR BENEFITS, THEIR IMPLICATIONS

1. What are the environmental sustainability practices that are being adopted by TPZ and what are their benefits to the company?
2. What are the effects of integrating environmental sustainability into cost management of TPZ?

SECTION C: CHALLENGES FACED WHEN INTEGRATING ENVIRONMENTAL SUSTAINABILITY

1. What are challenges that TPZ face when integrating environmental sustainability into cost management?

SECTION D: SOLUTIONS TO CHALLENGES

2. What do you think TPZ should do to overcome these challenges?

Thank you

END OF QUESTIONS-