

**Business Continuity Management Factors, Eco-Efficiency and Financial Sustainability of
Sugar Manufacturers in Lagos State, Nigeria**

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of Management & Social Sciences, Lead City University, Ibadan, Oyo State, Nigeria**

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Certification

This is to certify that this thesis “**Business Continuity Management Factors, Eco-Efficiency and Financial Sustainability of Sugar Manufacturers in Lagos State, Nigeria**” was carried out by **Tunde Joshua AKINSANYA** with Matriculation number **LCU/PG/001923**, in the Department of Management & Accounting under my thorough supervision in the Faculty of Management and Social Sciences, Lead City University, Ibadan, Nigeria and that this work had not been previously submitted.

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Date

Dedication

This thesis is dedicated to Almighty God.

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Acknowledgement

I give all praise and adoration to God Almighty for guiding me through the course of study in this noble university, Lead City University, Ibadan. I wish to express my profound gratitude to Lead City University, Ibadan, Nigeria for the opportunity given me to undergo this degree. I appreciate the Vice-Chancellor of the University, Professor K.A. Adeyemo, Provost, Postgraduate College, Prof. Oredein, Heads of Departments, Lecturers and other non-academic staff members of the University. The unquantifiable contribution of my supervisor, Dr. J.A Adejuwon, HOD, and all other lecturers in the Department who created an enabling supervision environment towards the completion of this thesis, can never be ignored. He motivated me and helped by mentoring and coaching me throughout this entire process. My sincere gratitude is extended to Prof. G.E. Oyedokun, Dr. T.M. Akinbo, (HOD, Department of Management & Accounting), Dr. A.B. Onamusi and Dr. F. Igbaduhme for their assistance. I am grateful to my mother, Mrs Deborah Aina Omosule, who supported early education.

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“Even though the above institutions and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any found in this work”.

Abstract

The financial sustainability of sugar industry in Nigeria has experienced a significant decline evidenced by poor profitability, weak resource diversification, and weak firm growth which is suggestive of challenges associated with business continuity management factors and eco-efficiency. Hence, using dynamic capability, and contingency theories, this study assessed the interaction of Business Continuity Management Factors (BCMFs), eco-efficiency and financial sustainability of sugar manufacturers in Nigeria. A cross-sectional survey research design was adopted. The population was 919 staff of selected sugar manufacturing companies in Lagos State, Nigeria. Sample size of 326 staff was determined through the Raosoft sample size calculator for a finite population, and a stratified random sampling technique was used to select the staff at the three management levels within the selected sugar companies. A validated questionnaire was used to collect data. Data were analysed using descriptive and inferential statistics. Findings revealed that BCMFs had a positive and significant effect on financial sustainability of sugar manufacturers in Nigeria ($R^2 = 0.452$, $F(1,277) = 228.570$, $p = 0.000$). Strategy unfolding had positive and significant effect on financial sustainability of sugar manufacturers in Nigeria ($R^2 = 0.231$, $F(1,277) = 83.049$, $p = 0.000$). Response strategy had positive and significant effect on financial sustainability of sugar manufacturers in Nigeria ($R^2 = 0.380$, $F(1,277) = 170.060$, $p = 0.000$). Crisis management leadership had positive and significant effect on financial sustainability of sugar manufacturers in Nigeria ($R^2 = 0.278$, $F(1,277) = 106.784$, $p = 0.000$). Business resilience had positive and significant effect on financial sustainability of sugar manufacturers in Nigeria ($R^2 = 0.397$, $F(1,277) = 182.247$, $p = 0.000$). Eco-efficiency has a positive and significant moderating effect on the interactions between BCMFs and financial sustainability of sugar manufacturers in Nigeria ($\Delta R^2 = 0.010$, $\Delta F = 7.230$, $P = 0.008$). This study concluded that there was a statistically significant effect of BCMFs and eco-efficiency factors to enhance financial sustainability of sugar manufacturers in Nigeria. The study recommended that BCMFs with emphasis on strategy unfolding and crisis management leadership orientation need to be revisited by the management so that the BCMFs can enhance robust financial sustainability and ensure the adoption of environmentally friendly eco-efficiency strategies.

Keywords: Business continuity management factors, Eco-efficiency, Financial sustainability, Sugar Industry

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Table of Contents

Content	Page
Title Page	i
Certification	ii
Dedication	iii
Acknowledgement	iv
Abstract	v
Table of Contents	vi
List of Tables	ix
List of Figures	x
List of Acronyms	
Chapter One: Introduction	
1.1 Background to the Study	1
1.2 Statement of the Problem	7
1.3 Aim and Objectives of the Study	10
1.4 Research Questions	11
1.5 Hypotheses	12
1.6 Significance of the Study	13
1.7 Scope of the Study	14
1.8 Limitation of the Study	14
1.9 Operationalisation of Variables	15
1.10 Operational Definition of Terms	16

Endnotes	18
Chapter Two: Literature Review	
2.1 Conceptual Review	21
2.1.1 Financial Sustainability	21
2.1.2 Business Continuity Management Factors	33
2.1.3 Eco-Efficiency	46
2.2 Theoretical Framework	49
2.2.1 Contingency Theory	49
2.2.2 Resource-Based View (RBV)	52
2.2.3 Theory of Dynamic Capabilities	55
2.3 Review of Empirical Studies	59
2.3.1 Strategy Unfolding and Financial Sustainability	59
2.3.2 Strategic Response and Financial Sustainability	63
2.3.3 Crisis Leadership and Financial Sustainability	67
2.3.4 Business Resilience and Financial Sustainability	70
2.3.5 Business Continuity Management Factors, and Financial Sustainability	74
2.3.6 Moderating Effect of Eco-Efficiency	77
2.4 Conceptual Model	81
2.5 Summary of Gap in Literature Reviewed	82
Endnotes	85
Chapter Three: Methodology	
3.1 Research Design	103

3.2	Population of the Study	103
3.3	Sample and Sampling Techniques	104
3.4	Description of the Research Instrument	107
3.5	Validity of Research Instrument	108
3.6	Reliability of Research Instrument	112
3.7	Administration of Research Instrument and Method of Data Collection	113
3.8	Method of Data Analysis	113
	Endnotes	115
Chapter Four: Results and Discussion of Findings		
4.1	Response Rate	116
4.2	Presentation of Data	119
4.2.1	Research Questions	120
4.2.2	Test of Hypotheses	141
4.3	Discussion of Findings	163
	Endnotes	184
Chapter Five: Conclusion		
5.1	Summary of Findings	193
5.2	Conclusion	194
5.3	Recommendations	195
5.4	Contribution to Knowledge	197
5.5	Suggestion for Further Studies	199
	Bibliography	201
	Appendix I: Questionnaire	219

Bio-data	225
The University Compliance Certification	228

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List of Tables

Table	Title	Page
3.1	List of Population in Selected Sugar Manufacturers in Lagos State	104
3.2	Sampling Frame for the Study	106
3.3	Source of Adapted Questionnaire Items	108
3.4	Summary of Pilot Test Incorporating Construct Validity Test	110
3.5	Discriminant Validity using Heterotrait-Monotrait Ratio (HTMT)	111
3.6	Validity Statistics Process	111
3.7	Reliability Statistic	113
4.1	Response Rate	117
4.2	Demographic Characteristics of Respondents	118
4.3	Descriptive Analysis of Responses on Strategy Unfolding	120
4.4	Descriptive Analysis of Responses on Strategic Response	123
4.5	Descriptive Analysis of Responses on Crisis Management Leadership	126
4.6	Descriptive Analysis of Responses on Business Resilience	129
4.7	Descriptive Analysis of Responses on Financial Sustainability	132
4.8	Descriptive Analysis of Responses on Eco-Efficiency	138
4.9	Summary of Regression Analysis for the Effect of Strategy Unfolding on Financial Sustainability of Sugar Manufacturing Companies in Nigeria	142
4.10	Summary of Regression Analysis for the Effect of Strategic Response on Financial Sustainability of Sugar Manufacturing Companies in Nigeria	144
4.11	Summary of Regression Analysis for the Effect of Crisis Management Leadership on Financial Sustainability of Sugar Manufacturing	

	Companies in Nigeria	147
4.12	Summary of Regression Analysis for the Effect of Business Resilience on Financial Sustainability of Sugar Manufacturing Companies in Nigeria	150
4.13	Summary of Regression Analysis for the Effect of BCMFs on Financial Sustainability of Sugar Manufacturing Companies in Nigeria	152
4.14	Summary of Regression Analysis for the Relative Effect of BCMFs on Financial Sustainability of Sugar Manufacturing Companies in Nigeria	155
4.15	Summary of Hierarchical Regression Analysis for the Moderating Effect of Eco-Efficiency on the Relationship between BCMFs and Financial Sustainability of Sugar Manufacturers in Nigeria	157

List of Figures

Figure	Title	Page
2.1	Conceptual Model	81
4.1	Resultant Model	162

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List of Acronyms

Abbreviation	Meaning
CAGR	Compound Annual Growth Rate
OECD	Organisation for Economic Cooperation and Development
FAO	Food and Agriculture Organisation
GHG	Green House Gases
CBN	Central Bank of Nigeria
GDP	Gross Domestic Product
NSDC	Nigeria Sugar Development Council
BIP	Backward Integration Project
USDA	United States Department of Agriculture
CSR	Corporate Social Responsibility
PMI	Purchasing Managers Index
CEO	Chief Executive Officer
BCMFs	Business Continuity Management Factors
ROA	Return On Asset
ROI	Return On Investment
AL	Authentic Leadership
WBCSD	World Business Council for Sustainable Development
ISO	International Organisation for Standardization
CT	Contingency Theory
RBV	Resource Based View
SMC	Strategic Management Capability
DCT	Dynamic Capability Theory
KPIs	Key Performance Indicators

GRI	Global Reporting Initiative
ESGP	Environmental, Social and Governance Practices
SASB	Sustainability Accounting Standards Board
BCM	Business Continuity Management

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Chapter One

Introduction

1.1 Background to the Study

The desire to continuously stay in business and be prosperous becomes one objective many organisations intend to achieve. Every stakeholder of a company desires increased return on their stakes. However, the constant uncertainties and complexities in the business environment often make this desire wishful thinking for many organisations. Thus, organisations must devise and deploy appropriate business continuity strategies to contend with the challenges which threaten their long-term financial sustainability.

With a projected Compound annual growth rate (CAGR) of 2.9% from 2018 to 2024, the global sugar manufacturing market is estimated to be worth US\$89.244 billion¹. Several sectors—including the food, cosmetics, pharmaceutical, agricultural, adhesive, and coating—have contributed to this expansion by increasing their demand for sugar¹. Increases in disposable income and the rapid urbanization of formerly low-income sections, as well as improvements in the food and beverage industry in the Asia-Pacific region, are expected to drive the region's sugar market to the highest market growth among the five global regions (North America, Europe, Asia-Pacific, South America, the Middle East, and Africa). North America, Europe, South America, the Middle East, and Africa all trail this area in terms of market expansion^{1,2}.

Despite these benefits, the global sugar manufacturing business has had uncertain output and pricing levels over the five years to 2021². This industry produces raw and refined sugar

from sugarcane or sugar beetroot. Early in the five-year period, Brazil's production levels have dropped due to adverse weather and rising diversion of sugar stockpiles to ethanol production, leading to major losses in the world supply of sugar and inflating the world price of sugar. The global price of sugar has been steadily declining over this time, however, so this boost was only temporary. As a result, analysts anticipate a 6.5% annual decline in industry revenue to \$55.5 billion between 2016 and 2021³.

Increased government regulation, decreased corporate procurement, and shifted consumer tastes resulting from rising worries about the health risks associated with consuming too much sugar. As a result of these changes, analysts are less optimistic about the future of the sector's market. Consequently, sugarcane production is expected to increase at a more moderate rate of 1.1 percent per year from 2018 to 2027, down from 2.1 percent per year over the previous decade³. This is according to projections made by the OECD and the FAO. Despite the sector's low growth outlook, fundamental problems threaten the sugarcane industry's long-term economic viability. Raw and refined sugar prices around the world have a history of extreme swings. When the price of raw sugar is less than the cost of production, it puts sugarcane farmers at risk of going bankrupt and losing their property³.

Sugar prices are highly responsive to government actions, especially subsidies and import tariffs. Oil price changes have a knock-on effect on the cost of ethanol, which in turn affects the price of sugar. Variations in exports from Brazil and India are caused by the countries' sizable domestic demands, as well as other factors such as changing weather patterns, industrial methods, and mechanisation^{4,5}. The sector is confronted with key issues, such as low farm prices and price instability. Land grabbing has been observed in several countries,

including Sierra Leone, Indonesia, Kenya, Zambia, Mali, and Cambodia, and two Brazilian states, Mato Grosso do Sul and Pernambuco^{6,7}.

In addition, instances of forced and child labour demonstrate the sector's dismal track record when it comes to respecting workers' rights. Furthermore, even in some of the top producing countries, such as Brazil, India, and Thailand, problems with occupational health and safety at plantations and mills are not unusual⁶. Air pollution and GHG emissions from burning sugarcane fields prior to hand harvesting are two additional negative environmental outcomes of sugarcane agriculture. Overconsumption and agricultural runoff can also contribute to water stress⁷. About 30 percent of the world's sugarcane is grown in places with high or extremely high water stress, leading to water pollution from agricultural runoff and the excessive use of fertilisers and pesticides. All of these sustainability issues have the potential to disrupt supply and demand if nothing is done about them^{4,5}.

Due to political instability and currency changes, as well as economic and financial crises, Africa's sugar industry has been growing at an unpredictable rate⁸. As a result, this has made it harder for significant players in the sugar industry to stay in business. Despite having plenty of land, Africa has the world's lowest per-capita sugar production.

Two major events happened between 2016 and 2020 in the macro-environment that resulted in economic adversity for individuals, firms, and the government of Nigeria. First, economic recession occasioned by a drop in the price of crude oil from \$100.87 per barrel in 2013 to \$40.68 per barrel in 2016, and since oil revenue constitutes the Nation's primary source of revenue, Nigeria was plunged into economic recession⁹. The second is socio-economic disruption by the COVID-19 pandemic. The federal government revenue could not meet its

financial responsibilities, state allocations dropped significantly, and payment of salaries to civil servants became a plague afflicting nearly all the states in the federation (except for Lagos State). As though these were not enough problems, the Naira-Dollar exchange rate became sour with an exchange rate of N400-N500 to \$1 in 2016 and between N420-N542 to \$1 in 2021¹⁰. This rate is currently between N980-N1474 to \$1 as of February 2024¹⁰.

The ripple effects of these two significant events and the minimum wage of N18,000 over these years remain the same from 2011-2019. Though this was reviewed to N30,000 in 2019 till date, inflation had overtaken this increase. Arguably to date, the purchasing power of the Naira was eroded. Consequently, salary earners (in the public and private sectors) have their real income depleted to a record low¹⁰. In managing to survive on a low disposable income, economic agents became price sensitive. Hence, premium brands were worse off now, while low-cost brands benefitted from these new economic realities. For manufacturers, importing raw material was a huge task as the dollar rise made it exorbitant to cost-effectively buy and produce, considering the sector is nearly 98% dependent on the imported raw material. As a result, the Nation's sugar production has suffered considerably. Its negative ripple effect is noticeable in the number of manufacturers operating in that industry until 2021¹¹. It is important to stress that the outbreak of the COVID-19 pandemic and its attendant consequences on global oil production, pricing, and revenue generation for the federal government of Nigeria is another cause of concern.

In addition, CBN's forex policies, poor road infrastructure, inadequate power supply, high electricity tariffs, double-tax regimes, high cost of funding, high inflation rate, removal of petrol subsidy further resulted in increased cost of running manufacturing operations,

thereby negatively affecting business sustainability^{11,12}. Notwithstanding these identified challenges, President Buhari's democratic head of States in 2019 did not help matters. The level of insecurity in the country is alarming (with the country scoring 8.597 out of 10 in the global terrorism index 2019, indicating that acts of terrorism are a significant concern for the country¹³. Business thrives in a safe and peaceful environment. The available literature has documented the effects of all of these macro environmental events on the organisational performance of manufacturing firms in Nigeria^{11,14}. CBN data on real GDP showed a further decline in the sector between 2018 and Q3 2019 (from N1, 608,461.83m to N1, 537,522.17m), corroborated by a decline in the manufacturing Purchasing Managers Index (PMI) from 61.10% to 57.7% between December 2018 and Q3 2019^{14,15}. The status quo persists despite the fact that the economy has left recession and is now in recovery.

According to information from the records of the Nigeria Sugar Development Council (NSDC), Nigeria spent \$1.87 billion over the past four years purchasing 5.54 million metric tonnes of raw sugar¹⁶. While domestic consumption was 5.61 million metric tonnes from 2015–2018, the country only produced 83,406 metric tonnes of sugar. The record further reveal that over the course of 27 years, from 1990 to 2016, Nigeria spent a total of \$8.44 billion importing 16.49 million metric tonnes of raw sugar¹⁷. Since domestic production meets only around 2% of demand, the country spends roughly N101.9 billion annually to import sugar¹⁷. Official pledges were signed by Dangote, BUA, and Flour Mills outlining many parameters by which their performance as operators of the Backward Integration Project (BIP) would be monitored. The goal was to have 700,000 metric tonnes of sugar produced domestically by the three of them by 2018, however only 30,000 metric tonnes were produced in the entire country combined in that year. Nigeria has not yet achieved self-

sufficiency in local sugar production for many reasons, not the least of which is the slow pace of the Backward Integration Programme¹⁸. The country's inability to produce its own sugar has been linked to 17 natural calamities, including flooding, communal confrontations, and smuggling.

During an interview with media members, the NSDC CEO also cited difficulties such as limited land availability, interference from the elite, hostility from locals, communal disruption and conflicts with/within host communities, persistent flooding of sugar estates, and the theft and smuggling of sugar cubes as reasons for the company's poor performance. The NSDC director named the three biggest companies that produce around 99.8 percent of Nigeria's sugar as BUA Sugar Refinery Ltd, Dangote Sugar Refinery PLC, and Flour Mills of Nigeria Plc¹⁹. Since sugar is Nigeria's fourth largest import, policymakers have paid close attention to the sector over the past decade. One goal of this attention is to ensure that Nigeria is no longer dependent on foreign sugar supplies by 2023. However, as of 2017, less than 5% of the sugar cane used in production was grown locally. This means that the vast majority of the sector's activities are focused on milling, processing, and packaging imported sugar cane^{19,20}.

In the face of these country-specific challenges, scholars have emphasized on deliberate programs that can guarantee financial sustainability and prosperity for an organisation that operates within such turbulent environment. Such an organisation must have business continuity management competencies in place to strategically plan for the future, have an agile strategic response, be resilient, and have a crisis-management leader found in authentic leadership²⁰. Also, given the financial sustainability challenges (profitability, growth and

resources conversion) to be addressed, eco-efficiency become a critical mechanism that can potentially enhance the influence of business continuity management factors on the sustainability performance of sugar manufacturers in Lagos State, Nigeria. Because of this discussion, this study intends to investigate the effect of business continuity management factors on the sustainability of sugar manufacturers in Lagos State, Nigeria.

1.2 Statement of the Problem

As domestic demand increased steadily over the years, Nigeria's government allowed enormous importation to thrive. In 2019, the country produced only 38,597 metric tonnes of sugar, which is a significant decrease from 1990's output of 41,478 metric tonnes²¹. According to the CBN 2020 industry report, imports skyrocketed from 603,000 metric tonnes in 1990 to 1.6 million metric tonnes in 2019²¹. Despite the government's claims that it has worked to increase local sugar production and claims by Dangote Plc and BUA Group that they have invested heavily in that programme, the Nigerian Sugar Development Council's data show that the country has relied almost entirely - over 98 percent - on the importation of raw sugar for the last 30 years¹⁷. Industry heavyweights like Dangote, BUA, and Flour Mills of Nigeria have found much of their success due to importing raw sugar for further processing and resale. A pricey model that has detrimental effects on the Naira, employment, and tax revenue.

To corroborate the NSDC report, the United States Department of Agriculture (USDA) stressed that Nigeria's sugarcane output is far from sweet for the 2021/22 marketing year²². The country is projected to produce an estimated 70,000 metric tonnes in the 2021/22 marketing year, a seven percent shortfall compared to 75,000 metric tonnes recorded in the

2020/21 marketing year²². Sugarcane is a predominant crop used in sugar production and is grown across many parts of Nigeria, especially in Adamawa, Jigawa, Kebbi, Kwara, Niger, Sokoto, Oyo, and Taraba States.

However, the recent production decline in Africa's largest economy (Nigeria) has been attributed to challenges characterized by insecurities in sugarcane planting communities, land disputes, host communities' hostility, and lack of long-tenured financing opportunities, among others^{22,23}. Analysts assert that the challenges facing the sugar-producing zones have overshadowed the investments made by the domestic sugar millers²³. The latter had increased sugar refineries capacity from 2.75 million metric tons per annum in 2019 to 3.4 million metric tons per annum in 2020, but operating at less than 70 percent capacity²³. This incidence is particularly hurting the natural, local productivity of the industry today and has a grave negative consequence for the industry's financial sustainability in the future if left unchecked²³.

Demand for sugar is divided between the retail and industrial markets—the primary regional market in northern Nigeria, which makes up an estimated 65% of retail demand⁵. The southwest and southeast regions lag, with the latter accounting for 12% of total retail demand. The majority of the industrial activity occurs in urban areas, with Lagos state accounting for 64% of production processes that use sugar⁷. The potential for environmental sustainability becomes another cause of concern. United Nations have identified manufacturing companies operating in developing economies characterized by institutional weakness like Nigeria to have a poor regard for maintaining environmentally friendly practices. The sugar manufacturers like Dangote, BUA, and Flourmill are also culpable in

not attaining the threshold for maintaining environmentally friendly operations; hence their rating on green performance is of concern.

According to Maryam Bashir, Non-Executive Director of Dangote Sugar, the most salient challenge involves transportation refined sugar to markets. Gridlock and bad roads in Apapa, its Lagos refinery's location, have posed a significant challenge to Dangote Sugar's distribution channels, with a knock-on effect on production. In 2018 the company, which makes up 60% of the market supply, had to scale back production when its warehouses reached maximum capacity¹⁷. This has a negative multiplier effect on firm growth. According to John Maniatis, General Manager of Flour Mills of Nigeria Plc, once the sugar reaches the retail market, it faces another challenge of being undercut by cheaper black-market imports. He cited the recent rise in the illegal importation of processed sugar as another significant challenge for sugar manufacturers given its negative ripple effect on profitability, growth and on the ability to diversify inherent firm resource.

This concern is corroborated by The Chairman of Dangote Sugar Refinery Plc in 2021. Alhaji Aliko Dangote stressed that the industry is losing over 300,000 metric tonnes of local sugar demand to smuggling yearly¹⁷. The attendant consequences of this situation are that it hurt the growth of the sugar industry, as a whole, in the face of cheap sub-standard sugar and creates unfair intense competition for the local sugar manufacturers. The combination of the challenges, if not addressed by the manufacturers, may lead to more shutdown of the companies operating within this industry to importation from global manufacturers. Business continuity management factors hold potential relevance in addressing crises. This is because BCMFs enhance the capability of firms to anticipate,

prepare for, respond and adapt to incremental change and sudden disruptions to survive and prosper. It reaches beyond risk management towards a more holistic view of business health and success²⁵. Likewise, scholars within the environmental accounting and finance field have argued in favour of firms conscious of their operating environment, which holds a potential reward for environmental sustainability via eco-efficiency²⁶.

Studies on BCMFs have addressed issues bothering the performance of lecturers, academic institutions, and systematic reviews in developed and emerging economy contexts^{26,27,28,29}. However, within the context of the sugar industry, nothing concrete is known in extant literature about the interaction between BCMFs and sustainability performance. Likewise, this study argues for the need to adopt eco-efficiency as mechanisms that can enhance how BCMFs can influence the sustainability performance of sugar manufacturers in Lagos State, Nigeria. Consequent to this discussion, the study raises the questions of what benefit is BCMFs and eco-efficiency to the sustainability performance of sugar manufacturers in Lagos State, Nigeria?

1.3 Aim & Objectives of the Study

The aim of this study is to investigate the effect of business continuity management factors (strategy unfolding, strategic response, crisis-management leadership, and resilience) on the financial sustainability of sugar manufacturers in Lagos State, Nigeria. The specific objectives were to:

- i. assess the effect of strategy unfolding on financial sustainability of sugar manufacturers in Lagos State, Nigeria;

- ii. examine the effect of strategic response on financial sustainability of sugar manufacturers in Lagos State, Nigeria;
- iii. determine the effect of crisis-management leadership on financial sustainability of sugar manufacturers in Lagos State, Nigeria;
- iv. determine the effect of business resilience on sustainability of sugar manufacturers in Lagos State, Nigeria;
- v. determine the combines effect of business continuity management factors on financial sustainability of sugar manufacturers in Lagos State, Nigeria; and
- vi. investigate the moderating effect of eco-efficiency on the interaction between business continuity management factors and financial sustainability of sugar manufacturers in Lagos State, Nigeria.

1.4 Research Question

This study will address the following questions:

1. What is the effect of strategy unfolding on financial sustainability of sugar manufacturers in Lagos State, Nigeria?
2. What is the effect of strategic response on financial sustainability of sugar manufacturers in Lagos State, Nigeria?
3. How does crisis-management leadership influence the financial sustainability of sugar manufacturers in Lagos State, Nigeria?
4. What is the effect of business resilience on financial sustainability of sugar manufacturers in Lagos State, Nigeria?

5. What is the effect of business continuity management factors and financial sustainability of sugar manufacturers in Lagos State, Nigeria?
6. What is the moderating effect of eco-efficiency on the interaction between business continuity management factors and financial sustainability of sugar manufacturers in Lagos State, Nigeria?

1.5 Hypotheses

The following null hypotheses will be tested in this study.

H₀₁: Strategy unfolding has no significant effect on financial sustainability of sugar manufacturers in Lagos State, Nigeria.

H₀₂: There is no significant effect of strategic response on financial sustainability of sugar manufacturers in Lagos State, Nigeria.

H₀₃: Crisis-management leadership has no significant effect on financial sustainability of sugar manufacturers in Lagos State, Nigeria.

H₀₄: There is no significant effect of business resilience on financial sustainability of sugar manufacturers in Lagos State, Nigeria.

H₀₅: The effect of business continuity management factors on financial sustainability of sugar manufacturers in Lagos State, Nigeria is not significant

H₀₆: Eco-efficiency has no significant moderating effect on the interaction between business continuity management factors and financial sustainability of sugar manufacturers in Lagos State, Nigeria.

1.6 Significance of the Study

This study will be significant to the various stakeholders (sugar manufacturers, government, body of Academia, and the society) in the following ways:

It will provide strategic information to the sugar manufacturers on BCMFs appropriate to develop or those needing attention to drive various sustainability measures such as green performance, productive capacity, competitiveness, and sale revenue. In addition, it considered the macro environment and knowing full well that the government, to no small extent, creates the framework within which business operates through economic policies. This study will provide the government with practical information to substantiate the relevance of an enabling environment for business prosperity. This is with the hope that policies that will favour the polity can be formulated and implemented.

Furthermore, to the body of Academia, this study has addressed the gaps in the existing literature on BCMFs. More specifically, it will test the conceptual model that evaluates how financial sustainability is affected by BCMFs in the sugar manufacturing context in Nigeria, thereby contributing to recent research in this regard. It will also serve as reference material for students to learn and create the platform for further studies, pushing forward the frontier of knowledge. In all, this study is beneficial to society, considering that when the firms achieve significant performance, the ripple effect of expansion, opportunity for a job, and income generation can be achieved.

1.7 Scope of the Study

This study intends to assess the effect of business continuity management factors on the sustainability of sugar manufacturers in Lagos State, Nigeria. More specifically, the study will examine how the four BCMFs strategy unfolding, strategic response, crisis-management leadership, and resilience affect financial sustainability (profitability, resource diversification, and firm growth) of sugar manufacturers in Lagos State Nigeria. To provide a full explanation for the intended functional relationship between the independent and dependent variables, a third variable (a moderator) was introduced. Eco-efficiency is the moderators proposed in this study. The study will cover BUA Sugar Refinery Ltd, Dangote Sugar Refinery PLC, and Flour Mills of Nigeria Plc. The three companies are the major players in the sugar industry in Nigeria. More so, they account for about 95 percent of sugar in current use in the country²⁴. Hence, they represent the sugar industry in Nigeria appropriately. The choice of conducting this research in Lagos State is because the three industry players have their head offices. Also, Lagos State is considered the hub of manufacturing activities in Nigeria because the city alone accounted for half of the country's manufacturing in 2016²⁴.

1.8 Limitation of the Study

There are cautions to this study that need to be recognized in order to open opportunities for new research. More specifically, the scope of this research is restricted to the three sugar manufacturers in Nigeria. Due to the study's cross-sectional research design nature, it is impossible to draw any conclusions about the long-term effects of BCMFs and eco efficiency on financial sustainability of sugar manufacturers in Nigeria. In spite of this

limitation, the study is nonetheless valid because its aim was to analyze how BCMFs and eco efficiency interact to affect financial sustainability, requires a one-time cross-sectional data; hence, playing to the strength of the research design. The questionnaire employed has some limitations as instrument of data collection. The low response rate, the fact that some people filled out the questionnaire without reading it, and the presumption that the data they provided will be utilized negatively are all weaknesses. The researcher makes sure that the questionnaire items were written in clear, unambiguous English to combat these issues and boost response rates. The researcher also ensures the respondents' anonymity and confidentiality, and obtains approval from respective human resource managers of the sugar manufacturers to conduct the study, all of which increased the researcher's accessibility to the respondents. Finally, the statistical assumptions, sample size requirements, and other issues related to inferential statistics were major concerns for testing study hypotheses. However, these obstacles were overcome by adapting the data treatments and increasing the sample size of the study. Despite these limitations, this research does present important conceptual, empirical, theoretical, and practical implications for the management of the sugar manufacturing companies in Nigeria.

1.9 Operationalisation of Variables

In this study the independent variable business continuity management factors (X) is measured by; strategy unfolding, strategic response capability, crisis-management leadership, and business resilience. The dependent variable financial sustainability of sugar manufacturers (Y) is measured by profitability, resource diversification, and firm growth. The moderating variables (Z) is eco-efficiency.

Dependent variable: Y= Financial sustainability of Sugar Manufacturers

y_1 = Profitability

y_2 = Resource diversification

y_3 = Firm growth

Independent variables: X= Business continuity management factors

x_1 = Strategy Unfolding,

x_2 = Strategic response capability

x_3 = Crisis-management leadership

x_4 = Business resilience

Z = Moderating variables: Z= Eco-efficiency

1.10 Operational Definition of Terms

Business Continuity Management Factors: This is an organization's ability to continue to serve customers, despite difficulty and challenging environment.

Financial Sustainability: This is a business philosophy that maximizes shareholders' wealth through profit while contributing to societal development so that the firm's activity does not destroy environmental assets.

Strategy Unfolding: This systematic process involves predicting the desired future and interpreting this vision into broadly defined goals and sequenced steps to achieve them.

Strategic Response Capability: This is a firm's ability to respond appropriately to external environmental changes by deploying critical internal firm-level resources to stay competitive.

Crisis-Management Leadership: This is a positive form of leadership used to develop trust and a positive working environment to foster higher self-performance.

Eco-Efficiency: This portrays environmental and financial statements' effects, which brings together the essential ingredients – economic and ecological progress – necessary for economic prosperity to increase with more efficient use of resources.

Profitability: The ability of firms to generate earnings overtime.

Resource Diversification: This is a strategic approach employed by organizations to manage risk and enhance long-term financial sustainability

Firm Growth: This shows the increase in the firm value relative to its industry of operation.

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Chapter Two

Literature Review

The literature for this study will consider conceptual, empirical, and theoretical reviews. This becomes vital as it helps the researcher understand and examine what has been done in existing studies given the variables under study. The conceptual review will take cognizance of definitions, features, advantages, and disadvantages of each variable as established by prior studies. The empirical review looks at the different studies and their findings. Lastly, the theoretical review will capture a review of several theories that provides theoretical explanation for the independent and dependent variable of the study; more so, it will establish the theory that underpins this study. Also, submissions will be made on summary of gaps in literature and a conceptual model to show the interactions in the study.

2.1 Conceptual Review

Considering the variables addressed in this study, a conceptual review of these variables in line with previous studies is critical for building the understanding of these variables. The variables under studied are; Business continuity management factors (strategy unfolding, strategic response, crisis management leadership, business resilience) and business financial sustainability (firm growth, resource diversification, and firm profitability) and eco-efficiency.

2.1.1 Financial Sustainability

One definition of "sustainability" is "all activities done by a firm to create long-term shareholder value by embracing the opportunities and managing the risks that upshot from

the organization's economic, environmental, and social responsibilities." The phrase "business sustainability" is used to describe how a company as a whole, including its demand and supply chain, works to improve the performance of its business and ensure its continued existence in the long run¹.

When it comes to risk management, company sustainability must always be considered as a fundamental part of the planning and management cycles. Protecting, conserving, and upgrading the future-requisite environmental, social, and economic resources is central to a sustainable business model, as is meeting the demands and ensuring the position of the organisation and its stakeholders continuously². That's why it's important for businesses to focus on sustainability, which aims to improve how companies handle their financial, ecological, and social responsibilities. As a result, a stronger organisation can form, and the firm can cultivate distinctive knowledge capabilities that will ensure its continued success in the long run³.

Scholars have argued in favour of business sustainability, which they define as "the practise of ensuring the achievement of one's intended goals and objectives by taking into account the long-term economic, environmental, and social effects of one's actions"^{4,5}. Similar arguments were made by another professor, who said that successful sustainability practises and policies can provide businesses an edge in the market and propel them towards a more sustainable, environmentally friendly future⁶.

A researcher argue that businesses should prioritise sustainability because it improves their reputation, cuts costs, and stimulates the local economy, all of which contribute to the growth of the company and the development of the community in which it operates⁷.

Another expert suggested that the "three bottom line," or the ability of enterprises to accomplish sustainability in the areas of environment, human, and economic objectives, is crucial to the short- and long-term viability of any economy⁸.

Business sustainability is made up of social, environmental, and economic factors, according to a number of studies^{9,10}. To put it another way, a sustainable business practise is one that takes into account the social, environmental, and economic impacts of an organization's current and future operations, and that allows it to continue providing for customers' immediate wants even as it works to secure its own long-term viability. For a company to endure the test of time, it needs visionary executives who can see beyond the numbers on the balance sheet and assess how best to allocate the company's resources to reach its specified goals and objectives. They use managerial approaches that take into account economic, ecological, and social factors¹¹.

Studies have shown that the economic dimensions of business sustainability are the most vital for the firm, as they ensure the company's continued existence and expansion even in the face of a volatile and uncertain competitive environment^{12,13}.

The long-term financial sustainability of a company is crucial to realising its goals and fulfilling its mission. In order to achieve the following, it can be defined as the process by which an organisation applies its knowledge, skills, tools, and techniques to its activities, products, and services. Set the stage for the company's operations, offerings, and customer service. Determine the most important goals and deadlines for the organisation to reach (based on its vision and purpose)¹⁴. Get rid of everything that's getting in the way of the company reaching its goals and objectives. Make it possible for the company to foresee the

results of controls and other techniques for mitigating the effects of disruptions and obstructions¹⁴. Help the company learn how to keep working towards its most important goals even if disruptions occur. Develop indicators that will serve as criteria for launching emergency, continuity, and recovery plans. During routine operations and in the event of a big interruption, everyone must know what they are responsible for and how to handle it. Build consensus and commitment to the requirements, implementation, and deployment of business sustainability and continuity, which are integrated into the routine way the organisation conducts business⁶. Ensure that there is a clear understanding throughout the organisation of what accountabilities and responsibilities are in place in the event of an emergency or a major stakeholder issue.

The efficiency of corporate operations can be improved by developing more sustainable business practises, which is a recognised benefit of business sustainability. Better resource management will lead to streamlined operations and lower operating expenses. The principles of leadership, stakeholder value, system thinking, developing human capability, continuous improvement, information and knowledge management, corporate responsibility, and long-term success all play a role in ensuring a company's long-term viability⁹.

Brand recognition, expenses, regulatory conformity, investors, employees, and stockholders all benefit from a company's commitment to sustainability²². Taking into account the findings of previous studies, this investigation defines business sustainability as the efficient and effective management of all activities and resources in order to maintain a competitive advantage, increase profits and market share, and boost the firm's overall growth and

performance. This research provides a framework for understanding sustainability in the sugar industry via the lenses of firm growth, resource diversification, and profitability¹⁵.

2.1.1.1 Firm Growth

There are two definitions of company growth used by growth scholars. First, according to Penrose, a growing business is one whose metrics (such sales, production, or exports) have increased by a predetermined amount. Second, according to Penrose, a company's growth is a process that, like biological processes, can either increase in size or quality over time¹⁶. Growth can be broken down into quantitative and qualitative components, much like Penrose did. When a company expands quantitatively, it means that some observable metric indicative of its size has increased; when a company expands qualitatively, it means that some criterion, such the quality of its products or the quality of its connections with its customers, has increased¹⁷.

Authors such as Davidsson, Achtenhagen, and Naldi reported that such growth might be related to new markets, especially in technology firms, regarding diversification¹⁸. Similarly, firm growth is the product of an internal organisational process in the development of an enterprise measure in terms of increase in size, quality, and expansion of business¹⁹. Literature suggested that firm growth is expressed by how a firm grows faster than its contemporaries within a similar industry²⁰. A firm may not be considered as growing if its revenues and some financial measures are not consistently increasing. Moreover, growth can occur alternatively as integrating part of the value chain, vertical growth, or when a firm introduces itself within a new market not related to its existing market²¹.

Chen expressed that firm growth is measurable in numbers, more so by increasing revenue or financial measures. Also, literature suggested vast differences in the growth patterns of firms: high-growth and young businesses²². More so, that firm growth can be achieved through integration with other firms, for example, through mergers, and that growing firms are generally seen as "vital" for economic growth. They can help disseminate innovations, shake up existing markets and increase productivity. They are an essential part of jobs growth, with estimates suggesting that almost half of all new jobs are created by high-growth firms²³. Firm growth is evidence of increased organisational performance and becomes key to economic success, given that growing firms create employment opportunities and generate income^{23,24,25}.

In addition, firm growth gives an impression to all stakeholders about the financial viability of a business²². Moreover, that lack of firm growth leads to stagnation for the business and an early size of more significant problems in the future. In this study, firm growth is seen as a quantitative increase in firm size, market coverage, products on offer, and the avenues dedicated to reaching out to customers²⁶.

2.1.1.2 Profitability

Profitability, as described by the existing literature, is "the ability of an enterprise to generate returns as a result of input costs falling below generated income"²⁷. The ability to earn a profit is a key indicator of whether or not a business will be successful in the future. A company's ability to make profits, via implication. According to another writer, a company's profitability is reflected in the size of its profit margin in relation to its sales and

average capital. The ratio of this result to sales (or production) is a common method of expressing this concept²⁷.

The ability to turn a profit, or profitability, can be thought of as a measure of how well a company utilises its assets in its primary business model to create income. Profitability was similarly conceptualised by academics through the lens of a "income statement"^{28,29}. Income and expenditures for the entire company are detailed here. The major motivation for starting a business is to make money. According to another author, profits are calculated by comparing revenue with costs³⁰. Earnings are the cash flow that a business sees as a direct outcome of its operations. Expenses are the money spent to replace or repair assets that were used up in the course of running a company. While the concept of profit is concrete, that of profitability is purely conceptual.

All commercial endeavours should aim to generate a profit. The company's long-term viability depends on its capacity to turn a profit. Income and costs are used to calculate profitability, which is then often broken down into gross profit and net profit. As a marketing metric, gross profit measures how much money a company makes³¹. Profit is determined by subtracting selling expenses from gross sales. A marketing manager's focus should also be on the bottom line, which is why the net profit is a crucial financial statistic. The term is equivalent with "bottom line," because it shows whether or not a company is profitable after deducting all of its operating costs. The net profit margin is a valuable marketing indicator for making cross-time and cross-company comparisons, as it represents the firm's true profitability as a percentage³².

Profitability is critical because it shows how successful a firm is at creating earnings, that is, how much money it makes in relation to the money it takes in. It was also stated that there are numerous benefits to the company's profitability, including the fact that it ensures the company's longevity and boosts the company's standing in the industry³³. However, according to one academic, profitability can be measured by looking at the relationship between sales, average capital, and a company's own average capital³⁴. It was usually expressed as a ratio of output to output (sales or product creation).

According to the literature, profitability has been shown to improve a company's longevity, size, sales growth, liquidity, and financial leverage^{32,34}. Profitability improves a business in many ways, including its chances of survival, its capacity to get bank loans and investment money, and its potential to expand. But one of the biggest drawbacks of running a successful company has to pay taxes on the money you make. This is why many companies work hard to claim all of the deductions they are entitled to under the Business Income Tax Act^{35,36}.

Profitability indicators include the profitability ratio and the accumulation margin, both of which have been the subject of multiple studies^{31,32,33,34}. Companies and financial institutions used profitability ratios to keep an eye on operations and make sure everything was running smoothly³⁴. In a similar vein, it was emphasised that operational profit ratio and gross profit ratio might be used to assess the company's financial health. According to the study's definition, profitability is "the extent to which an enterprise realises a financial return on its activities that exceeds its cost of production"³².

2.1.1.3 Resource Diversification

Resource diversification involves spreading investments or allocating resources across different categories to reduce exposure to risks associated with a single asset or market. It can include diversification of financial assets, products, services, geographical markets, and even skill sets. The primary goal is to achieve a balance between risk and return, thus enhancing long-term sustainability and resilience³³. Resource diversification is a strategic approach employed by organizations to manage risk and enhance long-term sustainability. Resource diversification refers to the expansion of an organization's activities, operations, or investments into new areas, sectors, or markets. Diversification can manifest in various forms, including product diversification, market diversification, and investment diversification³³. This strategic approach is often motivated by the desire to reduce dependency on a single source of revenue, mitigate risks associated with volatility in specific markets, and leverage synergies across different business lines.

Resource diversification is widely recognized as a means of reducing financial risk. Organizations that rely heavily on a single revenue stream are vulnerable to economic downturns or market fluctuations. Diversification can provide a cushion against such shocks by distributing risk across multiple sources. Research by scholars suggests that diversification can lead to increased stability and reduced earnings volatility, contributing to financial sustainability. Moreover, Resource diversification can drive revenue generation and growth³⁴. Firms entering new markets or offering complementary products/services can tap into untapped demand and expand their customer base. This potential for increased revenue can enhance a company's financial sustainability. Teece highlights how diversification can create opportunities for cross-selling and synergies that contribute to sustained financial performance³⁴. In terms of its relevance, it is posited that resource

diversification can lead to the development of unique capabilities and competitive advantages. Organizations that diversify effectively can access new resources, knowledge, and technologies, thereby strengthening their overall competitive position. This advantage can translate into sustained profitability and financial sustainability³⁵.

Diversification efforts must align with an organization's core competencies and strategic objectives. It is essential to evaluate whether the new ventures leverage existing strengths or require a significant shift in capabilities³⁶. When diversification is congruent with core competencies, it has a higher likelihood of contributing to financial sustainability.

Also, the success of resource diversification depends on the organization's ability to effectively manage the complexities that arise. Adequate management expertise and a culture that supports innovation and adaptation are crucial³⁶. Inadequate management practices can hinder the realization of financial benefits from diversification efforts. Moreover, thorough market analysis and due diligence are paramount before venturing into new areas. Researchers emphasize the significance of understanding market dynamics and assessing the potential risks and returns associated with diversification^{37,38}. Inadequate research can lead to unsuccessful ventures that undermine financial sustainability.

It has been argued that resource diversification can lead firms into securing competitive advantage. The concept of competitiveness can be understood in a variety of ways, depending on the theoretical framework and depth of investigation employed. Most academics, though, concur that it's a difficult subject with many moving parts. Therefore, it is important to evaluate competitiveness using a number of criteria³⁵. A company's competitiveness lies in its capacity to profitably serve its dual aim of satisfying customers'

needs. This potential is realised by providing products and services to consumers that are more highly valued by those consumers than those provided by competitors³⁹. For a business to remain competitive, it must be able to recognize when the external and internal environment has changed and make the necessary adjustments to keep up³⁵.

The "industrial organisation view of competitive advantage" describes Porter's explanation of competitiveness, which is based on the earlier works of Mason and Bain in the field of industrial organisation economics³⁷. According to Porter's thesis, a company's competitive advantage stems from the tactics it employs to counter threats and capitalise on opportunities in the market. Similarly, competitiveness is another term for productivity that emphasises a company's growth rate in comparison to its rivals³⁸. Competing in today's economic climate requires a greater emphasis on dynamic characteristics, such as agility, speed, and adaptability.

Human resources, organisational culture and structure, processes and practises, intellectual property, capital, natural resources, and technology are only a few of the various sources of competitiveness highlighted by researchers. Researchers in the field of organisational learning came to the same conclusion: companies that learn to institutionalise their knowledge through time have an advantage in the marketplace^{39,40,41}. Furthermore, CSR can be a source of opportunity, innovation, and competitive advantage as opposed to only a cost or constraint.

Other sources of competitive advantage include the firm's protected market position and firm-specific resources and capabilities⁴². Literature has confirmed that there are factors that

are very important for the achievement of competitive advantage. For example, the antecedents of competitive advantage are mostly internal factors: physical and financial resources in the first part (tangible resources) and human, structural, and customer capital in the second part (intangible resources)⁴². While some of these empirical studies found that resources are crucial for a company to gain a competitive advantage, others argued that only intangible resources are critically vital for achieving a competitive advantage^{43,44}.

While exploring the characteristics of the market-driven firms and antecedents to sustained competitive advantage, it was maintained that the entrepreneurial intensity of a firm, which serves as a link between entrepreneurship and organizational capabilities, must be significant for such a firm to be able to pursue an innovation-based strategy, which will enable it to build specific capabilities that will eventually distinguish that firm from its rivals by effectively facing the dynamism of the environment and outperforming its competitors^{41,42}. Secondly, the authors also posited that market-focused learning capability is critical for entrepreneurial firms pursuing competitive strategy. Market-focused learning concerns the capacity of the firm to learn from the markets and the marketplace by constantly scanning for new opportunities to satisfy customers⁴⁰.

Though their study was in the area of healthcare and healthcare organisations, a scholar considered lean thinking and operational agility as antecedents to and strategic drivers of the achievement of competitive advantage⁴³. They argued that lean thinking (which focuses process improvements on customer value) and operational agility (which focuses process improvements on responsiveness and adaptability to customer needs) are dynamic capabilities, that are necessary antecedents to the achievement of organizational

performance. It was also maintained that firms' capacity to possess high level of strategic agility impliedly can maintain their strategic supremacy despite market fluctuations and hence can impact sustainable competitiveness⁴⁵.

2.1.2 Business Continuity Management Factors

The ability or status of an organisation to persist, usually in the face of adverse conditions or perilous circumstances, is known as business continuity. The concept of "organisational survival," which is central to "business continuity management," might mean different things to different people⁴⁶. Observing a company's continued existence is the most objective metric of survival⁴⁴. Researchers and academics have incentive to focus on employees as a group because they are the source of product and service innovations that are crucial to a company's success in the face of rising consumer demand worldwide⁴⁵.

Traditional accounting metrics like sales growth, market share, and profitability aspiration levels may all play a role in a multidimensional measure of organisations' survival. Gross profit, return on assets, and return on investment are considered the "big three" when it comes to gauging a company's success⁴⁶. In addition to financial factors, the firm's reputation, public image, and goodwill, as well as the dedication and contentment of employees, may be critical to the company's success in the face of new competitors⁴⁷.

Primarily Profitability, originality, expansion, cash flow, and flexibility are all essential to the long-term health of any business. Insolvency causes an organisation to shut down its activities and stop servicing its debts to its customers, its employees, and its other creditors. There are various subjective and objective interpretations of what it means for an organisation to survive. Organisational survival can be measured most accurately by just

keeping track of how long they've been around⁴⁷. Traditional accounting metrics, such as sales growth, market share, and profitability targets, may all play a role in a more holistic evaluation of a company's success. Gross profit, return on asset (ROA), and return on investment (ROI) are considered the three most important indications of a company's success⁴⁷. Profitability, sales growth, return on sales, return on investment, and return on equity are only few of the metrics that contribute to a company's financial success, as detailed in the financial statements and notes that accompany them. The author also took into account other non-financial factors that may be important to new entrants such as the company's reputation, public image, and goodwill, and the commitment and contentment of employees⁴⁸.

Business continuity or survival guarantees returns for owners and plays a significant socio-economic role for the firm, individuals as employees, the government, and shareholders⁴⁴. Business continuity provides endless opportunities for job creation, revenue generation for employers, employees, and the government, and products to the general public. However, the scholar stressed that where a business failed to be considered a going concern, the disadvantages have significantly negative consequences for firms, individuals, government, and society^{45,46}. This study considers business continuity management factors as the attribute of a successful organization which shows that an organization will continue to exist as a going concern to satisfy the interest of the stakeholders⁴⁹. More so that such capacity to be a going concern is premised on the organisational ability to deploy leadership that can drive through crisis successfully, ability to plan for the future, with resilience features and the capability to respond strategically to macro and micro environmental challenges. Hence, in this study business continuity management factors is contextualized as critical

organisational success factors and they include; Crisis management leadership (Authentic Leadership), business resilience, strategic unfolding, and strategic response capability⁵⁰.

2.1.2.1 Crisis Management Leadership (Authentic Leadership)

Authenticity as a concept dates back centuries. To be genuine is to behave in accordance with one's innermost values. It's unclear how a "true self" can exist, as suggested by Gardiner, since people define themselves by their relationships with others. Scientists agree that everyone displays some degree of authenticity and that nobody is entirely genuine or fake⁵⁰. There is a growing demand for more genuine leaders in the modern world due to a decline in the moral character of leadership⁵¹. According to the AL theory, authenticity is demonstrated by people whose inner and outer selves are in harmony. Academic discussions on AL began around the time the positive psychology movement gained traction. In particular, AL was conceived of as a foundational element of the constructive leadership practises essential to creating thriving workplace environments⁵¹.

Positive self-development, internalised moral perspectives, balanced information processing, and relational transparency are all outcomes of AL, which has been defined as "a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate"⁴⁷. Authentic leadership (AL) refers to a style of leadership that is seen as a good approach to organisational leadership that may assist meet today's issues 48 because it is seen as real, transparent, and ethical. Furthermore, the attributes of ethical and transformational leadership are applied in a genuine leadership style, making it inspiring, motivating, visionary, and unwaveringly moral, compassionate, and service oriented. Genuine leaders care so much about their team members that they notice when people's

skills and interests are a good fit, and they help those people flourish in their roles as a result⁵².

The behaviours of self-awareness, transparency, and clarity are hallmarks of authentic leadership. True leaders are open and transparent with their followers, providing all the information necessary for making judgements while also considering and acting on the input of others. Such traits allow for genuine leadership evaluation, both in terms of competence and ethics⁵⁰. Furthermore, AL is founded on the leader's moral integrity, care for followers, and consistency of values and behavior⁵¹.

A scholar states the most popular interpretation of what AL is. "Authentic leadership" (AL) is "a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced information processing, and relational transparency on the part of leaders working with followers, fostering positive self-development"⁵³. Positive leadership abilities are combined in an advanced organisational setting through the AL process, which ranks⁴⁶. In addition, genuine leaders promote trust and a productive workplace culture to encourage employees to be their best selves and increase productivity. Further, authentic leadership is defined as a leader's pattern of behaviour that fosters the psychological capacities and ethical climate necessary for followers to adopt the leader's self-awareness, moral perspective, informational balance, and relational transparency, all of which contribute to the followers' own growth and development⁵⁴.

The four elements of self-awareness, relational transparency, unbiased processing, and an internalised moral perspective have been identified by scholars as essential to authentic

leadership. Leadership with integrity Telling the truth (a relational orientation), admitting mistakes (impartial processing), understanding what demotivates you (self-awareness), and acting in accordance with your values (authentic behaviour) are all examples of authentic functioning^{46,54,55}. Genuine leaders are self-aware and willing to communicate their thoughts and feelings with their followers; they also value and publicly acknowledge the contributions of others and are willing to pool resources to make the best decisions possible. Moreover, authentic leaders are trustworthy, dedicated to developing their team members' skills, open to new ways of thinking, and focused on fostering an enjoyable workplace culture⁵¹. In other words, real leaders can serve as a reference point and a source of social support for their followers, allowing them to better carry out their duties⁵⁶.

When people have access to plenty of resources, as proposed by the COR theory, they are more likely to be proactive about acquiring even more resources, to engage in resource gain spirals, and to put their existing resources towards actions that go beyond what is required⁵⁷.

Scholars have noted a correlation between having a genuine leader and employee satisfaction⁵³. That is to say, people are more content in their jobs when they see signs of authenticity in their leaders' actions. The authors claim that self-awareness, relational transparency, an internal moral perspective, and a balanced approach to information processing all have a favourable effect on employee satisfaction⁵⁸. Similarly, it was argued that AL perceptions promote followers' trust and emotions throughout change processes, and that employees with a good relationship with their leader will be more satisfied with work and less emotionally exhausted or AWB because of the leader's trustworthy and empathetic leadership⁵⁷.

Psychological capital, creativity, organisational citizenship behaviours, work engagement, job resourcefulness, emotional commitment, and high performance are just some of the positive attitudes and behaviours that researchers have shown AL to predict^{52,54,55,57}. Critics of AL in times of crisis, however, counter that it is essential for building trust in government and fostering "pragmatic outcomes"⁵⁶. Integrity of the leader is proven to be a driving factor in follower performance, according to the literature on AL. According to the research of other authors, AL has been shown to have a favourable influence on employee performance and is now being seen as a promising method for encouraging desirable behaviours among workers that ultimately benefit both individual teams and the company as a whole^{57,58}. However, the impact of the genuine leader may be mitigated in a context characterized by institutional weakness.

2.1.2.2 Business Resilience

Since Organisation 60's financial crisis, the phrase "resilience" has become increasingly prevalent in regulatory and supervisory rhetoric and papers. It's a notion with roots in many fields that looks at how complex adaptive nonlinear systems can dynamically repair themselves when put under pressure or when moving to a new stable equilibrium. The ability of a system to resist disruption and reorganise throughout change while maintaining essentially the same function, structure, identity, and feedback is referred to as resilience⁵⁹. Resilience, in the context of business, refers to the ability to cope with and recover from adversity in the face of a wide variety of dangers, from cyberattacks to natural catastrophes and beyond⁶⁰.

As a result, companies all over the world have taken a deliberate approach to enhancing company resilience by, among other things, strategically adjusting to new circumstances, restructuring, and reorganising operations to better achieve their stated aims and objectives⁶¹. A company's resilience lies in its capacity to bounce back swiftly from setbacks, all the while keeping business as usual and protecting its employees, assets, and reputation. Similarly, corporate resilience is defined as "the degree to which an organisation can withstand internal and external shocks through the application of strategic awareness and linked operational management"⁶².

Existing literature characterised business resilience as an organization's capability to effectively absorb disruptive surprises, devise situation-specific answers to those surprises, and eventually engage in transformative actions to capitalise on those surprises⁶³. Therefore, corporate resilience goes beyond disaster recovery by providing post-disaster solutions to prevent expensive downtime, fortify vulnerabilities, and keep operations running in the face of fresh, unanticipated breaches. Understanding the importance of maintaining workflows in the face of disruptions is the first step towards building business resilience. The human factor is sometimes neglected as a difficulty in corporate resilience planning, but it is crucial that people know what to do in a chaotic scenario and have been trained to do it⁶⁴.

In business, resilience is defined as "the capacity to anticipate, resist, and recover from a perturbation in a way that maintains or improves the firm's continuous operations and performance"⁶⁵. Resilience in the same industry is a dynamic target that affects both business as usual and crisis performance, necessitating adaptability and dependability and allowing organisations to handle disruptive circumstances⁶⁶.

Knowledge of the environment, degree of preparation, anticipation of disturbances, adaptation, and capability to recover are just few of the many aspects that emerge from definitions of organisational resilience, according to the author⁶⁷. Organisational readiness is reflected in its capacity to absorb shock or build resilience in the face of perturbations in its environment. Managers in resilient organisations, according to the literature, need to be cognizant of potential threats to their people, buildings, activities, services, and supply chains at the board level. Managers must be aware of key issues and trends that may affect the organization's goals and the perceptions and values of external stakeholders, as well as the increasingly complex cultural, political, legal, regulatory, economic, technological, natural, and competitive context within which it operates⁶⁶. Business resilience allows companies to strengthen their resources and adaptability in the face of adverse conditions⁶⁸.

Here are three things that contribute to a company's resilience: Organisational resilience must be tailored to its intended use. Leaders need to strike a balance between proactive management, reflective decision-making, performance enhancement, and adaptive innovation that is tailored to their organization's goals and industry⁶⁹. Leaders face tensions, including competing demands to be protective and progressive, consistent and flexible, and so on. With the use of paradox, leaders can move from an "either/or" mentality to one that embraces "both/and" possibilities. Deterioration: A sustained effort is required for organisational resilience. Companies might sleepwalk into a disaster if they don't pay attention to preventative control, attentive action, performance optimisation, and adaptive innovation⁷⁰.

Physical, digital, and intellectual property all need to be managed from creation to destruction for an organisation to be really resilient. Control (multiple, independent, and redundant levels of security for all key assets such as people, products, property, information, etc.) and compliance (standard operating procedures, processes, and training) are necessary for organisational resilience^{67,71}. For an organisation to be resilient, its leadership and culture must be prepared to proactively identify and react to both risks and opportunities. Organisational resilience is achieved by honing and expanding upon previously established strengths, abilities, know-how, and frameworks. The key to organisational resilience is making adjustments before it becomes financially prohibitive to do so. Changing one's core beliefs, changing one's approach to tackling problems, innovating, and learning are all necessary⁷².

If organisational resilience is understood as the ability to recover from setbacks, then efforts could be directed towards developing strategies that would allow the company to resume its previous level of performance⁷³. This recuperative view of organisational resilience places a premium on flexibility in the face of uncertainty. The second way to consider organisational resilience is in terms of its capacity to adapt to new circumstances. The definition of resilience in this context is "thriving"⁷⁰. The organisation is adaptable enough to capitalise on opportunities presented by the unexpected. Resilience is the capacity of an organisation to take advantage of its resources and competencies, seize opportunities, and construct a prosperous future, rather than reverting to past performance levels. According to this point of view, resilience is not a static trait, but rather a skill that can be honed through practise. The latter perspective is known as the "transformational view" of organisational resilience⁷⁴.

Business resilience has many characteristics, including the following: a static nature; a dynamic nature; constant monitoring; the ability to anticipate; redundancy; simulation; an initial vulnerability; a focus on minor factors; a focus on learning from mistakes; and a focus on minor aspects. In addition, there are many different types of company resilience, such as environmental and social resilience, operational resilience, commercial resilience, financial resilience, and future resilience⁷¹. Institutional, financial, operational, technological, organisational, and reputational resilience were also identified as key factors in a McKinsey report⁷².

Author emphasises benefits of business resilience, including increased adaptability, reliability, effectiveness, agility, and market share for businesses. The likelihood of failure, the severity of failure (in terms of human casualties, property damage, and negative economic and societal implications), and the time required to recover are all diminished by resilient systems. The time it takes for a system to recover its pre-event level of performance and the degree to which it continues to function after a calamity are two indicators of its resilience⁶³. However, if a company lacks resilience, it could suffer monetary setbacks and a loss of competitive edge. According to the authors of this study, business resilience is the adoption of dynamic organisational methods to counteract the effects of fluctuating external conditions in order to remain competitive and ensure the long-term viability of a company^{64,72,73,74}.

2.1.2.3 Strategy Unfolding

Developing a strategy, on the other hand, is a methodical procedure that begins with identifying the company's mission and objectives and ends with a carefully considered

choice of strategy, a detailed plan for putting that strategy into action, a system for keeping tabs on how well it's working, and an evaluation of the results. Thus, strategy unfolding is a management tool used to assist the organisation concentrate its efforts, unify its members behind common goals, and readjust its course in light of new information or circumstances⁷⁴. The process of developing and maintaining coherence between an organization's aims and resources and its evolving prospect is known as strategy unfolding⁷⁵. Determining a mission and goals, conducting an environmental scan, developing a strategy, putting it into action, and monitoring its results are all expected steps in the plan's unfolding⁷⁶.

The process of strategy unfolding involves the application of rigorous criteria and analysis to the steps of strategy creation, management, and documentation⁷⁷. Unfolding a strategy is a methodical process that begins with envisioning an end state and ends with a set of well-defined, sequential objectives⁷⁶. Firms engage in strategy unfolding when they engage in a sequence of planning activities designed to create strategies that may improve the firms' performance⁷⁶. Unfolding a strategy is the process by which an organization's goals and objectives are established, and through which plans of action and allocations of resources are developed and implemented⁷⁸.

The process of strategy unfolding includes validating and defining a course for corporate actions by assessing both immediate and long-term goals⁷⁸. The process through which an organisation develops its vision and strategies, and decides how best to allocate its human capital and other resources, is called strategy unfolding. Business goals, a long-term vision, and an easy-to-follow plan to implement the concept and reach the goals make up the building blocks of a strategy⁷⁹. Strategy unfolding, by implication, is prospective because of

the significant features it possesses (strategic coverage, centralization, time horizon, planning formality, and internal and external orientation)^{74,75,78}.

One of the benefits of strategy unfolding, according to the aforementioned studies, is that it improves coordination by centralising all business unit strategies inside a corporate strategy^{73,76}. Strategy unfolding has been cited as one of the most important determinants of performance in the literature. It's a tool in the modern manager's toolbox for dealing with the unknown and eliciting the best possible results⁸⁰. Even Nevertheless, a company's performance and its chances of survival in the market may suffer if its leaders fail to account for the plan they are implementing. It was said that strategy unfolding helps with creativity, motivation, communication within the company, ideation, data gathering, environment analysis, and meticulous deliberation over all viable options⁸¹.

In light of improved performance through investment in human capital, it is often considered that the development of a strategy could result in the creation of novel positions, business models, business processes, and positioning with respect to competitors. Depending on how the new plan plays out, the company's performance may either improve or worsen⁸². Therefore, a company must employ suitable tactics to stay up with and grow in a changing environment if it is to outperform its competitors in the face of global change⁸³. If a firm is going to be successful in today's volatile business climate, it needs to be able to modify its strategy and direction in response to the external obstacles it faces. As a result, the research interprets strategy development as an exercise in corporate-level planning that involves charting a course towards the achievement of the organization's short- and long-term goals⁸³.

2.1.2.4 Strategic Response Capability

During unprecedented disruptions and challenges to global business environment, it is imperative for firms to be able to conduct effective environmental analysis and consequently deploy appropriate competencies to copy and survive the changing business landscape^{83,84}. Going by this narrative, strategic response capability becomes a critical success factor during changing and challenging times. Strategic management literature often perceives strategic responses as key drivers in dealing with environmental challenges and responding to erratic customer needs⁸⁵. This narrative corroborates other scholar that found relevance for firms that possess strategic response capability^{85,86,87}. The scholars posited that firms that deploy strategic response capability were able to maximize their core competencies and thus provided value-adding goods and services at a cheaper price than their competitors⁸⁶.

Also, strategic responses are actions taken to align current strategy of a firm to environment changes so as to gain competitive advantage⁸⁷. This according to the scholar is because strategic response ensures that an organisation survives in the ever-changing environment and therefore improves overall performance. Wanjala's position provides support for the submission of ⁸⁸. The scholar stressed that through strategic response capability, firms are in a better position to enhance its relevance in a changing environment by staying on course with its operation. The implication of this narrative suggests that under the condition of intense changes in the business environment, firms need to be conscious of the possible association between its action and the resulting outcomes. Hence for firms that intend to continue been a going-concern particularly in an unstable environment induced by the

coronavirus pandemic, will need to evaluate the macro-environment, to look inward for competencies, and respond with an appropriate strategy^{88,89,90}.

2.1.3 Eco-Efficiency

The term "efficiency" is often used to describe the practice of maximizing output while minimizing input. The term "eco-efficiency" has a slightly different meaning when applied to environmental management; carbon emissions, for instance, are an undesirable output⁸⁹. The eco-efficiency theory put forth by the researchers in this case argues that businesses can achieve optimal efficiency through cost cutting and value creation while simultaneously lowering their environmental effect. The term "eco-efficiency" was used by the World Business Council for Sustainable Development (WBCSD) to describe a management tenet that promotes the use of environmentally friendly solutions by businesses as a means to boost their bottom lines⁹⁰. The goal of eco-efficiency is to maximize benefits while minimizing negative effects on the environment. Agricultural producers can improve their environmental responsibilities as evaluated by environmental performance and economics (lower costs, higher profits) according to the notion of eco-efficiency evaluation⁹¹.

Mathematically, an infinite number of combinations of economic and environmental measures have been applied since eco-efficiency is a multidimensional notion tied to each given analytical context⁹². Scholars have coined the term "ecological economic efficiency," or "eco-efficiency," to describe a concept that demonstrates enhanced productivity and reduced costs alongside improved environmental performance⁹³. During the Earth Summit and other publications, the World Business Council for Sustainable Development introduced the term⁹⁴. The term "eco-efficiency" describes a method that reduces negative effects on the

environment without sacrificing productivity. Eco-efficiency is a concept of management that aims to improve environmental conditions while also reaping financial rewards. Developing activities with monetary value that also reduce ecological impacts and resource consumption is one way to boost eco-efficiency⁹⁵.

The notion of eco-efficiency holds that the creation of pollution and waste is an indication of inefficiency in the production process, resulting in non-value-added expenses that should be minimized or avoided by the adoption of environmentally friendly procedures and technological advancements. Management may establish a direct connection between corporate environmental goals and benefits by incorporating the notion of environmental efficiency into corporate strategy planning⁹⁶. Consequently, ecoefficiency is a method to measure the factors of sustainable development, lessen the use of resources and their effect on the environment, and keep or increase the worth of the company's output⁹⁴.

Eco-Efficiency is one of the analytical and measurable approaches for businesses interested in practical ways to play a role in sustainable development, and it originates as a management response to the challenges of production processes, most of which are related to waste⁹⁵. Eco-efficiency bridges the gap between the economic and ecological impacts of a product or service. The following formula can be used to determine a product's Eco-efficiency. In addition, eco-efficiency, which bridges the gap between the economy and the environment, emerges as part of the process of environmental and ecosystem recovery^{96,97}.

To aid businesses in more visibly and efficiently solving their environmental challenges, it is suggested that they implement an environmental management system. Management employs the eco-efficiency method to benefit shareholders by lessening the company's

negative effects on the environment⁹⁸. Eco-efficiency implementation demonstrates a company's commitment to environmental protection, and effective implementation can contribute to long-term environmental viability. The company's commitment to environmental sustainability also ensures the long-term viability of its operations⁹⁹. A company's efficiency may rise, and it may find itself in a more advantageous market position, if it adopts methods to improve its social or environmental performance¹⁰⁰.

Eco-efficiency Every business must act responsibly towards the local community and the environment^{94,98}. As part of this duty, businesses must take precautions to limit the amount of damage they cause to their local ecosystems during the production process. Water, soil, and air pollution are all forms of environmental degradation that need to be mitigated by businesses. Eco-efficiency describes this idea. "Eco-efficiency" is an acronym for "ecological-economic efficiency," a framework demonstrating higher production and decreased costs alongside enhanced environmental performance⁹⁹. In addition, businesses can increase their eco-efficiency by providing products and services that add financial value in relation to the waste they generate. "maintaining that organisations can produce goods and services that are more useful while simultaneously reducing negative environmental impacts, resource consumption, and costs" is what we mean when we talk about eco-efficiency¹⁰⁰.

Reducing the company's negative effects on the environment while increasing shareholder value is the goal of eco-efficiency, which serves as a management control mechanism? Moreover, it was said that the objective of eco-efficiency is to "reduce the consumption of natural resources such as minimising the use of energy, water, and land raw materials"⁹⁷.

When a company gets ISO 14001 certification in environmental management, it can utilise the notion of eco-efficiency as a baseline for implementing the concept of environmental management. Convincing staff and stakeholders to care about environmental issues is only one example of how ISO 14001 may be utilised to achieve internal and external goals¹⁰⁰.

2.2 Theoretical Framework

This section of the review provides the basic theoretical assumptions for this study. It will focus on relevant theories that can be applied to the variables and concepts in order to come up with a logical linkage between the variables. These theories include contingency, resource-based view and dynamic capabilities theory.

2.2.1 Contingency Theory

Fiedler propounded the contingency theory (CT) in 1964. CT was built on the premise that beyond the organisation, some exigencies influence the organisation's performance¹⁰¹. This means that when an organisation can fit itself with contingent factors (such as culture, strategy, technology, structure, and environment), such alignment will guarantee improved performance. Also, given the contingent factors enumerated, the organisational structure is prominent of all, suggesting why the contingency theory is mostly referred to as structural contingency theory. Moreover, the structural contingency theory posits that every contingency warrants the existence of specific feature in the organisational structure, hence when the organisational structure possesses those attributes (as required by the contingencies), then a fit is achieved. It is this fit that produces improved performance¹⁰¹.

The fundamental assumption of CT is that it considers every organisation to be an open-system, one that can influence and be influenced by the external environment. Hence highlighting the different ways in which organisational structures are planned. The bottom line here is that success is based on how well the organisational structure fits its contingencies. The whole organisational structure-contingence-fit is a chain of activities that keep on evolving because, by nature, the business environment is dynamic¹⁰².

However, scholars have criticized the assumptions of CT. First, they suggested that the desire to accomplish internal and external alignment remains an obscure objective, especially for firms that operate within an environment that has several conflicting demands and for firms that have issues with internal-organisation trade-offs and high-performance target¹⁰³. In a study, the scholar argued further that in a scenario like this, it is exceptionally challenging to conceptualize a theoretical answer¹⁰⁴. Furthermore, came the Configuration theorist. They believed that it is not practicable for firms to align entirely with their contingencies, considering that as the firm is adapting its structure to fit the contingent factors, the factors themselves continue to change. In the end, the issue of fit does not materialize. They argued further that, CT is not proactive; instead, it is reactive because it emphasises what managers can do when faced with individual circumstances. Even at that, CT fails to specify in precise terms what these managers should do under these different situations. As such, it is not enough to say, "a managerial action depends on the situation"¹⁰⁵.

The contingency theory has been broadly adopted in extant literature to explain under which condition certain contingencies will improve firm performance and numerous scholars have buttressed its fundamentals^{106,107,108}. The majority of these scholars built the theoretical

framework of their studies on contingency theory and subsequently presenting findings that supported the it. For instance, some scholars opined that a proper alignment among internal and external organisational factors would positively affect organisational performance^{108,109}.

In a study, titled "effect of organisational structure on performance of selected manufacturing companies in Enugu state Nigeria," the scholars supported the CT by providing empirical evidence to substantiate how structure influences organisational performance. The results pointed out that structure appropriateness influences operational efficiency and that not having a suitable structure, suggests poor organisational performance¹¹⁰. To further support the CT, a scholar studied the performance-effect of strategic management focusing on manufacturing companies in Nigeria¹¹¹. Their study reiterated the narrative of the contingency perspective that there is no one best way to manage an organisation. Specifically, managerial, strategic choices are context-specific¹¹².

Furthermore, Titus and Anderson, in 2018, used CT to support the Attention-based view to provide a more robust theoretical framework to underpin their study. Similarly, a scholar examined "the past, present, and future of CT." According to the scholar, CT arose from the underlying assumptions of numerous scholarly works on contingent factors; that when an organisation can fit itself with contingent factors such an alignment is a prerequisite to achieving increasing performance. However, in the event of a misfit, the organisation should expect a poor run of results¹¹³.

Overall, this present study adopts the contingency theory because it provides opportunity to infuse a moderator into this study through contingency theory of fit-as-a-moderator. This means that beyond the interaction between business continuity management factors and

sustainability of sugar manufacturers in Lagos State, the deployment of eco-efficiency holds the potential to positively reduce carbon emission during sugar production and achieve an environmentally friendly product. Eco-efficiency becomes a contingent factor that can enhance the sustainability of sugar manufacturers in Lagos State, Nigeria¹¹⁴.

2.2.2 Resource-Based View (RBV)

In order to illustrate how businesses might gain and maintain a competitive edge, the RBV perspective looks inside, at the company's internal environment. After works like "Firm Resources and Sustained Competitive Advantage" by Barney, "The Resource-Based View of the Firm" by Wernerfelt, "The Core Competence of the Corporation" by Prahalad and Hamel, and "The Theory of the Growth of the Firm" by Penrose were published in the 1980s and 1990s, the concept finally came into the spotlight. RBV advocates argue that an organisation can increase its ability to profit from its external environment by capitalising on the unique combination of resources and expertise that make it up. In other words, even if a company is initially deemed to have VIRO features, in order to survive it must have the knowledge, skill, ability, and tangible productive assets, the proficiency to deploy it, and the ability to consistently improve these capabilities (as compared to competitive parity)¹¹⁵.

There are two main assumptions of RBV. First, resources are heterogeneous- this means that resources and competencies vary from one organisation to the next. Moreover, if every organisation possesses the same mix of resources and proficiency, then out-performing one another would not be possible. Also, resource heterogeneity suggests that "firms have areas of competitive advantage, parity, and disadvantage"¹¹⁶. Secondly, resources are immobile- this means that knowledge, skills, and abilities are at least not moveable in a short time. As

such, it is from this immobility of these resources that made it difficult and complicated for competitors to accomplish the processes, products, and strategies employed by an organisation. Intangible asset forms most of the immobile resource, and they include, brand name, organisation culture, embedded, work-relationships, processes, and intellectual property¹¹⁷.

However, some scholars have criticized the assumption of RBV for example in a paper presented by a scholar, titled, "Is the resource-based view a useful perspective for strategic management research?" the scholars argued that RBV is static consequently its ability to explain competitive advantage in a dynamic environment is weak¹¹⁸. In a "systematic review of the RVB literature" sufficiency critics argued that RBV is insufficient as a theory of the firm^{118,119}.

The idea that a company's ability to maintain its competitive advantage (SCA) is contingent on its possession of resources with value, uniqueness, rarity, and opportunity (VIRO) attributes has been challenged¹¹⁰. In addition, the sufficiency theorist first criticised the notion of resources for failing to differentiate between resources that are input to the firm and those that are required to assist the firm in selecting, deploying, and organising such inputs. Second, although a scholar defined many categories of resources, RBV does not take into account the substantial variations in how each resource might contribute to a firm's superior performance¹¹¹.

There is consensus among RBV proponents on this premise^{110,111,112,113}. For instance, "New product deployment: The Moderating Influence of economic-institutional context," by some scholars, argues that certain knowledge-based resources (Research &Development) are

pertinent for the deployment of new goods regardless of the organisational contexts. To learn how customer collaboration, innovation orientation, and customer knowledge management affect marketing success, a researcher employed the RVB as a testing model framework¹¹².

Similar research added to the RBV literature by focusing on the connections between a company's guanxi and information technology systems and the success of its new products¹¹³. According to the results, medium-sized NPPs must have the ability to innovate, and the study found that IT systems make a major contribution to this ability. In addition, a scholar viewed strategic management capability (SMC) as an essential business resource that assumes proactive accountability throughout the NPD procedure. In this way, SMC is a strategic enabler since it helps to bring together the prospective demands of the market with the best technological capabilities to meet those needs. In their 2015 paper, Sulaimon et al. explored "the impact of marketing capability and Diversification strategy on performance." The researcher hypothesised that marketing competence (an internal business resource) is significantly correlated with organisational effectiveness¹¹⁴.

Therefore, businesses should increase their dedication to marketing in order to reach and expand their target market and the extent to which they succeed in doing so. In a study, "Strategic management and firm performance: A study of selected manufacturing companies in Nigeria," used RBV (and Contingency theory) as the basis for their study's theoretical framework. The authors reaffirmed the premise of RBV and the strategic management perspective that a firm's ability to own and deploy resources and capabilities that are

valuable, scarce, difficult to imitate, and have no available substitutes is the primary source and driver of sustained competitive advantage¹¹⁵.

Since a company's ability to earn better performance is dependent on the resources it owns and the characteristics of these resources (which in this case as VIRO feature), this study is in support of the RBV, given the research objectives to be addressed in this study and despite the sufficiency critics of RBV. This study's hypothesised functional relationship between independent (BCMFs) and dependent (financial sustainability) factors was supported by RBV's theoretical explanations. Overall, considering the research objective to be addressed in this study and the critics of RBV that noted the static nature of RBV, this current study is in support of the RBV because the factors to be considered in business continuity management are critical internal-firm factors that enable an entity to recover from the negative effects of external shock¹¹⁶.

2.2.3 Theory of Dynamic Capabilities

The idea of dynamic capability was first proposed in a working paper by Teece, Pisano, and Shuen in 1990; it has its origins in the RBV but emphasizes the importance of firms having knowledge, skill, and abilities (KSA) to survive and prosper in a changing environment, originally released in 1994¹¹⁵. A more thorough explanation of the interplay of its assumptions and a rebuttal of criticisms were added to the earlier published work¹¹⁶. To adapt to the ever-shifting external conditions, an organization's "dynamic capability" can be defined as its capacity to combine and develop both internal and external competences.

A scholar identifies the dynamic and the capability as two crucial aspects of the emergence of new types of competitive advantage. 'Capability' implies the function of strategic management (through KSA) in addressing necessary adjustments through internal organisational adaption, while 'dynamics' refers to the attribute of change in the environment demanding strategic responses¹¹⁷. According to the research of a scholar, businesses with dynamic capacities are better able to adapt to the ever-evolving conditions of the business environment, be it local or global¹¹⁸.

Teece based the DCT on the assumptions of adaptability, absorbcency, and originality because they are seen as necessary dynamic characteristics at the industry level¹¹⁹. A company's adaptive capability is its ability to sustain its current level of performance despite sudden shifts in its external environment¹²⁰. It's proportional to a company's awareness of and responsiveness to market opportunities¹²¹. The ability of a company to recognise, acquire, and exploit relevant external knowledge is known as its "absorptive capability"¹²².

According to research, an organization's ability to assimilate new information depends on the depth and breadth of its existing knowledge base. Knowledge acquisition, transformation, absorption, and exploitation comprise the foundation of an organization's capacity for absorptiveness^{113,114}. When a company's strategic focus and its operational procedures are in sync, it has the innovative capability to launch novel products and services and expand into untapped markets¹¹⁵. This term refers to a company's propensity for creative activity, as demonstrated by its consistent application of acquired information to the development of novel offerings¹¹⁶.

Since the dynamic capability framework outperforms the RBV in explaining competitive advantages, it has become the de facto standard in strategic management. Organisations may adapt to the ever-changing business landscape with the help of these competencies, which protect them from being rendered obsolete by the rapid pace of change. An organisation, according to this theory, must improve both its capacity to exploit new resources and its capacity to rejuvenate current capabilities and resources. As a result, the company will be better able to adapt to shifting market conditions and gain an edge over its competitors^{117,118}.

Although it has been acknowledged in the literature that a company's dynamic capabilities may have a beneficial effect on its performance, there is little in the way of empirical evidence to back up this claim¹¹⁹. There are, according to study, a number of limitations to dynamic capabilities. Not incorporating dynamic capabilities into core business operations is one such issue. In addition, unwanted adjustments may be made due to the difficulty of using dynamic capabilities and the necessity of intensive large-scale administration¹¹⁹. It has been argued that dynamic capabilities cannot provide a competitive advantage because they do not exhibit heterogeneity and because their impact is both limited and indirect^{118,119,120}.

Despite these caveats and criticisms of the DCT, some academics argue that dynamic capabilities are essential to competitive advantage, especially in a dynamic economy¹²¹. A scholar conducted a meta-analysis of the dynamic capability literature, finding that despite the approach's origins in the field of strategy, the underlying assumptions of the dynamic capability now represent a vibrant theoretical underpinning for a number of scholarly works in other areas of study, including entrepreneurship, technology and innovation management, and strategic management¹²². In addition, dynamic capability played a crucial function in an

organisation because it highlighted the accumulation of talents integrated in a firm and was directly related to financial performance¹²³.

Despite its flaws and criticisms, DCT has been widely adopted in recent empirical literature across a variety of fields^{124,125}. It was also important because it may provide light on how businesses can adapt to change and keep performing at a high level. In addition, the DCT offered a theoretical justification for the ever-increasing development of capabilities at the level of the firm that can enhance business continuity, such as strategy unfolding, strategic response, crisis-management leadership, and resilience, all of which contribute to the maintenance of a competitive edge. In all, a company's ability to recognise and adjust its internal resources to the changing environment is crucial to its success in a fast-paced business climate¹²⁶. The study will be underpinned by Dynamic capability theory and contingency theory given their individual and complementary relevance to establishing the potential outcomes of the interaction between BCMF, eco-efficiency, and Sustainability of Sugar Manufacturers in Lagos State, Nigeria.

2.3 Review of Empirical Studies

This subsection centers on the position of previous studies carried out in another context, which relates to the objectives of this study. The findings review is done to follow objective by objective approach to reporting findings.

2.3.1 Strategy Unfolding and Financial Sustainability

Strategy Unfolding, also known as Strategy Development, refers to the dynamic and iterative process of formulating and implementing strategies within an organization. It

involves continuously adapting and adjusting strategies based on ongoing changes in the internal and external environment¹⁰¹. When applied to the context of sustainability, Strategy Unfolding can have a significant impact on promoting and advancing sustainable practices within sugar manufacturing industry and society as a whole¹²⁷.

Extant literature have presented argument of how this can happen: Strategy Unfolding enables organizations to embed sustainability considerations directly into their core strategies. Rather than treating sustainability as a separate aspect, it becomes an integral part of decision-making processes. This integration facilitates long-term thinking and helps organizations align their goals, objectives, and actions with sustainable principles¹²⁸.

Sustainability challenges are complex and rapidly evolving. Strategy Unfolding allows organizations to be flexible and responsive in addressing these challenges. By continuously monitoring and assessing environmental, social, and economic trends, organizations can adapt their strategies to incorporate emerging sustainability issues, risks, and opportunities. This iterative approach helps organizations stay ahead of the curve and proactively tackle sustainability challenges¹²⁹.

Strategy Unfolding emphasizes the involvement of various stakeholders in strategy development processes. Engaging stakeholders such as employees, customers, suppliers, local communities, and NGOs can enhance the sustainability performance of organizations¹³⁰. Through active collaboration, organizations can tap into diverse perspectives, co-create solutions, and build strong partnerships to drive sustainability initiatives. Strategy Unfolding encourages organizations to explore innovative approaches and leverage technological advancements to enhance sustainability. It fosters a culture of

innovation where new ideas and technologies are continuously explored, tested, and integrated into strategies¹⁰⁵. By embracing sustainable innovation, organizations can develop environmentally friendly products, processes, and business models that contribute to resource efficiency, waste reduction, and a low-carbon economy¹³¹.

Strategy Unfolding emphasizes the importance of measuring, monitoring, and reporting sustainability performance. By setting specific goals, targets, and key performance indicators (KPIs), organizations can track their progress over time. This enables them to identify areas for improvement, make informed decisions, and communicate their sustainability achievements transparently to stakeholders¹³². Effective performance measurement and reporting foster accountability and drive continuous improvement in sustainability practices. Strategy Unfolding facilitates organizational learning and knowledge sharing in the realm of sustainability. As organizations implement and evaluate their strategies, they gather valuable insights and lessons learned. This knowledge can be disseminated internally to foster learning and enable continuous improvement. Furthermore, organizations can contribute to the broader sustainability field by sharing their experiences, best practices, and research findings with the wider community^{108,109}.

Additionally, certain schools of thought have equated strategy implementation with strategy unfolding. Strategy unfolding, as proposed by a scholar, is one such management tool that can help an organisation concentrate its efforts, make sure its members are all pulling in the same direction, and adapt to a shifting external environment¹¹⁰. The correlation between SMMEs' strategy unfolding processes and their financial success was found to be positive by a researcher¹¹¹. Research finds similar results regarding the connection between strategy

unfolding and organisational success. In addition, the results of this analysis corroborate a study, which found that the strategy unfolding process positively impacts financial performance^{112,113}.

Some researchers argue that the manner in which a company's strategy is put into action has a significant impact on its bottom line^{112,113,114,115}. Similar results were found in a study which confirms these results¹¹⁶. According to research in the Thai pharmaceutical business, the rate at which a company's strategy is unveiled and put into action is a major factor explaining significant difference in organisational success. Scholars looking at the components involved in strategy execution have concluded that strategic unfolding has a major impact on business outcomes¹¹⁷.

In a study, the researchers concluded that strategic planning is relevant within the context of medium-sized organisations in the Czech Republic and the Slovak Republic. The researchers hypothesised that companies with well-written strategic plan documents outperformed those without¹¹⁸. As a corollary, significant institutional performance does not spontaneously occur, therefore institutions need a deliberate strategy to reach their objectives. Other researchers came to the same conclusion in their own research on the topic. Although the researchers conducted their research in a different geographical environment than others, they were able to confirm those researchers' findings^{118,119,120}. In their study, some researchers found that moderate users of strategic planning at medium-sized firms in Western Sri Lanka saw significant improvements in operational performance¹²¹.

When it comes to strategic planning, strategy implementation, organisational excellence, and OP, some scholars confirmed the good and strong connections between these four

factors¹²². In a related study, some researchers found that strategic planning and innovation had a favourable and significant impact on the efficiency of the Dubai Police Department¹²³. The research of some scholars confirmed the importance of strategic planning metrics in boosting business effectiveness^{121,122,123,124}. Some researchers discovered that strategic planning has a moderately beneficial and statistically significant effect on organisational performance¹²⁵. While a researcher found that strategic planning in general improved organisational performance, it found no meaningful effect on strategy implementation in manufacturing firms that prioritised strategic planning¹²⁶. That is, businesses care less and less about how well their strategies are planned to be implemented. According to a study, the majority of Ghana's family-run businesses are doing okay. The outcomes of this study demonstrated a substantial beneficial association between strategic planning and family firm performance, however it was also found that strategic planning activities are not commonly pursued among family firms in Ghana¹²⁷.

According to research, strategic planning has a major impact on the success of businesses¹²⁸. The results underline the importance of strategic planning for business owners and entrepreneurs in achieving a sustainable competitive advantage. A study found a positive correlation between strategic planning and SMMEs' bottom lines. It was also discovered that the formulation, execution, assessment, and control stages of strategic planning all had a favourable correlation with financial results¹²⁹. The research conducted by a scholar found that strategic planning implementation improved strategic performance across all of its dimensions (financial, customer, internal business processes, and learning and growth)¹³⁰. A research shows that, in the modern business world, strategic planning is positively correlated with company success¹³¹. In conclusion, Strategy Unfolding provides a dynamic and

adaptable approach to sustainability that enables organisations to incorporate sustainability into their core strategies, be responsive to change, engage stakeholders, drive innovation, measure performance, foster organisational learning, and contribute to the wider sustainability agenda. By adopting Strategy Unfolding, businesses may help solve some of the world's most critical environmental and social problems¹³².

2.3.2 Strategic Response and Financial Sustainability

Strategic response describes the actions taken by organizations to address challenges and opportunities in their operating environment. These responses can have a significant impact on sustainability, which involves meeting the needs of the present without compromising the ability of future generations to meet their own needs. By aligning strategic responses with sustainability goals, organizations can contribute to a more environmentally, socially, and economically sustainable future¹³³. Extant literature have provided logical explanation of how strategic response can impact sustainability in the following ways. For instance, organizations are recognizing the need to adopt sustainable business models that integrate economic success with environmental and social considerations. Strategic responses involve rethinking traditional approaches to business, such as embracing circular economy practices, developing eco-friendly products, and investing in renewable energy sources. These actions promote sustainability by reducing resource consumption, minimizing waste generation, and contributing to climate change mitigation¹³⁴.

Also, effective strategic responses involve engaging with stakeholders, including employees, customers, suppliers, communities, and regulatory bodies. By involving stakeholders in decision-making processes, organizations can better understand their concerns, values, and

expectations regarding sustainability. This engagement helps organizations align their strategic responses with stakeholder interests, leading to more sustainable outcomes that address social and environmental issues¹³⁵. Similarly, strategic responses can enhance sustainability by effectively managing risks and uncertainties. Organizations are increasingly recognizing the importance of identifying and mitigating environmental and social risks to ensure long-term viability. By incorporating sustainability considerations into risk assessment and management practices, organizations can minimize negative impacts on the environment and society, safeguard their reputation, and create value for all stakeholders¹³⁶.

Strategic responses can drive innovation and collaboration, leading to sustainable solutions. Organizations are encouraged to seek innovative approaches to address sustainability challenges, such as developing new technologies, processes, and business models. Strategic collaborations with other organizations, research institutions, and NGOs can accelerate the development and adoption of sustainable practices, enabling shared learning, resource optimization, and collective action towards sustainability goals¹³⁷. Strategic responses include transparent reporting on sustainability performance. Organizations are increasingly adopting sustainability reporting frameworks and standards, such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB), to disclose their environmental, social, and governance (ESG) practices¹³⁸. Transparent reporting not only allows organizations to assess their own performance but also facilitates informed decision-making by stakeholders, encourages accountability, and supports the transition to a more sustainable economy¹³⁹.

By incorporating these elements into their strategic responses, organizations can contribute to the achievement of sustainable development goals, such as those outlined in the United Nations Sustainable Development Agenda. The literature emphasizes the importance of integrating sustainability considerations into the core strategies and operations of organizations to ensure long-term success and a positive impact on the environment and society. It is important to note that this response is based on the available literature up to 2021¹³⁰. There may be more recent studies and developments in the field that could further enhance our understanding of the impact of strategic responses on sustainability.

Scholars of strategic management stress the importance of a company's strategic response capability as a prerequisite to achieving superior firm performance in an ever-evolving environment characterized by unpredictable consumer behavior, intense global/local competitive rivalry, inconsistent government policies, disruptive innovations, and weak purchasing power¹³¹. According to the storyline presented in, businesses can gain a lot by having and using strategic reaction capacity. According to one school of thought, businesses have a better chance of long-term success if they put their attention on developing a strategic response to the ever-shifting conditions of the market. Increased market share, satisfied fickle consumers, rapid new product development, and reduced operating costs due to environmental shocks are just some of the many benefits that can accrue to businesses that practice greater responsive agility¹³². A researcher in the field of Kenyan manufacturing proposed that the success of small and medium-sized enterprises (SMEs) in export markets was directly related to their strategic response capability. In a similar vein, it was found that Malaysian SMEs can benefit from, and are better able to implement, strategic reaction skills in adaptive and sensing capacities¹³³.

Local oil marketing enterprises in Kenya have an opportunity to deal with intense competition according to research showing that strategic reaction capability has a positive and significant correlation with firm performance¹³⁴. Strategic responses, management methods, and customer loyalty were found to have a substantial correlation. Theoretically, this study shows that companies with high customer loyalty will attract and retain a dedicated customer base, leading to increased profits for their business¹³⁵. Scholars in the oil and gas industry, the banking industry, the textile industry, the agrochemical industry, the manufacturing industry, and the service industry have all conducted empirical studies on strategic response capability that explain a positive and significant contribution to short term performance and long-term sustainability¹³⁶. In light of these findings, it is clear that the ability to implement strategic responses is critical to business sustainability. The authors of this study argue, based on this discussion, that a sugar manufacturer's sustainability is heavily impacted by their strategic response capability¹³⁷.

2.3.3 Crisis Leadership and Financial Sustainability

Crisis leadership describe the ability of leaders to effectively navigate and manage crises or disruptive events within organizations. The concept of sustainability, on the other hand, involves the integration of economic, social, and environmental factors to ensure the long-term well-being of individuals, organizations, and the planet¹³⁸. While the literature on crisis leadership and sustainability may not have directly linked these two topics extensively yet the few that did offer insights as to the expected outcomes of this interaction. According to prior studies, the crisis leadership plays a critical role in building adaptive capacity, which is the ability to respond and adapt to changing circumstances. Sustainable organizations need

to be adaptable to effectively address environmental and social challenges¹³⁹. Crisis leaders who are proactive, innovative, and capable of making quick decisions can enhance an organization's adaptive capacity, leading to better sustainability outcomes¹⁴⁰.

Also, effective crisis leaders understand the importance of engaging various stakeholders, including employees, customers, communities, and regulators. In the context of sustainability, stakeholder engagement is crucial for building trust, fostering collaboration, and incorporating diverse perspectives¹⁴¹. By involving stakeholders in decision-making processes, crisis leaders can promote sustainable practices and ensure that the organization's actions align with stakeholder expectations and environmental considerations. Sustainability requires ethical decision making, considering the long-term consequences of actions on the environment and society. Crisis leaders who prioritize ethical decision making and demonstrate integrity can set a strong foundation for sustainable practices within an organization. They can establish a culture of responsibility, accountability, and transparency, which are essential for fostering sustainability¹⁴². Sustainability and crisis management are inherently linked, as both involve identifying and managing risks. Crisis leaders who prioritize resilience planning and risk management can mitigate the negative impacts of crises on sustainability. By identifying potential threats, developing contingency plans, and implementing measures to reduce vulnerabilities, crisis leaders can enhance an organization's ability to withstand crises and maintain sustainable operations¹⁴³.

Crisis situations often present opportunities for learning and innovation. Effective crisis leaders foster a culture of learning from failures and successes, promoting continuous improvement and innovation. By encouraging experimentation, embracing new technologies,

and supporting sustainable innovation, crisis leaders can drive organizational sustainability by finding creative solutions to complex challenges¹⁴⁴. Often considered as an authentic leader, studies suggest that the authentic leadership is the positive form of leadership used to develop the trust and positive working environment to foster the employee for higher self-performance; and has been found to influence high-performance working system^{144,145}. Some scholars' description of the relevance the authentic leader found support in a researcher narration. The authentic leader is associated with positive and genuine self-awareness with transparent, consistent, and behavioural integrity needed to encourage and enhance positive outcomes in employees and the organisation as a whole¹⁴⁶. From the empirical study done by the researcher which focused on the health practitioners (nurses) in India, found that authentic leadership is positively linked to contextual performance of nurses. Often considered as a crisis-management leader, the scholar averred that in times of uncertainties and environmental complexities, the authentic leader have the potentials to promote employee creativity, inspire confidence and drive employee and organisational performance^{146,147}.

In a study, the researcher reveal that affective commitment mediates the relationship between AL and employees' performance¹⁴⁸. In other words, leaders' authenticity promotes employees' affective commitment which, in turn, increases their individual competitive performance¹⁴⁹. A study showed a positive relationship between employee training, authentic leadership and employee performance in Jeddah Islamic Port of Kingdom of Saudi Arab. Furthermore, the findings of the study have shown a positive significant mediating role of authentic leadership between employee training and employee performance, in other words, the authentic leader is very important for the effectiveness of

employee training and employee performance^{150,151}. Findings show that AL has a positive impact on organisation citizenship behaviour, employee creativity, and individual performance¹⁵². The outcomes are critical to the competitiveness of firms. The researcher submission offered support for another study by providing a path through which the authentic leader can enhance project performance of South Korean establishments¹⁵³. Moreover, that the authentic leader is a prerequisite for improving firm competitiveness.

On which leadership orientation offer higher adaptive performance, the researcher posits that servant leadership offered stronger impact on adaptive performance compared to the authentic leadership¹⁵⁴. Despite this result, Kaya and Karatepe still found relevance for AL in aiding organisational performance. In a related study in the health industry in Busan South Korea, some researchers through their study reveal that the Head nurses' authentic leadership and nurses' performance were strong correlates¹⁵⁵. Similar to the South Korea study, some researchers equally provides empirical evidence that authentic leadership is positively related to subordinates' proactive behavior needed to attain competitiveness. Likewise, there is a level of commitment that employee must exhibit to enhance competitiveness¹⁵⁶. That level of commitment is achieve through an employee validation that the leader is an authentic one¹⁵⁷.

Authentic leader's orientation has been found to boost work place happiness and employee affective commitment¹⁵⁸. The implication of the outcome is that positive work atmosphere and affective commitment potentially will influence the efficiency and enhance the firm competitive potentials¹⁵⁸. Focussing on academic environment in Indonesia, researchers pointed out that the authentic leadership behaviour exhibited by the university lecturers were

critical for the academic performance observed by their students^{159,160}. Some researchers align with earlier scholars to offer explanation as to how authentic leader can drive firm competitive nature through having positive psychological influence on employee^{160,161,162}. Overall, these submissions have provided different research contexts yet one underlining truth is that a crisis/authentic leader is essential for firms that intend to stay competitive and achieve long-term sustainability¹⁶³.

2.3.4 Business Resilience and Financial Sustainability

Business resilience describe an organization's ability to adapt, recover, and thrive in the face of various disruptions and challenges, such as economic downturns, natural disasters, supply chain disruptions, and other unforeseen events. Sustainability, on the other hand, refers to the long-term ability of a business to operate in an environmentally and socially responsible manner, meeting the needs of the present without compromising the ability of future generations to meet their own needs¹⁶⁴.

Recent studies have highlighted the significant impact that business resilience can have on sustainability. First Business resilience strategies focus on identifying and mitigating risks that can disrupt operations. By implementing proactive measures, such as diversifying supply chains, developing alternative sourcing options, and investing in renewable energy sources, companies can reduce their vulnerability to environmental, economic, and social shocks. This enhances the stability of their operations and contributes to long-term sustainability¹⁶⁵.

Second as the impacts of climate change become more pronounced, businesses need to adapt to changing environmental conditions to ensure their long-term viability. Resilient

businesses are better equipped to respond to climate-related risks and incorporate sustainable practices¹⁶⁶. For example, companies can implement energy-efficient technologies, reduce greenhouse gas emissions, and adopt circular economy principles to minimize waste generation and resource consumption. Third business resilience measures that prioritize sustainability can enhance stakeholder trust and reputation. Customers, investors, employees, and communities increasingly expect businesses to operate in an environmentally and socially responsible manner. By demonstrating resilience through sustainable practices, companies can strengthen their relationships with stakeholders and foster a positive brand image¹⁶⁷.

Resilience and sustainability often go hand in hand when it comes to cost savings and operational efficiency. For instance, investing in energy-efficient technologies can reduce energy consumption and lower operational costs. Similarly, implementing sustainable supply chain practices, such as responsible sourcing and waste reduction, can lead to cost savings and improved resource management. Also, business resilience strategies that incorporate sustainability considerations help organizations comply with evolving regulations and standards. By proactively aligning their practices with emerging environmental and social requirements, businesses can reduce compliance risks and avoid potential penalties. Moreover, anticipating and adapting to sustainability trends can future-proof companies, enabling them to stay ahead of regulatory changes and market demands¹⁶⁸.

Furthermore, why do some organizations cope with adverse environmental conditions better than others? What processes lead to the creation and adoption of new ways of working? These are questions addressed by resilience¹⁶⁹. Some researchers offer more specific answer

by advocating that firm with resilience mechanism are more prone to excel better than firm that do not¹⁷⁰. A scholar point was corroborated by another scholar that stressed resilience becomes a critical characteristic of a strategic firm with the capability to excel during environmental disruption^{171,172}.

Within supply chain literature, some scholars found relevance for resilience capability. The study posits that external resilience enhance supply chain performance. The implication of their study submission is that organisations need to build resilience capability with their SC partners to ensure stable material supply as well as continuous product and service delivery so that the end customers' needs can be satisfied and they can improve SC performance¹⁷³. This result is supported by previous studies^{171,172,174,175}. For instance, some scholars emphasized that firm resilience contributes to firms' survival and sustainability by helping firms to behave as complex dynamic systems, operating within dynamic systems of SC partners¹⁷⁶.

In their study, the scholars found that Resilience positively and significantly influences firm performance¹⁷⁷. Adaptive resilience has a significant influence on business performance¹⁷⁸. Study showed planned resilience had a significant and positive influence on adaptive resilience. Planned resilience had no statistically significant influence on financial performance but, despite the small effect, adaptive resilience had a positive and significant influence on financial performance¹⁷⁹. In a related study to another scholar but offering a different outcome in terms of the unit of analysis is submit that employee-level resilience affect performance positively when the entrepreneur has a strong propensity towards personal resilience¹⁸⁰.

Some researchers predicted that the owner's resilience has a positive impact on the owner's CSE and firm innovation respectively¹⁸¹. A direct positive relationship between the owner's CSE and firm innovation, this was also supported. Predicted that resilience has a direct positive effect on firm performance, this was not supported; the owner/manager's degree of resilience does not directly lead to a higher level of performance for the firm¹⁸². However, further examination of the results revealed that resilience has an indirect effect on performance through the mediating variables of CSE and innovation¹⁸³. In the presence of supply-chain-resilience capabilities in the apparel industry, study finds that supply-chain risk-management culture positively affects supply-chain-resilience capabilities, namely re-engineering, agility and collaboration¹⁸⁴.

Despite the submission of several resilience scholars about its relevance and significance contribution to firm performance in different context, contrary findings were observed¹⁸⁵. In a study, the scholar found no direct positive and significant influence of adaptive resilience on firm performance¹⁸⁶. More so, the business owner manager's resilience did not result in higher level of firm performance. Nonetheless, further analysis revealed that resilience provided the boundary condition through which creative-self efficacy and innovation influenced firm performance. Stressing that resilience is more of a second-order construct as against a first order construct with a direct impact on performance. The ability to cope with challenging situations and to deal with adversity, as well the self-belief in problems solving is positively related to building creative capabilities and a willingness to search for innovative solutions in business, these in turn become important drivers of firm performance¹⁸⁷. In conclusion, by integrating resilience measures that encompass environmental and social considerations, businesses can mitigate risks, adapt to changing

conditions, build stakeholder trust, achieve cost savings, comply with regulations, and position themselves for long-term success in a rapidly evolving business landscape¹⁸⁸.

2.3.5 Business Continuity Management Factors, and Financial Sustainability

Business Continuity Management (BCM) factors, including strategy unfolding, crisis management leadership, strategic response, and business resilience, play a crucial role in enhancing sustainability within organizations. Recent studies emphasize the importance of strategy unfolding in BCM¹⁸⁹. Organizations that have a well-defined and adaptable BCM strategy are better equipped to navigate disruptions and crises. By continuously reviewing and updating their strategies, businesses can identify vulnerabilities, assess risks, and implement mitigation measures. This proactive approach enhances their ability to withstand unexpected events and maintain sustainability over the long term¹⁹⁰.

Effective crisis management leadership is a critical aspect of BCM and sustainability. Leaders who possess strong crisis management skills and can make informed decisions during crises have a direct influence on an organization's ability to recover and sustain operations. Research highlights that leaders who display qualities such as clear communication, strategic thinking, and the ability to coordinate resources effectively can guide their organizations through turbulent times, minimizing disruptions and maintaining sustainable operations¹⁹¹. The ability to respond swiftly and effectively to disruptions is key to sustainability. Recent studies highlight that organizations with robust BCM plans that outline specific response protocols are more likely to achieve sustainability in the face of crises. These plans should encompass various scenarios, outlining the actions to be taken, resource allocation, and communication strategies. Organizations that can quickly adapt,

implement their response plans, and address critical issues are better positioned to minimize the impact of disruptions and maintain operations¹⁹².

Furthermore, based on previous research, business continuity management was related with performance^{24,25,26}. The research article by a scholar explains that business continuity management has been widely known by many organizations especially higher education institution. The organization should pay attention the importance of strategic planning, proactive management, risks identification to globally compete and obtained the maximum performance of business²⁶. In a related literature, the scholar stressed that business continuity management must concern on critical factors that must be considered by institution to ensure maximum productivity as well as avoid existing risks^{27,28}. Considering the previous researches, the business continuity management is a very important factor to make the organization runs sustainably.

The BCM method addresses the organization's employees as well as the processes that are critical for its survival that ensuring continuity of critical processes. Scholars have considered the continuity model needed for the organizations to create formal BCM systems that would lead to development of business continuity planning (BCP)^{125,128}. However, it is most critical that inherent in managing risk in ensuring the flow of inbound products and services as inputs to production. Indeed, business disruptions of any sort that could have extremely damaging repercussions to an organization, not only in terms of tangible financial losses but also intangible effects on the corporate reputation and confidence^{27,28,29}. It is, therefore, a critical business imperative that a working plan should be established to ensure that in the event of an unforeseen disruption, critical business functions will be resumed as

effectively and quickly as possible³⁰. In case of disruption in the business due to crisis events, there needs to be protective measures for an organization who wants to stay in the competition. This can be done by increasing their resiliency^{30,38}. According to the previous research, the business houses that implement BCM get an edge over their competitors in terms of resiliency^{32,33}. This enables the business to get out from crisis and restart critical functioning with minimized impacts.

In conclusion, recent studies highlight the critical role of strategy unfolding, crisis management leadership, strategic response, and business resilience in promoting sustainability within organizations. By incorporating these factors into their BCM practices, businesses can enhance their preparedness for disruptions, minimize the impact of crises, and maintain sustainable operations over time¹⁹³.

2.3.6 Moderating Effect of Eco-Efficiency

Eco-efficiency, the concept of maximizing resource efficiency and minimizing environmental impacts, can play a crucial role in moderating the interaction between business continuity management factors and the sustainability of sugar manufacturers in Lagos State, Nigeria. By integrating eco-efficiency principles into their operations, sugar manufacturers can effectively address both the short-term challenges of business continuity and the long-term goal of sustainability¹⁹⁴.

Firstly, implementing eco-efficient practices can enhance the resilience of sugar manufacturers in the face of potential disruptions to their operations. Lagos State, being a bustling and rapidly developing area, is susceptible to various risks such as power outages, water scarcity, and regulatory changes. By optimizing resource utilization and minimizing

waste generation, sugar manufacturers can reduce their dependence on scarce resources and mitigate the impact of disruptions. For example, adopting energy-efficient technologies and processes can reduce the reliance on unreliable power grids, ensuring continued production even during power outages¹⁹⁵.

Secondly, eco-efficiency can lead to cost savings, which is a crucial factor in business continuity management. By improving energy efficiency, optimizing water consumption, and reducing waste generation, sugar manufacturers can lower their operational costs. This not only enhances their financial stability but also allows them to allocate resources towards business continuity planning and risk mitigation. The cost savings can be used to invest in backup power systems, establish alternative supply chains, or develop contingency plans, thereby increasing the resilience of their operations¹⁹⁶.

Furthermore, eco-efficient practices align with the growing demand for sustainable products and responsible business practices. Consumers and stakeholders are increasingly concerned about the environmental and social impacts of the products they purchase. By adopting eco-efficiency measures, sugar manufacturers can reduce their carbon footprint, minimize water pollution, and promote sustainable land use. This not only enhances their reputation and brand image but also opens up new market opportunities and ensures the long-term viability of their business¹⁹⁷.

In addition to the immediate benefits, integrating eco-efficiency into the operations of sugar manufacturers can contribute to the overall sustainability of Lagos State. Nigeria, like many other countries, faces pressing environmental challenges, including climate change, deforestation, and pollution. By adopting eco-efficient practices, sugar manufacturers can

contribute to mitigating these issues by reducing greenhouse gas emissions, conserving natural resources, and promoting circular economy principles. This proactive approach towards sustainability can help foster a conducive business environment and garner support from regulators, communities, and investors¹⁹⁸.

Furthermore, in the context of sugar manufacturers, eco-efficiency plays a crucial role in moderating the interaction between business continuity management factors and sustainability and academic literature have provided a possible linkage. For example, eco-efficiency enables sugar manufacturers to optimize their resource utilization and reduce environmental impacts. A study conducted by a scholar analyzed the eco-efficiency of sugar mills in Brazil and found that efficient use of resources, such as water, energy, and raw materials, led to reduced waste generation and lower environmental pollution. By implementing eco-efficient practices, sugar manufacturers can minimize their ecological footprint and contribute to the long-term sustainability of the industry¹⁹⁹.

Also, eco-efficiency fosters resilience and adaptability in the face of business continuity management challenges. Sugar manufacturers are often exposed to various risks, such as climate change, fluctuating market demands, and supply chain disruptions. According to a study, eco-efficient strategies, such as adopting cleaner production techniques, diversifying energy sources, and implementing waste management systems, enhance the resilience of sugar manufacturers. These practices not only minimize environmental risks but also improve operational efficiency and ensure business continuity during turbulent times²⁰⁰.

Furthermore, eco-efficiency contributes to the overall profitability and competitiveness of sugar manufacturers. Sustainable practices can lead to cost savings through reduced

resource consumption and waste generation. A study emphasized that eco-efficiency measures, such as energy efficiency improvements and waste reduction, positively influence the economic performance of sugar manufacturers²⁰¹. By integrating sustainable practices into their operations, sugar manufacturers can enhance their brand image, attract environmentally conscious consumers, and gain a competitive edge in the market.

Moreover, eco-efficiency aligns with evolving regulatory frameworks and stakeholder expectations. Governments and society are increasingly demanding sustainable practices from businesses. By incorporating eco-efficiency into their operations, sugar manufacturers can comply with environmental regulations, mitigate reputational risks, and maintain a positive relationship with stakeholders²⁰². A study emphasized that eco-efficiency initiatives can help sugar manufacturers build trust and credibility with communities, environmental organizations, and investors.

In conclusion, eco-efficiency can act as a moderating factor between business continuity management factors and the sustainability of sugar manufacturers in Lagos State, Nigeria. By implementing eco-efficient practices, sugar manufacturers can enhance their resilience, reduce costs, meet the growing demand for sustainable products, and contribute to the overall sustainability of the region. It is essential for sugar manufacturers to recognize the interplay between business continuity and sustainability and embrace eco-efficiency as a means to achieve long-term success in a dynamic and environmentally conscious business landscape²⁰³.

2.4 Conceptual Model

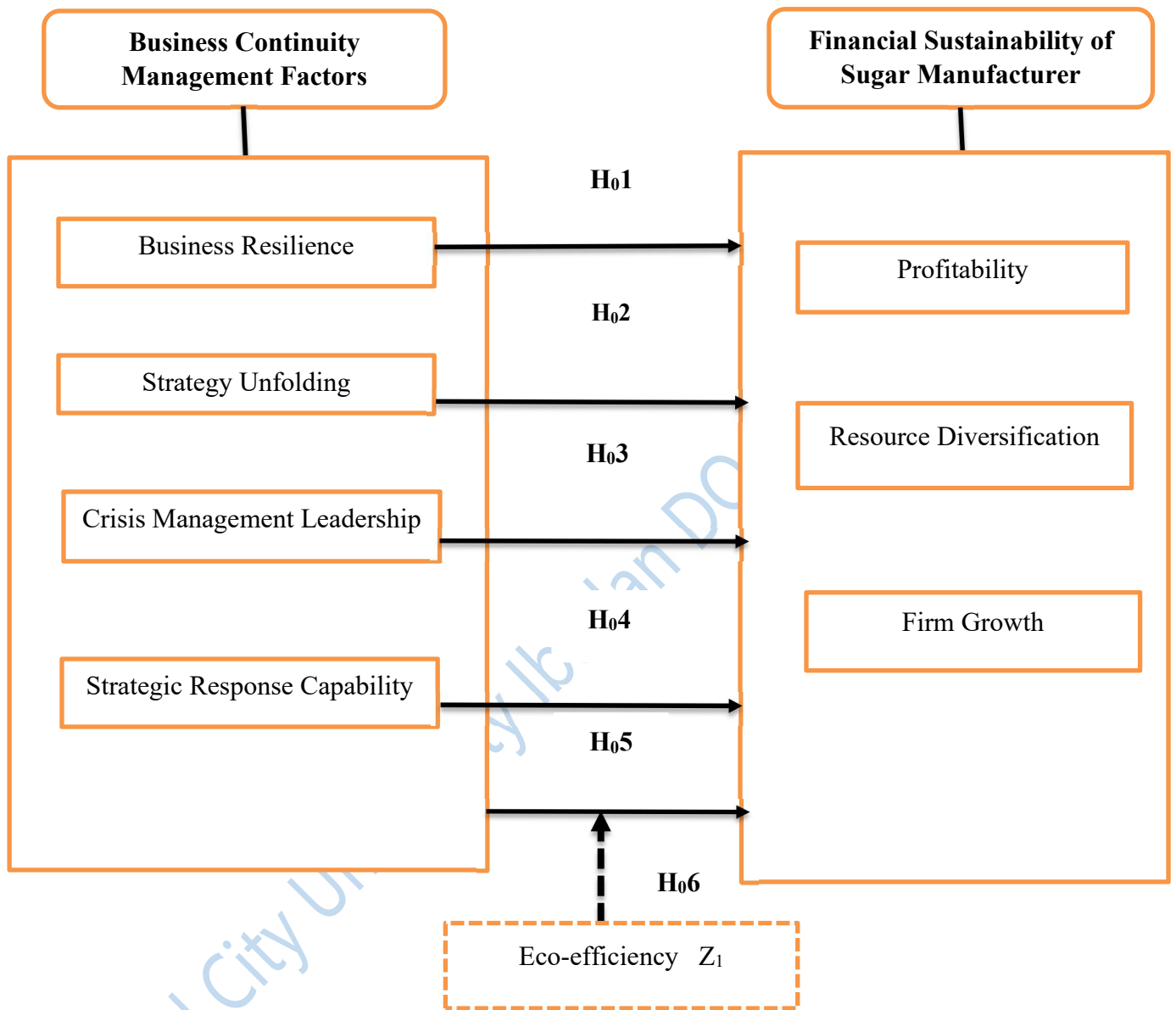


Figure 2.1 Conceptual Model

Source: Researcher's Conceptual Model, 2024

The conceptual model of this study is developed based on DCT and contingency theory. The two theories explain the interactions between Business continuity management factors, eco-efficiency, and financial sustainability of sugar manufacturing companies and the potential outcomes of the interactions. The strength of the DCT provided the link between the sugar manufacturer and the macro-environment in which they operate and the contingency theory emphasizes that critical role played by eco-efficiency given the interaction between BCMFs and financial sustainability of sugar manufacturing companies in Lagos State, Nigeria.

The conceptual model thus summarizes the study; BCMFs, eco-efficiency, and financial sustainability of sugar manufacturing companies in Lagos State, Nigeria. BCMFs been the predictor variable is measured by; strategy unfolding, crisis leadership, strategic response, and business resilience. financial sustainability the dependent variable focuses on economic aspect and therefore measured by; profitability, growth, and resource diversification. The moderating variable is eco-efficiency. Therefore, the six null hypotheses will be linked as follows: strategy unfolding and sustainability; Crisis leadership and financial sustainability; strategic response and financial sustainability, business resilience and financial sustainability, BCMFs and sustainability, Eco-efficiency, BCMFs, and financial sustainability. Overall, these formulated null hypotheses will be subjected to statistical tests to determine the direction of results, conclusion, and possible recommendation of this study.

2.5 Summary of Gaps in Literature Reviewed

Business continuity management factors hold potential relevance in addressing crises. This is because BCMFs enhance the capability of firms to anticipate, prepare for, respond and adapt to incremental change and sudden disruptions to survive and prosper. It reaches

beyond risk management towards a more holistic view of business health and success²⁵. Business Continuity Management (BCM) factors, play a crucial role in enhancing financial sustainability within organizations. Organizations that have a well-defined and adaptable BCM strategy are better equipped to navigate disruptions and crises. By continuously reviewing and updating their strategies, businesses can identify vulnerabilities, assess risks, and implement mitigation measures. This proactive approach enhances their ability to withstand unexpected events and maintain sustainability over the long term. Likewise, scholars within the environmental accounting and finance field have argued in favour of firms conscious of their operating environment, which holds a potential reward for environmental sustainability via eco-efficiency²⁶.

Studies on BCMFs have addressed issues bothering the performance of lecturers, academic institutions, and systematic reviews in developed and emerging economy contexts^{26,27,28,29,204}. However, within the context of the sugar industry, nothing concrete is known in extant literature about the interaction between BCMFs and financial sustainability performance. This presents a gap in literature and warrant the need to conduct an empirical investigation to substantiate this study's intention. Likewise, this study argues for the need to adopt eco-efficiency as mechanisms that can enhance how BCMFs can influence the financial sustainability performance of sugar manufacturers in Lagos State, Nigeria. Looking to literature on environmental analysis, evidence of how eco-efficiency intervenes in the linkage between BCMFs and financial sustainability is sparse²⁰⁵. Hence, supporting the author's decision to examine the intervening effect on eco-efficiency on the association between BCMFs and financial sustainability of sugar manufacturing companies in Lagos State, Nigeria. This development creates another gap worthy of investigation. Consequent to

this discussion, the study intends to bridge the gaps in literature by assessing the effect of BCMFs on financial sustainability of sugar manufacturers in Lagos State, Nigeria and ascertaining the moderating effect of eco-efficiency on the BCMFs-Financial sustainability linkage.

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Chapter Three

Methodology

This section entails methods including the research design, study population, sample size and sampling technique as well as the research instruments the methods of data collection and the statistical analysis and the tool to be used to analyze the data.

3.1 Research Design

The study will adopt the cross-sectional survey research design. This is considered most suitable because of it offers the assurance of confidentiality of the identity of the respondents, data to be obtained, and ability to achieve the aim of this study which is to investigate the effect of business continuity management factors on financial sustainability of sugar manufacturers in Nigeria. Moreover, the adoption of this design is premised on other scholars work that found it appropriate for a study of this nature but in different research context^{1,2,3}.

3.2 Population of the Study

The population of the study comprise of nine hundred and nineteen (919) staff of manufacturers in Nigeria (BUA Sugar Refinery Ltd, Dangote Sugar Refinery PLC, and Flour Mills of Nigeria Plc) operating in the sugar products category in Lagos State, Nigeria. The companies were selected because they are involved in sugar manufacturing and they

account for more than 91% of the market share of the sugar product industry in Nigeria and the choice of Lagos State as the geographical setting for this study is because the sugar manufacturers have their head office in the State⁴. Also, Lagos State is considered the hub of manufacturing activities in Nigeria as there is no single state in the country that boast of that many sugar manufacturers in Nigeria.

Table 3.1: List of Population in selected Sugar Manufacturers in Lagos State

S/ N	Name	Location	Staff Strength	Year of Establishment
1	BUA Sugar Refinery Ltd,	22B Creek Road, Apapa 102272, Lagos	201	2005
2	Dangote Sugar Refinery PLC,	Shed 20 NPA Apapa Wharf Lagos	406	1999
3	Flour Mills of Nigeria Plc	2 Old Dock Road Apapa, Lagos	312	2013
	Total		919	

Source⁴

3.3 Sample and Sampling Techniques

This study adopted Raosoft online sample size calculator for a finite population⁴. This is because the researcher is not considering gathering data from every staff of the sugar manufacturing firm in Lagos State. More so, the resultant sample size is considered a representation of the population. Below is the pictorial representation of Raosoft sample size determination.

Raosoft		Sample size calculator
What margin of error can you accept? 5% is a common choice	<input type="text" value="5"/> %	The margin of error is the amount of error that you can tolerate. If 90% of respondents answer yes, while 10% answer no, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size.
What confidence level do you need? Typical choices are 90%, 95%, or 99%	<input type="text" value="95"/> %	The confidence level is the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer yes would be more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size.
What is the population size? If you don't know, use 20000	<input type="text" value="919"/>	How many people are there to choose your random sample from? The sample size doesn't change much for populations larger than 20,000.
What is the response distribution? Leave this as 50%	<input type="text" value="50"/> %	For each question, what do you expect the results will be? If the sample is skewed highly one way or the other, the population probably is, too. If you don't know, use 50%, which gives the largest sample size. See below under More information if this is confusing.
Your recommended sample size is	272	This is the minimum recommended size of your survey. If you create a sample of this many people and get responses from everyone, you're more likely to get a correct answer than you would from a large sample where only a small percentage of the sample responds to your survey.

Figure 3.1: Raosoft Sample Size Calculator

Source⁵

Result from the Raosoft calculator suggest that an appropriate sample size given nine hundred and nineteen population is 272. Moreover, 20% (54) of the scientifically determined sample size (272) was added to the computed sample. The addition of the 54 sample was to address issues of anticipated non-response from the respondents, inappropriate filling of questionnaire items, and this procedure is in concomitance with existing literature². Likewise, to avoid getting response rate below the scientifically determine optimum sample size, it became imperative to provide for such eventualities. Therefore, the sample size for this study is 326 employees working with the three sugar manufacturing companies in Lagos State, Nigeria.

Table 3.2: Sampling Frame for the Study

Sugar Manufacturers	Number of staff	Sample 326 Proportional sample	Top Management level	Middle Management level	Operational Management level
BUA Sugar Refinery Ltd,	201	71	14	21	36
Dangote Sugar Refinery PLC,	406	144	29	43	72
Flour Mills of Nigeria Plc	312	111	22	33	56
Total	919	326	65	97	164

Source³

A stratified random sample technique will be used to select the 326 participants from the population of this study. To do this, the sample size will be proportional to each sugar manufacturing company's population to determine how many employees to select (Note the proportional sample was calculated as number of employees company divided by population and multiplied by the sample size for example for BUA Sugar Refinery Ltd, $201/919 \times 326 = 71$). The employees will then be divided into three groups: upper-level management, middle-level management, and lower-level "operational" management based on the percentage recommended by extant literature (20%, 30%, & 50% respectively for top, middle, and operational level)³.

By using this method, researchers will be able to collect representative data about the study's population⁴. Stratified sampling is ideal for populations with heterogeneous features, but not if such subcategories do not exist or cannot be constructed. Last but not least, the

researcher will use a simple random method to select employees from each stratum in each sugar company according to the proportions already determined. It is important to note that when the need to collect data from a population that is not uniform in composition, a stratified random approach is preferable to a simple random one since it produces smaller error margins.

3.4 Description of Research Instrument

The researcher employed a structured questionnaire for the analysis. The use of questionnaires is also important since it makes it easier to gather feedback based on the participants' perspectives and opinions, which enhances quantitative data analysis. The questionnaire's items were adapted. The adapted questionnaire items are standardized scales that the authors have used to the topic of this study in other nations, industries, and sectors. The researcher included a question in the bio-data section asking respondents to rank their understanding of the overall organizational activities and performance on a scale of 1–10 in order to address the quality of response. Because it implies a lack of awareness of the organization's overall operations and performance, respondents who checked fewer than five will not be taken into account. However, those who checked five or more will be taken into account as necessary. This process was utilized by researchers to increase the accuracy of the replies they collected for their study, and it was used for the pilot and hopefully for the main study. The sources of the modified questionnaire items are listed in Table 3.3.

Table 3.3: Source of Adapted Questionnaire items

Variable	Source
Business continuity management factors (strategy unfolding, crisis leadership, strategic response, business resilience)	6
Eco-efficiency	7
Financial sustainability	8

Source^{6,7,8}

The 6-point Likert-type scale is used in this study's questionnaire, which is consistent with previous research⁵. The numbers on this scale represent ordinal intervals from 6 to 1. Very High Extent (VHE) = 6, High Extent (HE) = 5, Moderately High Extent (MHE) = 4, Low Extent (LE) = 2, and Very Low Extent (VLE) = 1 were the response options in the questionnaire for this study. The questionnaire is divided into four parts: Part A covers demographic characteristics with 6 questions; Part B covers business continuity management factors with 33 questions; Part C covers financial sustainability with 22 questions; Part D covers eco-efficiency with 8 questions.

3.5 Validity of Research Instrument

A pilot study was carried out employing the staff of the Nanpak Ltd and Procter & Gamble in Ibadan given that they have characteristics in common with the manufacturers to be examined. Thirty-two (32) employees were included in the sample, which was 10% of the total. But the method for gathering data described in subsection 3.4 called for administering

more than 32 copies of the questionnaire. As a result, the employees of Nanpak Ltd and Procter & Gamble received seventy (70) copies of the questionnaire. Respondents were chosen at random from the sampling unit. Fifty-two copies of the questionnaire were retrieved; however, only 46 respondents ranked six above on the "SCALE" in terms of their familiarity with the organizational operations and performance. This represented a response rate of 65.7%.

Utilizing construct, content, and criterion validity, the research tools were validated. The researcher's supervisor and practitioners who participated in the pilot study gave their input on the instruments' criterion and content validity. Taking into account how each of the variables was measured in the prior research, the contributions will be utilized to adjust the questionnaire as necessary for the main study. The conducted pilot study offered the chance to pre-test the instruments in order to determine construct validity.

Statistics for validity and reliability can be examined and produced by measuring the structural model in PLS-SEM. Construct validity was demonstrated for each of the investigated variables by the AVE and discriminant validity scores. The convergent validity was therefore further supported by the AVE value more than 0.5 and the construct validity was further supported by the discriminate validity value for all the constructs below 0.90 on the Heterotrait-Monotrait (HTMT) criterion for each of the measured variables. A summary of the construct validity for these questionnaire items from this study is provided in Tables 3.4 and 3.5 below.

Table 3.4: Summary of Pilot Test Incorporating Construct Validity Test.

Variable	No. of items	AVE	Remark
Business continuity management factors	33	0.655	Reliable
Eco-efficiency	8	0.629	Reliable
Financial sustainability	22	0.731	Reliable

Source: Computed from Pilot study, (2023)

Table 3.4 above shows that the AVE values for all the constructs are above the threshold of 0.5 to suggest that the convergent validity has been established for all the reflective constructs in this study.

In addition, the HTMT criterion was used to assess the discriminant validity for all the reflective constructs. The new acceptable approach to establishing discriminant validity is the HTMT criterion, which measures the indicators' average correlations across constructs. A researcher posited that where the HTMT values for all the reflective constructs are below 0.90, discriminant validity has been established between the reflective constructs. Table 3.5 presented the HTMT criterion for this study⁵.

Table 3.5: Discriminant Validity using Heterotrait-Monotrait Ratio (HTMT)

Variables	BCMFs	EEF	SUS
Business continuity management factors			

Eco-efficiency	0.05	
Financial sustainability	0.58	0.22

Source: Computed from Pilot study via SmartPLS version 4.0, (2023)

All of the constructs in Table 3.5 above met the study's criteria for establishing discriminant validity, which indicates that discriminant validity has been established for all of the reflective constructs in this study. The importance of convergent and discriminant validity as crucial indicators of construct validity has been stressed by academics^{5,6}.

Table 3.6: Validity Statistics Process

Variable	No. Items	KMO	Bart.	Sig	Remark
Business continuity management factors	33	.862	218.059	(0.000)	Accepted
Eco-efficiency	8	.711	159.619	(0.000)	Accepted
Financial sustainability	22	.789	124.789	(0.000)	Accepted

Source: Computed from Pilot study through SPSS V25 (2023)

Kaiser-Meyer-Olkin (KMO) test was used to examine the applicability of the data to the study and the sampling adequacy for each variable in the model and the full model. This method helped to advance the process of validating the research instrument. The variable must have a KMO larger than 0.5 in order to be accepted. But readings between 0.5 and 0.7 are considered average, 0.7 and 0.8 are considered good, and 0.8 and 0.9 are considered quite good⁶. The Bartlett test of sphericity also gauges how strongly variables are related to

one another. The original correlational matrix's items were then subjected to the null hypothesis test, which revealed that there is no relationship between them. This would suggest that the variables are unrelated and the study is therefore inappropriate for them. The KMO and Bartlett test scores and corresponding probability values in table 3.6 above were below the 0.05 cutoff, indicating that the conducted factor analysis was appropriate.

3.6 Reliability of Research Instrument

The reliability of the questionnaire was tested by the researcher. The variables' internal consistency technique of reliability and composite reliability were assessed. The variables included adaptive resilience components, reaction strategy, entrepreneurial attitude, and organizational performance measure. By assessing the within-scale consistency of the responses to the measure's items, the internal consistency was utilized to determine a measure's reliability. Cronbach's alpha coefficient is frequently used to evaluate this internal consistency and is applicable to multiple-item measuring instruments (such as this study). A Cronbach's alpha coefficient for a questionnaire that is > 0.7 but 1 was deemed reliable⁶. The instrument's reliability is revalidated using the composite reliability. The reliability statistic for each variable in this study is shown in Table 3.7 below.

Table 3.7: Reliability Statistic

Variables	Composite Reliability	Cronbach's Alpha coefficient
Business continuity management factors	0.874	0.816
Eco-efficiency	0.933	0.910
Financial sustainability	0.806	0.745

Source: Computed from pilot study (2023)

3.7 Method of Data Collection

Primary data was collected to address the objectives of this study. This is because it helps to reduce the chances of obtaining incorrect data and equally provides the opportunity to gain a better understanding of the respondents under investigation. The primary data was collected through a structured questionnaire in line with existing literature. The researcher met with the company's human resources managers to seek permission to conduct this study. This became critical because of the strict standard procedures for attending to visitors who were not their known customers, the approval of the human resource managers facilitated the questionnaire administration, retrieval and also increased the response rate.

3.8 Methods of Data Analysis

The researcher analysed the data that was collected using the descriptive statistics for the items in all the sections in the questionnaire. The use of the descriptive statistics is appropriate because it helped to describe and summarize data in terms of frequency distribution, mean, standard deviation, and percentage of response about variables under study, thereby answering the research questions. More importantly, the descriptive statistics enhanced the process of conducting inferential statistics.

The inferential statistics was used to test the hypotheses formulated in this study using Ordinary least square technique. Hypotheses one to four were examined using simple regression analysis, hypothesis five was examined using multiple regression analysis and the

sixth hypothesis was analyzed using the hierarchical regression analysis. The result of each hypothesis was significant at 0.5 probability value. The analysis was achieved through the use of Statistical Package for Service Solutions (SPSS) version 25. The use of SPSS is appropriate as it is a statistical platform that allows the use of primary data (questionnaire) to run numerous data analysis.

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Endnotes

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Chapter Four

Results and Discussion of Findings

This chapter offers the empirical results from the data analysis conducted, interpretation of the findings, and discussions of the study results. The aim of this study is to examine how the BCMFs and eco-efficiency interaction to address the financial sustainability of sugar manufacturers in Nigeria. This objective was achieved through survey which was used to obtain the required information for the analysis. Information regarding respondents' demographic, response rate, response to each variable and test of hypotheses are presented in this chapter. The section also presents the test of the hypotheses. It indicates how each of the four hypotheses were tested. This last section dealt with discussion of findings. The data was analyzed using Statistical Package for Social Sciences (SPSS) version 25 for the descriptive and the inferential statistics.

4.1 Response Rate

A total of three hundred and twenty-six (326) copies of questionnaire were administered, and two hundred and ninety-four (294) copies were returned. After sorting the questionnaires 279 copies were certified as duly filled and considered usable. The useable questionnaire represented 85.58% response rate. The high response rate was recorded due to the help of the human resource department of the sugar companies who administered the questionnaire and coopted their staff to take this research as a priority. The response results are presented in Table 4.1.

Table 4.1: Response Rate

Responses	Frequency	Percent
Completed usable copies of questionnaire	279	85.58%
Unusable, unreturned and disqualified questionnaires	47	14.42%
Total	326	100%

Source: Field Survey Results, 2024

Table 4.2: Demographic Characteristic of Respondents

Variables	Category	Frequency	Percentage
Gender	Male	180	64.5%
	Female	99	35.5%
Age	21-30	47	16.8%
	31-40	114	40.9%
	41-50	94	33.7%
	51-60+	24	8.6%
Educational qualifications	ND/NCE	23	8.2%
	BSC/BA/HND	146	52.3%

	PGD/MBA/MSC/M		110	39.4%
	A			
Job level of respondents	Top Management	31		11.1%
	Middle Management	148		53.0%
	Operational Management	100		35.8%
Level of service	Below 5yrs		78	28.0%
	6-10yrs		100	35.8%
	11-15yrs		62	22.2%
	16yrs+		31	11.1%
	5		8	2.9%

Source: Field Survey Results, 2024

The Table 4.2 presents the demographic and personal profile of respondents used for this study. Demographic and personal profile of respondents as shown in Table 4.2 indicated that 180 respondents representing 64.5% were male while 99 respondents representing 35.5% were females, indicating that most of the respondents were male. Also, Table 4.2 regarding respondent's age revealed that 47 respondents representing 16.8% were between 21-30years, 114 respondents representing 40.9% were 31-40years, 94 respondents representing 33.7% were 41-50years, 24 respondents representing 8.6% were 51-60+years, indicating that there were more respondents within the age 31-40years. Furthermore, 23 of the respondents representing

8.2% indicated that they had ND/NCE, 146 of the respondents representing 52.3% indicated that they had BSC/BA/HND, 110 of the respondents representing 39.4% indicated that they had PGD/MBA/MSc/MA. This finding suggests that most of the respondents have first degree qualification.

Further analysis revealed that 31 respondents representing 11.1% indicated that they are top management, 148 respondents representing 53.0% indicated that they are middle management, 100 respondents representing 35.8% indicated that they are operational management. This result shows that majority of the respondents are within the middle management level and this suggest that the information provided can be very reliable given their position within the organisation. Also, 78 respondents representing 28.0% indicated to have serve for below 5 years, 100 respondents representing 35.8% have serve between 6-10years, 62 respondents representing 22.2% have serve between 11-15 years, 31 respondents representing 11.1% have serve between 16 years plus and 8 respondents representing 2.9% have serve 5 years. By this result, it is evident that many of the respondents have spent ten years are in the majority and this is good for employee retention.

4.2 Presentation of Data

In Table 4.3, 4.4, 4.5, and 4.6 Strategy unfolding, strategic response, crisis management leadership, and business resilience was presented as measures of BCMFs for the sugar manufacturers in Nigeria. Also, in Table 4.7, profitability, resource diversification, and firm growth were presented a measure of financial sustainability. Lastly, Table 4.8 presented the moderating variable which is eco-efficiency using descriptive statistics and computed for each statement to reveal the frequencies, percentages, and mean on a six-point Likert-type scale (6 =

Very High extent; 5 = High extent; 4 = Partially High extent; 3 = Partially Low extent; 2 = Low extent; 1 = Very Low extent) for all the variables (independent, dependent, and moderating).

Table 4.3: Descriptive Analysis of Responses on Strategy Unfolding

Strategy Unfolding	VHE	HE	PHE	PLE	LE	VLE	Mean
Establish specific actions to implement the strategy	(94) 33.7%	(100) 35.8%	(85) 30.5%	(0) 0.00%	(0) 0.00%	(0) 0.00%	5.03
Encourage staff input in planning strategy	(30) 10.8%	(87) 31.2%	(94) 33.7%	(54) 19.4%	(7) 2.5%	(7) 2.5%	4.21
Demarcate resources to enhance strategy planning	(32) 11.5%	(124) 44.4%	(77) 27.6%	(38) 13.6%	(8) 2.9%	(0) 0.00%	4.48
Designate who is responsible for each strategic action	(76) 27.2%	(86) 30.8%	(79) 28.3%	(23) 8.2%	(15) 5.4%	(0) 0.00%	4.66
Engage managers in defining resources required to achieve plan	(61) 21.9%	(94) 33.7%	(101) 36.2%	(8) 2.9%	(15) 5.4%	(0) 0.00%	4.64
Define goal indicators in order to monitor strategy success	(56) 20.1%	(123) 44.1%	(69) 24.7%	(15) 5.4%	(16) 5.7%	(0) 0.00%	4.67
Able to comprehensively monitor the implementation of the strategy	(56) 20.1%	(90) 32.3%	(101) 36.2%	(24) 8.6%	(8) 2.9%	(0) 0.0%	4.58
Grand Mean for Strategy Unfolding							4.61

Decision rule 1.00 – 1.49= very low extent, 1.50 – 2.49= low extent, 2.50 – 3.49 = partially low extent, 3.50-4.00= partially high extent, 4.50-5.00 = high extent, 5.50-6.00= strongly agree.

Note: VHE- Very High Extent, HE- High Extent, PHE- Partially High Extent, PLE- Partially Low Extent, LE- Low Extent, VLE- Very Low Extent.

Source: Field Survey Results, 2024

According to results in Table 4.3, 33.7% of the respondents rated very high extent that establish specific actions to implement the strategy, 35.8% high extent and 30.5% partially high extent. On the average, the respondents indicated that establish specific actions to implement the strategy has a mean of 5.03. Results also showed that 10.8% of the respondents rated very high extent that encourage staff input in planning strategy, 31.2% high extent, 33.7% partially high extent, 19.4% partially low extent, 2.5% low extent and 2.5% very low extent. On the average, the respondents indicated that encourage staff input in planning strategy has a mean of 4.21. Results also showed that 11.5% of the respondents rated very high extent that demarcate resources to enhance strategy planning, 44.4% high extent, 27.6% partially high extent, 13.6% partially low extent and 2.9% low extent. On the average, the respondents indicated that demarcate resources to enhance strategy planning has a mean of 4.48. Results also showed that 27.2% rated very high extent that designate that is responsible for each strategic action, 30.8% high extent, 28.3% partially high extent, 8.2 partially low extents and 5.4% low extent. On the average, the respondents indicated that designate who is responsible for each strategic action has a mean of 4.66.

Results also showed that 21.9% of the respondents rated very high extent that engage managers in defining resources required to achieve plan, 33.7% high extent, 36.2% partially high extent, 2.9% partially low extent and 5.4% low extent. On the average, the respondents indicated that engage managers in defining resources required to achieve plan has a mean of 4.64. Results also showed that 20.1% of the respondents rated very high extent that define goal indicators in order to monitor strategy success, 44.1% high extent, 24.7% partially high extent, 5.4% partially low extent and 5.7% low extent. On the average, the respondents indicated that define goal indicators in order to monitor strategy success has a mean 4.67. Results also showed that 20.1%

of respondents rated very high extent that able to comprehensively monitor the implementation of the strategy, 32.3% high extent, 36.2% partially high extent, 8.6% partially low extent and 2.9 low extents. On the average, the respondents indicated that able to comprehensively monitor the implementation of the strategy has a mean of 4.58.

The grand mean for strategy unfolding is 4.61 which indicates that on average, respondents agreed with most of the statements on the high scale as it relates to how strategy unfolding is an appropriate measure of BCMFs. Based on the decision rule, the grand mean of 4.61 suggest that the respondents rated strategy unfolding moderately high. This implies that the level of activities regarding strategy unfolding for the sugar manufacturers in Nigeria is moderately high. Nevertheless, there is room for improvement to attain higher level of efficiency concerning strategy unfolding.

Table 4.4: Descriptive Analysis of Responses on Strategic Response

Strategic Response	VHE	HE	PHE	PLE	LE	VLE	Mean
We have a flexible business process that respond to market changes quickly	(46) 16.5%	(108) 38.7%	(61) 21.9%	(24) 8.6%	(32) 11.5%	(8) 2.9%	4.32
We are sensitive to opportunities presented by market changes	(69) 24.7%	(76) 27.2%	(94) 33.7%	(32) 11.5%	(8) 2.9%	(0) 0.00%	4.59
We can deploy quick changes to company policy to accommodate environmental challenges	(39) 14.0%	(92) 33.0%	(76) 27.2%	(72) 25.8%	(0) 0.00%	(0) 0.00%	4.35
We collaborate with competitors to address common goals	(23) 8.2%	(16) 5.7%	(146) 52.3%	(78) 28.0%	(16) 5.7%	(0) 0.00%	3.83

We actively conduct market scanning for opportunities	(54)	(93)	(100)	(16)	(160)	(0)	4.55
	19.4%	33.3%	35.8%	5.7%	5.7%	0.00%	
We consistently explore new markets	(69)	(87)	(76)	(39)	(8)	(0)	4.61
	24.7%	31.2%	27.2%	14.0%	2.9%	0.00%	
We are quick to adapt our business to suit changing business environment	(40)	(107)	(68)	(48)	(16)	(0)	4.38
	14.3%	38.4%	24.4%	17.2%	5.7%	0.00%	
Grand Mean for Strategic Response							4.38

Decision rule 1.00 – 1.49= very low extent, 1.50 – 2.49= low extent, 2.50 – 3.49 = partially low extent, 3.50-4.00= partially high extent, 4.50-5.00 = high extent, 5.50-6.00= strongly agree.

Note: VHE- Very High Extent, HE- High Extent, PHE- Partially High Extent, PLE- Partially Low Extent, LE- Low Extent, VLE- Very Low Extent.

Source: Field Survey Results, 2024

Results in Table 4.4, 16.5% of the respondents rated very high that we have a flexible business process that respond to market changes quickly, 38.7% high extent, 21.9% partially high extent, 8.6% partially low extent, 11.5% low extent and 2.9% very low extent. On the average, the respondents indicated that we have a flexible business process that responds to market change quickly has a mean of 4.32. Results also showed that 24.7% of the respondents rated very high that we are sensitive to opportunities presented by market changes, 27.2% high extent, 33.7% partially high extent, 11.5% partially low extent and 2.9% low extent. On the average, the respondents indicated that we are sensitive to opportunities presented by market changes has a mean of 4.59. Results also showed that 14.0% of the respondents rated very high extent that we can deploy quick changes to company policy to accommodate environmental challenges, 33.0% high extent, 27.2% partially high extent and 25.8% partially low extent. On the average, the

respondents indicated that we can deploy quick changes to company policy to accommodate environmental challenges has a mean of 4.35.

Results also showed that 8.2% of the respondents rated very high extent that we collaborate with competitors to address common goals, 5.7% high extent, 52.3% partially high extent, 28.0% partially low extent and 5.7% low extent. On the average, the respondents indicated that we collaborate with competitors to address common goals has a mean of 3.83. Results also showed that 19.4% of the respondents rated very high extent that we actively conduct market scanning for opportunities, 33.3% high extent, 35.8% partially high extent, 5.7% partially low extent and 5.7% low extent. On the average, the respondents indicated that we actively conduct market scanning for opportunities have a mean of 4.55. Results also showed that 24.7% of the respondents rated very high extent that we consistently explore new markets, 31.2% high extent, 27.2% partially high extent, 14.0% partially low extent and 2.9% low extent. On the average, the respondents indicated that we consistently explore new markets has a mean of 4.61. Results also showed that 14.3% of the respondents rated very high that we are quick to adapt our business to suit changing business environment, 38.4% high extent, 24.4% partially high extent, 17.2% partially low extent and 5.7% low extent. On the average, the respondents indicated that we are quick to adapt our business to suit changing business environment has a mean of 4.38 and Strategic Response has a grand mean of 4.38.

The grand mean for strategic response is 4.38 which indicates that on average, respondents agreed with most of the statements on the high scale as it relates to how strategic response is an appropriate measure of BCMFs. Based on the decision rule, the grand mean of 4.38 suggests

that the respondents rated strategic response moderately high. This implies that the level of strategic response capability of the sugar manufacturers in Nigeria is moderately high.

Table 4.5: Descriptive Analysis of Responses on Crisis Management Leadership

Crisis Management Leadership	VHE	HE	PHE	PLE	LE	VLE	Mean
Actively listen to diverse points of view to address organisation's concern	(77) 27.6%	(116) 41.6%	(70) 25.1%	(8) 2.9%	(8) 2.9%	(0) 0.00%	3.88
Follow through on promises he/she makes	(16) 5.7%	(78) 28.0%	(122) 43.7%	(32) 11.5%	(15) 5.4%	(16) 5.7%	4.00
Genuinely celebrate others commitment to organisation value	(32) 11.5%	(63) 22.6%	(84) 30.1%	(69) 24.7%	(16) 5.7%	(15) 5.4%	3.93
Treat others with dignity and respect	(47) 16.8%	(62) 22.2%	(87) 31.2%	(60) 21.5%	(8) 2.9%	(15) 5.4%	4.13
Give people a great deal of freedom and choice in deciding how to do their work	(8) 2.9%	(48) 17.2%	(78) 28.0%	(107) 38.4%	(23) 8.2%	(15) 5.4%	3.52
Show genuine concern for employee's wellbeing	(24) 8.6%	(55) 19.7%	(76) 27.2%	(93) 33.3%	(8) 2.9%	(23) 8.2%	3.73
Encourage learning and development across units	(29) 10.4%	(56) 20.1%	(103) 36.9%	(46) 16.5%	(23) 8.2%	(22) 7.9%	3.84
Demonstrate genuine self-discipline	(23) 8.2%	(70) 25.1%	(108) 38.7%	(70) 25.1%	(8) 2.9%	(0) 0.00%	4.08

Builds a system of shared purpose for all employees	(8) 2.9%	(94) 33.7%	(93) 33.3%	(54) 19.4%	(7) 2.5%	(23) 8.2%	3.90
Show significant understand of task that need to be achieved	(22) 7.9%	(141) 50.5%	(61) 21.9%	(39) 14.0%	(8) 2.9%	(8) 2.9%	4.38

Crisis Mana 3.93

Decision rule 1.00 – 1.49= very low extent, 1.50 – 2.49= low extent, 2.50 – 3.49 = partially low extent, 3.50-4.00= partially high extent, 4.50-5.00 = high extent, 5.50-6.00= strongly agree.

Note: VHE- Very High Extent, HE- High Extent, PHE- Partially High Extent, PLE- Partially Low Extent, LE- Low Extent, VLE- Very Low Extent.

Source: Field Survey Results, 2024

According to results in Table 4.5, 27.6% of the respondents rated very frequently that actively listen to diverse points of view to address organization’s concern, 41.6% frequently, 25.1% occasionally, 2.9% rarely and 2.9% very rarely. On the average, the respondents represented that actively listen to diverse points of view to address organization’s concern has a mean of 3.83. Results also showed that 5.7% of the respondents rated very frequently that follow through on promises he/she makes, 28.0% frequently, 43.7% occasionally, 11.5% rarely, 5.4% very rarely and 5.7% never. On the average, the respondents represented that follow through on promises he/she makes has a mean of 4.00. Results also showed that 11.5% rated that very frequently genuinely celebrate others commitment to organization’s value, 22.6% frequently, 30.1% occasionally, 24.7% rarely, 5.7% very rarely and 5.4% never. On the average, the respondents represented that genuinely celebrate others commitment to organization’s value has a mean 3.93.

Results also showed that 16.8% of the respondents rated very frequently that treat others with dignity and respect, 22.2% frequently, 31.2% occasionally, 21.5% rarely, 2.9% very rarely and 5.4% never. On the average, the respondents represented that treat others with dignity and respect has a mean 4.13. Results also showed that 2.9% rated very frequently that give people a

great deal of freedom and choice in deciding how to do their work, 17.2% frequently, 28.0% occasionally, 38.4% rarely, 8.2% very rarely and 5.4% never. On the average, the respondents represented that give people a great deal of freedom and choice in deciding how to do their has a mean of 3.52. Results also showed that 8.6% of the respondents rated very frequently that show genuine concern for employee's wellbeing, 19.7% frequently, 27.2% occasionally, 33.3% rarely, 2.9% very rarely and 8.2% never. On the average, the respondents represented that show genuine concern for employee's wellbeing has a mean of 3.73.

Results also showed that 10.4% of the respondents rated very frequently that encourage learning and development across units, 20.1% frequently, 36.9% occasionally, 16.5% rarely, 8.2% very rarely and 7.9% never. On the average, the respondents represented that encourage learning and development across units has a mean of 3.84. Results also showed that 8.2% of the respondents rated very frequently that demonstrate genuine self-discipline, 25.1% frequently, 38.7% occasionally, 25.1% rarely and 2.9% very rarely. On the average, the respondents represented that demonstrate genuine love has a mean of 4.08. Results also showed that 2.9% of the respondents rated very frequently that builds a system of shared purpose for all employees, 33.7% frequently, 33.3% occasionally, 19.4% rarely, 2.5% very rarely and 8.2% never. On the average, the respondents represented that builds a system of shared purpose for all employees has a mean of 3.90. Results also showed that 7.9% of the respondents rated very frequently that show significant understand of task that need to be achieved, 50.5% frequently, 21.9% occasionally, 14.0% rarely, 2.9% very rarely and 2.9% never. On the average, the respondents represented that show significant understand of task that need to be achieved has a mean of 4.38 and Crisis Management Leadership has a grand mean of 3.93.

The grand mean for crisis management leadership is 3.39 which indicates that on average, respondents agreed with most of the statements on the partially high scale as it relates to how crisis management leadership is an appropriate measure of BCMFs. Based on the decision rule, the grand mean of 3.93 suggests that the respondents rated crisis management leadership moderately high. This implies that the level of crisis management leadership in place in the sugar manufacturers in Nigeria is moderately high.

Table 4.6: Descriptive Analysis of Responses on Business Resilience

Business Resilience	VHE	HE	PHE	PLE	LE	VLE	Mean
We can identify emerging threats and understand their impact on all aspects of the business; workers and their broader community	(84) 30.1%	(93) 33.3%	(70) 25.1%	(16) 5.7%	(8) 2.9%	(8) 2.9%	4.73
We have strong and supportive relationships with key stakeholders	(77) 27.6%	(110) 39.4%	(76) 27.2%	(8) 2.9%	(8) 2.9%	(0) 0.00%	4.80
We have Staff who are committed to working as a unified team	(78) 28.0%	(140) 50.2%	(38) 13.6%	(16) 5.7%	(7) 2.5%	(0) 0.00%	4.87
We set clear objectives, supported by staff	(79) 28.3%	(92) 33.0%	(77) 27.6%	(16) 5.7%	(15) 5.4%	(0) 0.00%	4.73
We enjoy clear direction from leadership	(32) 11.5%	(115) 41.2%	(94) 33.7%	(23) 8.2%	(15) 5.4%	(0) 0.00%	4.45
We acquire new technologies/knowledge from various channels	(39) 14.0%	(55) 19.7%	(117) 41.9%	(38) 13.6%	(30) 10.8%	(0) 0.00%	4.13

Permits new knowledge, even when it conflicts with well-accepted experience and knowledge	(16) 5.7%	(79) 28.3%	(87) 31.2%	(66) 23.7%	(16) 5.7%	(15) 5.4%	3.89
Invest resources necessary to closely connect with customers	(38) 13.6%	(110) 39.4%	(99) 35.5%	(24) 8.6%	(8) 2.9%	(0) 0.00%	4.52
Develop a culture that values and practices open communication	(31) 11.1%	(94) 33.7%	(85) 30.5%	(30) 10.8%	(24) 8.6%	(15) 5.4%	4.12
Grand mean for resilience							4.47

Decision rule 1.00 – 1.49= very low extent, 1.50 – 2.49= low extent, 2.50 – 3.49 = partially low extent, 3.50-4.00= partially high extent, 4.50-5.00 = high extent, 5.50-6.00= strongly agree.

Note: VHE- Very High Extent, HE- High Extent, PHE- Partially High Extent, PLE- Partially Low Extent, LE- Low Extent, VLE- Very Low Extent.

Source: Field Survey Results, 2024

Results in Table 4.6, 30.1% of the respondents rated very frequently that We can identify emerging threats and understand their impact on all aspects of the business; workers and their broader community, 33.3% frequently, 25.1% occasionally, 5.7% rarely, 2.9% very rarely and 2.9% never. On the average, the respondents represented that We can identify emerging threats and understand their impact on all aspects of the business; workers and their broader community has a mean of 4.73. Results also showed that 27.6% of the respondents rated very frequently that We have strong and supportive relationships with key stakeholders, 39.4% frequently, 27.2% occasionally, 2.9% rarely and 2.9% very rarely. On the average, the respondents represented that we have strong and supportive relationships with key stakeholders has a mean of 4.80. Results also showed that 28.0% rated very frequently that We have Staff who are committed to working as a unified team, 50.2% frequently, 13.6% occasionally, 5.7% rarely and 2.5% very rarely. On the average, the respondents represented that We have Staff who are

committed to working as a unified team has a mean of 4.87. Results also showed that 28.3% of the respondents rated very frequently that we set clear objectives, supported by staff, 33.0% frequently, 27.6% occasionally, 5.7% rarely and 5.4% very rarely. On the average, the respondents represented that we set clear objectives, supported by staff has a mean of 4.73. Results also showed that 11.5% of the respondents rated very frequently that we enjoy clear direction from leadership, 41.2% frequently, 33.7% occasionally, 8.2% rarely and 5.4% very rarely. On the average, the respondents represented that we enjoy clear direction from leadership has a mean of 4.45.

Results also showed that 14.0% of the respondents rated very frequently we acquire new technologies/knowledge from various channels, 19.7% frequently, 41.9% occasionally, 13.6% rarely and 10.8% very rarely. On the average, the respondents represented that we acquire new technologies/knowledge from various channels has a mean 4.13. Results also showed that 5.7% of the respondents rated very frequently that Permits new knowledge, even when it conflicts with well-accepted experience and knowledge, 28.3% frequently, 31.2% occasionally, 23.7% rarely, 5.7% very rarely and 5.4% never. On the average, the respondents represented that Permits new knowledge, even when it conflicts with well-accepted experience and knowledge has a mean of 3.89. Results also showed that 13.6% of the respondents rated very frequently that Invest resources necessary to closely connect with customers, 39.4% frequently, 35.5% occasionally, 8.6% rarely and 2.9% very rarely. On the average, the respondents represented that Invest resources necessary to closely connect with customers has a mean of 4.52. Results also showed that 11.1% of the respondents rated very frequently that Develop a culture that values and practices open communication, 33.7% frequently, 30.5% occasionally, 10.8% rarely, 8.6% very rarely and 5.4% never. On the average, the respondents represented that Develop a

culture that values and practices open communication has a mean of 4.12 and grand mean of resilience is 4.47.

The grand mean for business resilience is 4.47 which indicates that on average, respondents agreed with most of the statements on high scale as it relates to how business resilience is an appropriate measure of BCMFs. Based on the decision rule, the grand mean of 4.47 suggests that the respondents rated business resilience moderately high. This implies that the level of business resilience of the sugar manufacturers in Nigeria is moderately high and this suggest the firms can largely survive turbulent environment.

Table 4.7: Descriptive Analysis of Responses on Financial Sustainability

Profitability	VHE	HE	PHE	PLE	LE	VLE	Mean
Increase between 2017 and 2018	(61) 21.9%	(102) 36.6%	(69) 24.7%	(47) 16.8	(0) 0.00%	(0) 0.00%	4.63
Increase between 2018 and 2019	(61) 21.9%	(87) 31.2%	(84) 30.1%	(47) 16.8%	(0) 0.00%	(0) 0.00%	4.58
Increase between 2019 and 2020	(39) 14.0%	(108) 38.7%	(101) 36.2%	(31) 11.1%	(0) 0.00%	(0) 0.00%	4.56
Increase between 2020 and 2021	(40) 14.3%	(123) 44.1%	(85) 30.5%	(23) 8.2%	(8) 2.9%	(0) 0.00%	4.59
Increase between 2021 and 2022	(47) 16.8%	(116) 41.6%	(85) 30.5%	(23) 8.2%	(8) 2.9%	(0) 0.00%	4.61

Increase between 2022 and September 2023	(64) 22.9%	(77) 27.6%	(99) 35.5%	(31) 11.1%	(8) 2.9%	(0) 0.00%	4.57
Resource Diversification							Mean
I believe that diversifying our resources is essential for long-term financial sustainability.	(117) 41.9%	(100) 35.8%	(39) 14.0%	(15) 5.4%	(8) 2.9%	(0) 0.00%	5.09
Our organization actively explores new sources of funding or revenue to reduce reliance on a single source.	(32) 11.5%	(129) 46.2%	(79) 28.3%	(23) 8.2%	(8) 2.9%	(0) 0.00%	4.57
We regularly assess the risks associated with relying too heavily on a specific resource or income stream.	(32) 11.5%	(71) 25.4%	(122) 43.7%	(30) 10.8%	(16) 5.7%	(8) 2.9%	4.18
Our organization has a well-defined strategy for diversifying resources.	(31) 11.1%	(133) 47.7%	(38) 13.6%	(69) 24.7%	(8) 2.9%	(0) 0.00%	4.39
I feel that resource diversification enhances our ability to adapt to changing economic conditions.	(47) 16.8%	(115) 41.2%	(55) 19.7%	(54) 19.4%	(8) 2.9%	(0) 0.00%	4.50
We actively seek partnerships or collaborations to access new resources or markets.	(85) 30.5%	(123) 44.1%	(32) 11.5%	(23) 8.2%	(16) 5.7%	(0) 0.00%	4.85
I believe that resource diversification contributes to our organization's overall resilience and competitiveness.	(40) 14.3%	(122) 43.7%	(78) 28.0%	(31) 11.1%	(8) 2.9%	(0) 0.00%	4.56
Firm Growth							Mean
Increase between 2017 and 2018	(70) 25.1%	(140) 50.2%	(46) 16.5%	(15) 5.4%	(8) 2.9%	(0) 0.00%	4.89
Increase between 2018 and	(139)	(85)	(39)	(8)	(8)	(0)	5.22

2019	49.8%	30.5%	14.0%	2.9%	2.9%	0.00%	
Increase between 2019 and 2020	(110) 39.4%	(98) 35.1%	(24) 8.6%	(32) 11.5%	(8) 2.9%	(0) 0.00%	5.95
Increase between 2020 and 2021	(86) 30.8%	(122) 43.7%	(56) 20.1%	(7) 2.5%	(8) 2.9%	(0) 0.00%	4.97
Increase between 2021 and 2022	(55) 19.7%	(100) 35.8%	(77) 27.6%	(31) 11.1%	(16) 5.7%	(0) 0.00%	4.53
Increase between 2022 and September 2023	(94) 33.7%	(84) 30.1%	(55) 19.7%	(39) 14.0%	(7) 2.5%	(0) 0.00%	4.78
Grand Mean for financial sustainability							4.74

Decision rule 1.00 – 1.49= very low extent, 1.50 – 2.49= low extent, 2.50 – 3.49 = partially low extent, 3.50-4.00= partially high extent, 4.50-5.00 = high extent, 5.50-6.00= strongly agree.

Note: VHE- Very High Extent, HE- High Extent, PHE- Partially High Extent, PLE- Partially Low Extent, LE- Low Extent, VLE- Very Low Extent.

Source: Field Survey Results, 2024

According to results in Table 4.7, 21.9% of the respondents rated very high extent increase between 2017 and 2018, 36.6% high extent, 24.7% partially high extent and 16.8% partially low extent. On the average, the respondents represented that increase between 2017 and 2018 has a mean of 4.63. Results also showed that 21.9% of the respondents rated very high extent increase between 2018 and 2019, 31.2% high extent, 30.1% partially high extent and 16.8% partially low extent. On the average, the respondents represented that increase between 2018 and 2019 has a mean of 4.58. Results also showed that 14.0% of the respondents rated very high extent increase between 2019 and 2020, 38.7% high extent, 36.2% partially high extent and 11.1% partially low extent. On the average, the respondents represented that increase between 2019 and 2020 has a mean of 4.56.

Results also showed that 14.3% of the respondents rated very high extent increase between 2020 and 2021, 44.1% high extent, 30.5% partially high extent, 8.2% partially low extent and 2.9% low extent. On the average, the respondents represented that increase between 2020 and 2021 has a mean of 4.59. Results also showed that 16.8% of the respondents rated very high extent increase between 2021 and 2022, 41.6% high extent, 30.5% partially high extent, 8.2% partially low extent and 2.9% low extent. On the average, the respondents represented that increase between 2021 and 2022 has a mean of 4.61. Results also showed that 22.9% of the respondents rated very high extent increase between 2022 and September 2023, 27.6% high extent, 35.5% partially high extent, 11.1% partially low extent and 2.9% low extent. On the average, the respondents represented that increase between 2022 and September 2023 has a mean of 4.57 and Grand Mean for profitability is 4.59.

According to results in Table 4.8, 41.9% of the respondents rated very high extent that I believe that diversifying our resources is essential for long-term financial sustainability, 35.8% high extent, 14.0% partially high extent, 5.4% partially low extent and 2.9% low extent. Averagely, the respondents indicated that I believe that diversifying our resources is essential for long-term financial sustainability has a mean of 5.09. Results also showed that 11.5% of the respondents rated very high extent that Our organization actively explores new sources of funding or revenue to reduce reliance on a single source, 46.2% high extent, 28.3% partially high extent, 8.2% partially low extent and 2.9% low extent. Averagely the respondents indicated that Our organization actively explores new sources of funding or revenue to reduce reliance on a single source has a mean of 4.57.

Results also showed that 11.5% of the respondents rated very high extent that We regularly

assess the risks associated with relying too heavily on a specific resource or income stream, 25.4% high extent, 43.7% partially high extent, 10.8% partially low extent, 5.7% low extent and 2.9% very low extent. Averagely the respondents indicated that We regularly assess the risks associated with relying too heavily on a specific resource or income stream has a mean of 4.18. Results also showed that 11.1% of the respondents rated very high extent that Our organization has a well-defined strategy for diversifying resources, 47.7% high extent, 13.6% partially high extent, 24.7% partially low extent and 2.9% low extent. Averagely the respondents indicated that our organization has a well-defined strategy for diversifying resources has a mean of 4.39. Results also showed that 16.8% of the respondents rated very high extent that I feel that resource diversification enhances our ability to adapt to changing economic conditions, 41.2% high extent, 19.7% partially high extent, 19.4% partially low extent and 2.9% low extent. Averagely the respondents indicated that I feel that resource diversification enhances our ability to adapt to changing economic conditions has a mean of 4.50. Results also showed that 30.5% of the respondents rated that We actively seek partnerships or collaborations to access new resources or markets, 44.1% high extent, 11.5% partially high extent, 8.2% partially low extent and 5.7% low extent. Averagely the respondents indicated that We actively seek partnerships or collaborations to access new resources or markets has a mean of 4.85. Results also showed that 14.3% of the respondents rated very high extent that I believe that resource diversification contributes to our organization's overall resilience and competitiveness, 43.7% high extent, 28.0% partially high extent, 11.1% partially low extent and 2.9% low extent. Averagely the respondents indicated that I believe that resource diversification contributes to our organization's overall resilience and competitiveness has a mean of 4.56 and Resources Diversification has a grand mean of 4.59.

Results in Table 4.9, 25.1% of the respondents rated very high extent increase between 2017 and 2018, 50.2% high extent, 16.5% partially high extent, 5.4% partially low extent and 2.9% low extent. On the average, the respondents represented that increase between 2017 and 2018 has a mean of 4.89. Results also showed that 49.8% of the respondents rated very high extent increase between 2018 and 2019, 30.5% high extent, 14.0% partially high extent, 2.9% partially low extent and 2.9% low extent. On the average, the respondents represented that increase between 2018 and 2019 has a mean of 5.22. Results also showed that 39.4% of the respondents rated very high extent increase between 2019 and 2020, 35.1% high extent, 8.6% partially high extent, 11.5% partially low extent and 2.9% low extent. On the average, the respondents represented that increase between 2019 and 2020 has a mean of 5.95. Results also showed that 30.8% of the respondents rated very high extent increase between 2020 and 2021, 43.7% high extent, 20.1% partially high extent, 2.5% partially low extent and 2.9% low extent. On the average, the respondents represented that increase between 2020 and 2021 has a mean of 4.97. Results also showed that 19.7% of the respondents rated very high extent increase between 2021 and 2022, 35.8% high extent, 27.6% partially high extent, 11.1% partially low extent and 5.7% low extent. On the average, the respondents represented that increase between 2021 and 2022 has a mean of 4.53. Results also showed that 33.7% of the respondents rated very high extent increase between 2022 and September 2023, 30.1% high extent, 19.7% partially high extent, 14.0% partially low extent and 2.5% low extent. On the average, the respondents represented that increase between 2022 and September 2023 has a mean of 4.61 and firm growth has a grand mean of 5.06.

The grand mean for financial sustainability resilience is 4.47 which indicates that on average, respondents agreed with most of the statements on high scale as it relates to how profitability,

resource diversification, and firm growth are appropriate measures of financial sustainability. Based on the decision rule, the grand mean of 4.47 suggest that the respondents rated financial sustainability moderately high. This implies that the level of financial sustainability of the sugar manufacturers in Nigeria is moderately high but not at the optimum level of efficiency, Hence, there is the need for concerted efforts through the BCMFs to better enhance the financial sustainability of sugar manufacturers in Nigeria.

Relating results in tables 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, and 4.9 together, the BCMFs (strategy unfolding, strategic response, crisis management leadership, and business resilience) have varying patterns of increase with financial sustainability of sugar manufacturers in Nigeria. The findings reveal that manufacturers of sugar products in Nigeria are found to adopt BCMFs; strategy unfolding, strategic response, crisis management leadership, and business resilience which are at a moderately high extent. Consequent on these findings mentioned above, it suggests that BCMFs vis-à-vis strategy unfolding, strategic response, crisis management leadership, and business resilience may influence the financial sustainability of the sugar manufacturers in Nigeria respectively. This provided response to research questions one to five and has enabled the researcher to achieve the first five specific objectives of this study.

Table 4.8: Descriptive Analysis of Responses on Eco-Efficiency

Eco-Efficiency	VHE	HE	PHE	PLE	LE	VLE	Mean
We train our staff to care for the environment	(54) 19.4%	(76) 27.2%	(102) 36.6%	(39) 14.0%	(8) 2.9%	(0) 0.00%	4.46
We allocate budgetary resources to minimize pollution	(16) 5.7%	(102) 36.6%	(105) 37.6%	(32) 11.5%	(24) 8.6%	(0) 0.00%	4.19

We advocate pollution prevention	(31) 11.1%	(133) 47.7%	(91) 32.6%	(8) 2.9%	(8) 2.9%	(8) 2.9%	4.53
We take responsibility to control pollution-related events	(23) 8.2%	(147) 52.7%	(78) 28.0%	(15) 5.4%	(8) 2.9%	(8) 2.9%	4.49
We employ the use of environmental management systems	(47) 16.8%	(139) 49.8%	(61) 21.9%	(24) 8.6%	(80) 2.9%	(0) 0.00%	4.66
We advocate zero-waste via recycling/reuse of materials/waste	(75) 26.9%	(72) 25.8%	(85) 30.5%	(31) 11.1%	(16) 5.7%	(0) 0.00%	4.57
We advocate for reduction of energy and water consumption in the production process.	(91) 32.6%	(55) 19.7%	(101) 36.2%	(16) 5.7%	(8) 2.9%	(8) 2.9%	4.65
We conduct environmental impact assessment of our products.	(64) 22.9%	(99) 35.5%	(92) 33.0%	(8) 2.9%	(8) 2.9%	(8) 2.9%	4.64
Grand Mean for Eco-Efficiency							4.52

Decision rule 1.00 – 1.49= very low extent, 1.50 – 2.49= low extent, 2.50 – 3.49 = partially low extent, 3.50-4.00= partially high extent, 4.50-5.00 = high extent, 5.50-6.00= strongly agree.

Note: VHE- Very High Extent, HE- High Extent, PHE- Partially High Extent, PLE- Partially Low Extent, LE- Low Extent, VLE- Very Low Extent.

Source: Field Survey Results, 2024

According to results in Table 4.8, 19.4% of the respondents rated very high extent that we train our staff to care for the environment, 27.2% high extent, 36.6% partially high extent, 14.0% partially low extent and 2.9% low extent. Averagely the respondents indicated that we train our staff to care for the environment has a mean of 4.46. Results also showed that 5.7% of the respondents rated very high extent that we allocate budgetary resources to minimize pollution, 36.6% high extent, 37.6% partially high extent, 11.5% partially low extent and 8.6% low extent. Averagely the respondents indicated that we allocate budgetary resources to minimize pollution has a mean of 4.19. Results also showed that 11.1% of the respondents rated very high extent that we advocate pollution prevention, 47.7% high extent, 32.6% partially high extent, 2.9%

partially low extent, 2.9% low extent and 2.9% very low extent. Averagely the respondents indicated that we advocate pollution prevention has a mean of 4.53. Results also showed that 8.2% of the respondents rated very high extent that we take responsibility to control pollution related events, 52.7% high extent, 28.0% partially high extent, 5.4% partially low extent, 2.9% low extent and 2.9% very low extent. Averagely the respondents indicated that we take responsibility to control pollution related events has a mean of 4.49. Results also showed that 16.8% of the respondents rated very high that we employ the use of environmental management system, 49.8% high extent, 21.9% partially high extent, 8.6% partially low extent and 2.9% low extent. Averagely the respondents indicated that we employ the use of environmental management system has a mean of 4.66. Result also showed that 26.9% of the respondents rated very high extent that we advocate zero-waste via recycling/reuse of materials/waste, 25.8% high extent, 30.5% partially high extent, 11.1% partially low extent and 5.7% low extent. Averagely, the respondents indicated that we advocate zero-waste via recycling/reuse of materials/waste has a mean of 4.57. Results showed that 32.6% of the respondents rated very high extent that we advocate for reduction of energy and water consumption in the production process, 19.7% high extent, 36.2% partially high extent, 5.7% partially low extent, 2.9% low extent and 2.9% very low extent. Averagely the respondents indicated that we advocate for reduction of energy and water consumption in the production process has a mean of 4.65. Results also showed that 22.9% of the respondents rated very high extent that we conduct environmental impact assessment of our products, 35.5% high extent, 33.0% partially high extent, 2.9% partially low extent, 2.9% low extent and 2.9% very low extent. Averagely the respondents indicated that we conduct environmental impact assessment of our products has a mean of 4.64 and Eco-Efficiency has a grand mean of 4.52.

The grand mean for eco-efficiency is 4.52 which indicates that on average, respondents agreed with most of the statements on high scale as it relates to how eco-efficiency is an appropriate intervening variable. Based on the decision rule, the grand mean of 4.52 suggest that the respondents rated eco-efficiency moderately high. This implies that the level of eco-efficiency as adopted by the sugar manufacturers in Nigeria is moderately high but not at the optimum level of efficiency, Hence, there is the need for concerted efforts to ensure optimum level of eco-efficiency given it potentials in enhancing the interaction between BCMFs and financial sustainability of sugar manufacturers in Nigeria.

Relating results in tables 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, and 4.10 together, the BCMFs (strategy unfolding, strategic response, crisis management leadership, and business resilience) have varying patterns of increase with financial sustainability and eco-efficiency of sugar manufacturers in Nigeria. The findings reveal that manufacturers of sugar products in Nigeria are found to adopt BCMFs and eco-efficiency which are at a moderately high extent. Consequent on these findings mentioned above, it suggests that BCMFs may interact with eco-efficiency to influence the financial sustainability of the sugar manufacturers in Nigeria respectively. This provided response to research questions six and has enabled the researcher to achieve the sixth specific objective of this study.

4.2 Test of Hypotheses

H₀₁: Strategy unfolding has no significant effect on financial sustainability of sugar manufacturers

The null hypothesis one which states that there is no significant effect of strategy unfolding on financial sustainability of sugar manufacturers in Nigeria was tested using simple linear regression analysis. In the analysis, the values of financial sustainability were regressed on the values of strategy unfolding. The data for strategy unfolding (independent variable) was generated by summing responses of all the items while financial sustainability (dependent variable) was generated by adding responses of all items used to measure the variable. The regression test results are presented in Tables 4.11

Table 4.9: Summary of Regression Analysis for the effect of Strategy Unfolding on Financial Sustainability of Sugar Manufacturing Companies in Nigeria

Model		F(df)	Anova Sig
R	0.480		
R Square	0.231	83.049(1,277)	0.000
Adjusted R Square	0.228		
Coefficients	Unstandardized Coefficients	t	sig
(Constant)	2.765	12.785	.000
Strategy Unfolding	.421	9.113	.000

a. Dependent Variable: Financial Sustainability

b. Predictors: (Constant), Strategy Unfolding

Source: Researcher's Field Survey Results, 2024

From the results in Table 4.9, strategy unfolding has weak positive and statistically significant relationship with financial sustainability of sugar manufacturers in Nigeria ($R = 0.480$, $p < 0.05$). The coefficient of determination (R^2) of 0.231 shows that strategy unfolding predicts 23.1% of the changes in financial sustainability, while the remaining 76.9% changes in financial sustainability of sugar manufacturers in Nigeria is explained by other external factors other than those examined in this study. From the Table 4.9 the results of ANOVA (overall model significance) of regression test which revealed that strategy unfolding has a significant effect on financial sustainability of sugar manufacturers in Nigeria. This can be explained by the F-value (83.049) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that strategy unfolding process in place within the sugar manufacturing companies in Nigeria significantly influenced their financial sustainability. Moreover, scholars have provided additional threshold for making sense of the values of R^2 . The R^2 values of 0.75, 0.50, and 0.25 for endogenous latent variables can be considered as substantial, moderate, and weak. Hence, with reference to R^2 criterion, it is safe to say that strategy unfolding have weak effect on the financial sustainability of sugar manufacturing companies in Nigeria.

Furthermore, the results of regression coefficients revealed that a positive and statistically significant relative influence was reported for strategy unfolding. Specifically, the results reveal that at 95% confidence level, strategy unfolding ($\beta = 0.421$, $p = 0.000$, $t = 3.449$) exercise of the sugar manufacturing companies in Nigeria is statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. This suggest that a unit change in Strategy unfolding will lead to a 0.421 increase in the financial sustainability of sugar manufacturers in

Nigeria, given that all other factors are held constant. Based on the path coefficient, the regression model is restated as follows:

$$FS = 2.765 + 0.421SU \text{ ----- (i)}$$

FS= Financial Sustainability

SU= Strategy Unfolding

On the strength of this result ($R^2 = 0.231$, $F(1,277) = 83.049$, $p = 0.000$), this study rejects the null hypothesis one (H_01) which states that Strategy unfolding have no significant effect on financial sustainability of sugar manufacturers in Nigeria.

H_02 : Strategic response has no significant effect on financial sustainability of sugar manufacturers.

The null hypothesis two which states that there is no significant effect of strategic response on financial sustainability of sugar manufacturers in Nigeria was tested using simple linear regression analysis. In the analysis, the values of financial sustainability were regressed on the values of strategic response. The data for strategic response (independent variable) was generated by summing responses of all the items while financial sustainability (dependent variable) was generated by adding responses of all items used to measure the variable. The regression test results are presented in Tables 4.10.

Table 4.10: Summary of Regression Analysis for the effect of Strategic Response on Financial Sustainability of Sugar Manufacturing Companies in Nigeria

Model		F(df)	Anova Sig
R	0.617		
R Square	0.380	170.060(1,277)	0.000
Adjusted R Square	0.378		
Coefficients	Unstandardized	t	sig
	Coefficients		
(Constant)	2.477	14.221	.000
Strategic response	.509	13.041	.000

a. Dependent Variable: Financial Sustainability

b. Predictors: (Constant), Strategic Response

Source: Researcher’s Field Survey Results, 2024

From the results in Table 4.10, strategic response has moderately strong positive and statistically significant relationship with the financial sustainability of sugar manufacturers in Nigeria ($R = 0.617, p < 0.05$). The coefficient of determination (R^2) of 0.380 shows that strategic response predicts 38% of the changes in financial sustainability, while the remaining 62% changes in financial sustainability of sugar manufacturers in Nigeria is explained by other external factors other than those examined in this study. From the Table 4.9 the results of ANOVA (overall model significance) of regression test which revealed that strategic response has a significant effect on financial sustainability of sugar manufacturers in Nigeria. This can be

explained by the F-value (170.060) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that strategic response capabilities of the sugar manufacturing companies in Nigeria significantly influenced their financial sustainability. Moreover, scholars have provided additional threshold for making sense of the values of R^2 . The R^2 values of 0.75, 0.50, and 0.25 for endogenous latent variables can be considered as substantial, moderate, and weak. Hence, with reference to R^2 criterion, it is safe to say that strategic response has moderately strong effect on the financial sustainability of sugar manufacturing companies in Nigeria.

Furthermore, the results of regression coefficients revealed that a positive and statistically significant relative influence was reported for strategic response. Specifically, the results reveal that at 95% confidence level, strategic response ($\beta = 0.509$, $p = 0.000$, $t = 13.041$) exercise of the sugar manufacturing companies in Nigeria is statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. This suggests that a unit change in strategic response will lead to a 0.509 increase in the financial sustainability of sugar manufacturers in Nigeria, given that all other factors are held constant. Based on the path coefficient, the regression model is restated as follows:

$$FS = 2.477 + 0.509SR \text{ ----- (i)}$$

FS= Financial Sustainability

SR= Strategic Response

On the strength of this result ($R^2 = 0.380$, $F(1,277) = 170.060$, $p = 0.000$), this study rejects the null hypothesis two (H_02) which states that strategic response have no significant effect on financial sustainability of sugar manufacturers in Nigeria.

H₀₃: Crisis management leadership has no significant effect on financial sustainability of sugar manufacturers in Nigeria

The null hypothesis three which states that there is no significant effect of crisis management leadership on financial sustainability of sugar manufacturers in Nigeria was tested using simple linear regression analysis. In the analysis, the values of financial sustainability were regressed on the values of crisis management leadership. The data for crisis management leadership (independent variable) was generated by summing responses of all the items while financial sustainability (dependent variable) was generated by adding responses of all items used to measure the variable. The regression test results are presented in Tables 4.11.

Table 4.11: Summary of Regression Analysis for the Effect of Crisis Management Leadership on Financial Sustainability of Sugar Manufacturing Companies in Nigeria

Model		F(df)	Anova Sig
R	0.527		
R Square	0.278	106.784 (1,277)	0.000
Adjusted R Square	0.276		
Coefficients	Unstandardized Coefficients	t	sig
(Constant)	3.133	20.022	.000
Crisis management leadership	.399	10.334	.000

- a. Dependent Variable: Financial Sustainability
- b. Predictors: (Constant), Crisis Management Leadership

Source: Researcher's Field Survey Results, 2024

From the results in Table 4.11, Crisis management leadership has averagely strong positive and statistically significant relationship with the financial sustainability of sugar manufacturers in Nigeria ($R = 0.527$, $p < 0.05$). The coefficient of determination (R^2) of 0.278 shows that Crisis management leadership explains 27.8% of the changes in financial sustainability, while the remaining 72.2% changes in financial sustainability of sugar manufacturers in Nigeria is explained by other external factors other than those examined in this study. From the Table 4.10 the results of ANOVA (overall model significance) of regression test which revealed that crisis management leadership has a significant effect on financial sustainability of sugar manufacturers in Nigeria. This can be explained by the F-value (106.784) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that crisis management leadership evident within the sugar manufacturing companies in Nigeria significantly influenced their financial sustainability. Moreover, scholars have provided additional threshold for making sense of the values of R^2 . The R^2 values of 0.75, 0.50, and 0.25 for endogenous latent variables can be considered as substantial, moderate, and weak. Hence, with reference to R^2 criterion, it is safe to say that crisis management leadership has moderately strong effect on the financial sustainability of sugar manufacturing companies in Nigeria.

Furthermore, the results of regression coefficients revealed that a positive and statistically significant relative influence was reported for crisis management leadership. Specifically, the results reveal that at 95% confidence level, crisis management leadership ($\beta = 0.399$, $p = 0.000$, $t = 10.334$) exercise of the sugar manufacturing companies in Nigeria is statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. This suggest that a unit change in Crisis management leadership will lead to a 0.399 increase in the financial

sustainability of sugar manufacturers in Nigeria, given that all other factors are held constant.

Based on the path coefficient, the regression model is restated as follows:

$$FS = 3.133 + 0.399CML \text{ ----- (i)}$$

FS= Financial Sustainability

CML= Crisis Management Leadership

On the strength of this result ($R^2= 0.278$, $F(1,277)= 106.784$, $p= 0.000$), this study rejects the null hypothesis three (H_03) which states that crisis management leadership have no significant effect on financial sustainability of sugar manufacturers in Nigeria.

H_04 : Business resilience has no significant effect on financial sustainability of sugar manufacturers in Nigeria

The null hypothesis four which states that there is no significant effect of business resilience on financial sustainability of sugar manufacturers in Nigeria was tested using simple linear regression analysis. In the analysis, the values of financial sustainability were regressed on the values of Business resilience. The data for business resilience (independent variable) was generated by summing responses of all the items while financial sustainability (dependent variable) was generated by adding responses of all items used to measure the variable. The regression test results are presented in Tables 4.12.

Table 4.12: Summary of Regression Analysis for the effect of Business Resilience on Financial Sustainability of Sugar Manufacturing Companies in Nigeria

Model		F(df)	Anova Sig
R	0.630		
R Square	0.397	182.247(1,277)	0.000
Adjusted R Square	0.395		
Coefficients	Unstandardized Coefficients	t	sig
(Constant)	2.346	13.183	.000
Business Resilience	.527	13.500	.000

a. Dependent Variable: Financial Sustainability

b. Predictors: (Constant), Business Resilience

Source: Researcher’s Field Survey Results, 2024

From the results in Table 4.12, business resilience has moderately strong positive and statistically significant relationship with the financial sustainability of sugar manufacturers in Nigeria ($R = 0.630$, $p < 0.05$). The coefficient of determination (R^2) of 0.397 shows that business resilience explains 39.7% of the changes in financial sustainability, while the remaining 60.3% changes in financial sustainability of sugar manufacturers in Nigeria is explained by other external factors other than those examined in this study. From the Table 4.12 the results of ANOVA (overall model significance) of regression test which revealed that business resilience has a significant effect on financial sustainability of sugar manufacturers in Nigeria. This can be explained by the F-value (182.247) and low p-value (0.000) which is statistically significant at

95% confidence interval. Hence, the result posited that business resilience attributes of the sugar manufacturing companies in Nigeria significantly influenced their financial sustainability. Moreover, scholars have provided additional threshold for making sense of the values of R^2 . The R^2 values of 0.75, 0.50, and 0.25 for endogenous latent variables can be considered as substantial, moderate, and weak. Hence, with reference to R^2 criterion, it is safe to say that business resilience ($R^2= 0.397$) has moderately strong effect on the financial sustainability of sugar manufacturing companies in Nigeria.

Furthermore, the results of regression coefficients revealed that a positive and statistically significant relative influence was reported for business resilience. Specifically, the results reveal that at 95% confidence level, Business resilience ($\beta = 0.527$, $p= 0.000$, $t= 13.500$) attributes of the sugar manufacturing companies in Nigeria is statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. This suggest that a unit change in business resilience will lead to a 0.527 increase in the financial sustainability of sugar manufacturers in Nigeria, given that all other factors are held constant. Based on the path coefficient, the regression model is restated as follows:

$$FS = 2.346 + 0.527BR \text{ ----- (i)}$$

FS= Financial Sustainability

BR= Business resilience

On the strength of this result ($R^2= 0.397$, $F(1,277)= 182.247$, $p= 0.000$), this study rejects the null hypothesis four (H_04) which states that business resilience have no significant effect on financial sustainability of sugar manufacturers in Nigeria.

H₀₅: BCMFs has no significant effect on financial sustainability of sugar manufacturers in Nigeria

The null hypothesis five which states that there is no significant effect of BCMFs on financial sustainability of sugar manufacturers in Nigeria was tested using simple linear regression analysis. In the analysis, the values of financial sustainability were regressed on the values of BCMFs. The data for BCMFs (independent variable) was generated by summing responses of all the items while financial sustainability (dependent variable) was generated by adding responses of all items used to measure the variable. The regression test results are presented in Tables 4.13.

Table 4.13: Summary of Regression Analysis for the effect of BCMFs on Financial Sustainability of Sugar Manufacturing Companies in Nigeria

Model		F(df)	Anova Sig
R	0.672		
R Square	0.452	228.570(1,277)	0.000
Adjusted R Square	0.450		
Coefficients	Unstandardized	t	Sig
	Coefficients		
(Constant)	1.840	9.574	.000
BCMFs	.658	15.119	.000

a. Dependent Variable: Financial Sustainability

b. Predictors: (Constant), BCMFs

Source: Researcher's Field Survey Results, 2024

From the results in Table 4.13, BCMFs has moderately strong positive and statistically significant relationship with the financial sustainability of sugar manufacturers in Nigeria ($R = 0.672$, $p < 0.05$). The coefficient of determination (R^2) of 0.452 shows that BCMFs explains 45.2% of the changes in financial sustainability, while the remaining 54.8% changes in financial sustainability of sugar manufacturers in Nigeria is explained by other external factors other than those examined in this study. From the Table 4.15 the results of ANOVA (overall model significance) of regression test which revealed that BCMFs has a significant effect on financial sustainability of sugar manufacturers in Nigeria. This can be explained by the F-value (228.570) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that BCMFs evident within the sugar manufacturing companies in Nigeria significantly influenced their financial sustainability. Moreover, scholars have provided additional threshold for making sense of the values of R^2 . The R^2 values of 0.75, 0.50, and 0.25 for endogenous latent variables can be considered as substantial, moderate, and weak. Hence, with reference to R^2 criterion, it is safe to say that BCMFs ($R^2 = 0.452$) has moderately strong effect on the financial sustainability of sugar manufacturing companies in Nigeria.

Furthermore, the results of regression coefficients revealed that a positive and statistically significant relative influence was reported for BCMFs. Specifically, the results reveal that at 95% confidence level, BCMFs ($\beta = 0.658$, $p = 0.000$, $t = 15.119$) of the sugar manufacturing companies in Nigeria is statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. This suggest that a unit change in BCMFs will lead to a 0.658 increase

in the financial sustainability of sugar manufacturers in Nigeria, given that all other factors are held constant. Based on the path coefficient, the regression model is restated as follows:

$$FS = 1.840 + 0.658BCMFs \text{ ----- (i)}$$

FS= Financial Sustainability

BCMFs= Business Continuity Management Factors

On the strength of this result ($R^2= 0.452$, $F(1,277)= 228.570$, $p= 0.000$), this study rejects the null hypothesis five (H_05) which states that BCMFs have no significant effect on financial sustainability of sugar manufacturers in Nigeria.

Further analysis was done to identify the relative effect of each of the measure of BCMFs on financial sustainability simultaneously. This is important because it will help the sugar manufacturers to identify the contribution of each of the BCMFs towards its financial sustainability. The multiple regression was conducted to achieve this objective. In the analysis, emphasis is on the unstandardized coefficients in Table 4.16.

Table 4.14: Summary of Regression Analysis for the Relative Effect of BCMFs on Financial Sustainability of Sugar Manufacturing Companies in Nigeria

Model		F(df)	Anova Sig
R	0.701		
R Square	0.491	66.019(4,275)	0.000
Adjusted R Square	0.483		
Coefficients	Unstandardized Coefficients	t	sig
(Constant)		1.731	8.656
			.000

Strategy Unfolding	.059	1.106	.270
Strategic response	.304	6.512	.000
Business Resilience	.297	4.890	.000
Crisis Management Leadership	.011	.213	.832

a. Dependent Variable: Financial Sustainability

b. Predictors: (Constant), Strategy unfolding, Strategic response, Business resilience, Crisis management leadership

Source: Researcher's Field Survey Results, 2024

The path coefficient of each BCMFs (strategy unfolding, strategic response, business resilience, & crisis management leadership) represents the coefficient of determination (β) which shows the relative effect of each BCMFs on financial sustainability. The multiple regression results in Table 4.14 revealed that all the BCMFs have positive and significant effect on financial sustainability except strategy unfolding and Crisis management leadership. Specifically, the results revealed that at 95% confidence level, Strategic response ($\beta = 0.304$, $t = 6.512$), and business resilience ($\beta = 0.297$, $t = 4.890$), and brand recognition ($\beta = 0.274$, $t = 2.079$) sugar manufacturers in Nigeria were statistically significant as their p-values were less than 0.05 and their t-values greater than 1.96. However, strategy unfolding ($\beta = 0.059$, $t = 1.106$) and crisis management leadership ($\beta = 0.011$, $t = 0.213$) are statistically insignificant as their p-values is greater than 0.05 and their t-values less than 1.96 Based on the path coefficient, the regression model is restated as follows:

$$FS = 1.731 + 0.304SR + 0.297BR \text{ ----- (i)}$$

FS= Financial Sustainability

SR= Strategic Response

BR = Business Resilience

Further analysis indicates that taking all other independent variables at zero, a unit change in strategic response will result in an increase of 0.304 in the financial sustainability of sugar manufacturers in Nigeria given that all other factors are held constant. Similarly, the result shows that a unit change in business resilience will lead to a 0.297 increase in financial sustainability of sugar manufacturers in Nigeria given that all other factors are held constant. Overall, from the results, strategic response had the highest relative effect on financial sustainability of sugar manufacturers in Nigeria with a coefficient of 0.304 and t value of $t=6.512$ followed by business resilience with a coefficient of 0.297 and t value of $t=4.890$.

H₀₆: Eco-efficiency has no significant moderating effect on the interactions of BCMFs and financial sustainability of sugar manufacturers in Nigeria.

To evaluate the null hypothesis six, hierarchical regression was applied whereby the analysis was carried out in the order of hierarchy. A composite score was obtained for BCMFs as adopted by the sugar manufacturers in Nigeria and were used in the regression analysis. Also, data for financial sustainability (Y) was created by adding responses of all items for the variable, while that of eco-efficiency (Z) was obtained from adding responses of all items for the variable. In addition, an interaction term for BCMFs and eco-efficiency (X_1*Z_2) was obtained by multiplying the composite score for BCMFs and Eco-efficiency. The hypothesis would be supported if the effect of the interaction of BCMFs and Eco-efficiency (X_1*Z_2) on financial sustainability of sugar manufacturers in Nigeria is statistically significant. The results of the analysis step by step are presented in Table 4.15.

Table 4.15: Summary of Hierarchical Regression Analysis for the Moderating Effect of Eco-Efficiency on the Relationship between BCMFs and Financial Sustainability of Sugar Manufacturers in Nigeria

Model ^{1,2,3}	Beta	t	Sig.	R	R ²	Adj. R ²	ΔR ²	ΔF	Sig. F Change
(Constant) ¹	1.84 0	9.574	.000	.672 ^a	.452	.450	.452	228.57 0	0.000
BCMFs	.658	15.11 9	.000						
F & Anova Sig: 228.570(1,277), p=.000									
(Constant) ²	1.49 0	8.831	.000	.773 ^b	.597	.594	.145	99.483	0.000
BCMFs	.326	6.504	.000						
Eco-efficiency	.397	9.974	.000						
F & Anova Sig: 204.659(2,276), p=.000									
(Constant) ³	3.05 2	5.050	.000	.779 ^c	.608	.603	.010	7.230	0.008
BCMFs	-.119	-.690	.491						
Eco-efficiency	.049	.362	.718						
BCMFs*Ecoefficiency	.097	2.689	.008						
F & Anova Sig: 141.929 (3,275), p=.000									

a. Predictors: (Constant), BCMFs

b. Predictors: (Constant), BCMFs, Eco-Efficiency

c. Predictors: (Constant), BCMFs, Eco-Efficiency, BCMFs*Eco-Efficiency

d. Dependent Variable: Financial Sustainability

Source: Researcher's Field Survey Results, 2024

From the results in Table 4.15, BCMFs has moderately strong positive and statistically significant relationship with the financial sustainability of sugar manufacturers in Nigeria ($R = 0.672$, $p < 0.05$). The coefficient of determination (R^2) of 0.452 shows that BCMFs explains 45.2% of the changes in financial sustainability, while the remaining 54.8% changes in financial sustainability of sugar manufacturers in Nigeria is explained by other external factors other than those examined in this study. From the Table 4.15 the results of ANOVA (overall model significance) of regression test which revealed that BCMFs has a significant effect on financial sustainability of sugar manufacturers in Nigeria. This can be explained by the F-value (228.570) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that BCMFs evident within the sugar manufacturing companies in Nigeria significantly influenced their financial sustainability. Moreover, scholars have provided additional threshold for making sense of the values of R^2 . The R^2 values of 0.75, 0.50, and 0.25 for endogenous latent variables can be considered as substantial, moderate, and weak. Hence, with reference to R^2 criterion, it is safe to say that BCMFs ($R^2 = 0.452$) has moderately strong effect on the financial sustainability of sugar manufacturing companies in Nigeria.

Furthermore, the results of regression coefficients revealed that a positive and statistically significant relative influence was reported for BCMFs. Specifically, the results reveal that at 95% confidence level, BCMFs ($\beta = 0.658$, $p = 0.000$, $t = 15.119$) of the sugar manufacturing companies in Nigeria is statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. This suggest that a unit change in BCMFs will lead to a 0.658 increase in the financial sustainability of sugar manufacturers in Nigeria, given that all other factors are held constant. Based on the path coefficient, the regression model is restated as follows:

$$FS = 1.840 + 0.658BCMFS \text{ ----- (i)}$$

FS= Financial Sustainability

BCMFs= Business Continuity Management Factors

In the second model, a multiple regression involving BCMFs and Eco-efficiency was introduced in the model as predictor variables and the results indicates that a change was experienced as R^2 change is 0.145 implying that the regression model explains 59.7% of changes in financial sustainability while the rest (40.3) are attributed to variables not included in the model. The F-statistics is 204.659 with a corresponding p-value of 0.000 ($p < 0.05$) indicating that the effect is statistically significant.

BCMFs has a coefficient of 0.326; t-statistic of 6.504 and a p-value of 0.000. This implies that BCMFs has positive and significant relative effect on financial sustainability of sugar manufacturers in Nigeria. Moreover, a unit change in BCMFs will have a concomitant 0.326 change in financial sustainability. In addition, the beta coefficient for eco-efficiency is 0.397; t-statistic of 9.974, and a corresponding p-value of 0.000. This implies that eco-efficiency has positive and statistically significant effect on financial sustainability of sugar manufacturers in Nigeria. The result posits that a unit change in eco-efficiency would result in 0.397 change in financial sustainability of sugar manufacturers in Nigeria. The regression model is hence restated as follows;

$$FS = 1.490 + 0.326BCMFs + 0.397EE \dots\dots\dots \text{Eq. (iv)}$$

Where:

FS = Financial Sustainability

BCMFs = Business Continuity Management Factors

EE = Eco-efficiency

The third model involved the introduction of interaction term of BCMFs and Eco-efficiency using regression model. Result in Table 4.15 indicates that the R square change is 0.010, and F-change of 7.230 with a corresponding p-value of 0.008 implied that the interaction term of BCMFs and Eco-efficiency have a positive and significant moderating effect on financial sustainability of sugar manufacturers in Nigeria (p=0.000). Furthermore, the interaction term of BCMFs and Eco-efficiency has a beta coefficient of 0.097, and a corresponding p-value of 0.000. Hence, this implies that eco-efficiency moderates the functional relationship between BCMFs and financial sustainability of sugar manufacturers in Nigeria. The established regression equation from the result is stated as follows:

$$FS = 3.052 - 0.119BCMFs + 0.049EE + 0.097BCMFs*EE \dots\dots\dots \text{Eq. (iv)}$$

Where:

FS = Financial Sustainability

BCMFs = Business Continuity Management Factors

EE = Eco-efficiency

BCMFs*EE= Business Continuity Management Factors*Eco-efficiency

The results posit that eco-efficiency moderates the functional relationship between BCMFs and financial sustainability of sugar manufacturers in Nigeria. Based on this result ($\Delta R^2= 0.010$, $\Delta F = 7.230$, $P= 0.008$), this study rejects the null hypothesis six (H_06) which states that eco-efficiency has no significant moderating effect on the association between BCMFs and financial sustainability of sugar manufacturers in Nigeria.

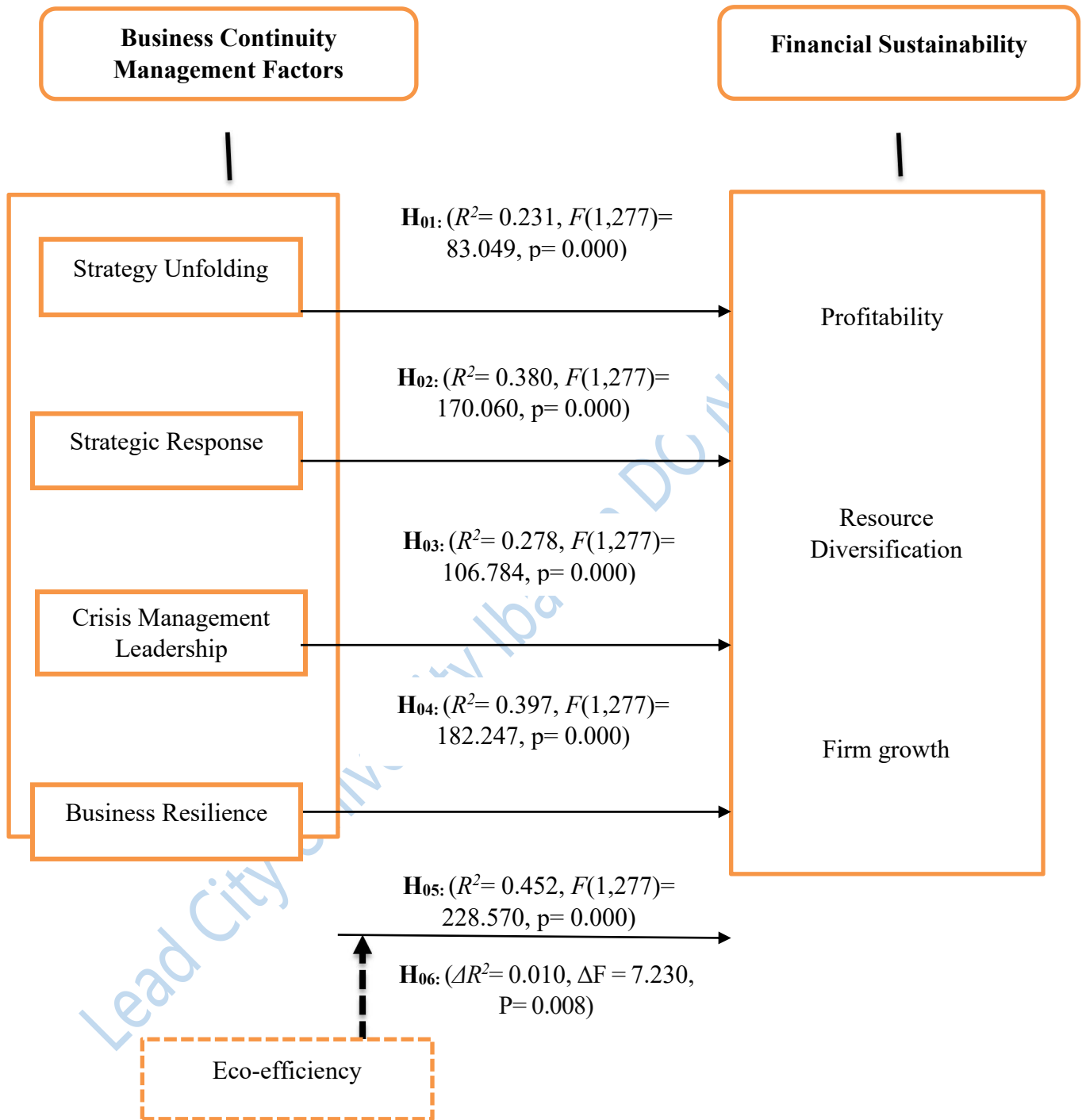


Figure 4.1 Resultant Model

Source: Researcher's Resultant Model, 2024

Figure 4.1 presents the summary of result of the six null hypotheses tested in relation to the sugar manufacturers (BUA Sugar Refinery Ltd, Dangote Sugar Refinery PLC, and Flour Mills of Nigeria Plc) in Nigeria. All the null hypotheses were not accepted and this suggested that BCMFs and eco-efficiency are critical success factors to the attainment of financial sustainability of sugar manufacturers in Nigeria. This result has implication for management and external stakeholders of the sugar industry in Nigeria. On the aggregate, the result of this study, buttressed the submission of the DCT and the contingency theory hence contributing to knowledge in this regard.

4.3 Discussion of Findings

The results of regression analysis for the effect of strategy unfolding on financial sustainability of sugar manufacturers in Nigeria revealed that strategy unfolding has a positive and significant effect on financial sustainability of sugar manufacturers in Nigeria. Conceptually the capacity to formulate strategy when done appropriate hold significant potential for better execution which will in turn enhance organisation capacity to achieve higher performance sustainably. This is because strategy unfolding involves continuously adapting and adjusting strategies based on ongoing changes in the internal and external environment¹. When applied to the context of sustainability, Strategy Unfolding can have a significant impact on promoting and advancing sustainable practices within sugar manufacturing industry and society as a whole¹.

Extant literature have presented argument of how this can happen: Strategy Unfolding enables organizations to embed sustainability considerations directly into their core strategies. Rather than treating sustainability as a separate aspect, it becomes an integral part of decision-making

processes. This integration facilitates long-term thinking and helps organizations align their goals, objectives, and actions with sustainable principles².

Strategy Unfolding emphasizes the involvement of various stakeholders in strategy development processes. Engaging stakeholders such as employees, customers, suppliers, local communities, and NGOs can enhance the sustainability performance of organizations³. Through active collaboration, organizations can tap into diverse perspectives, co-create solutions, and build strong partnerships to drive sustainability initiatives. Strategy Unfolding encourages organizations to explore innovative approaches and leverage technological advancements to enhance sustainability. It fosters a culture of innovation where new ideas and technologies are continuously explored, tested, and integrated into strategies⁴. By embracing sustainable innovation, organizations can develop environmentally friendly products, processes, and business models that contribute to resource efficiency, waste reduction, and a low-carbon economy⁵.

Strategy Unfolding emphasizes the importance of measuring, monitoring, and reporting sustainability performance. By setting specific goals, targets, and key performance indicators (KPIs), organizations can track their progress over time. This enables them to identify areas for improvement, make informed decisions, and communicate their sustainability achievements transparently to stakeholders⁶. Effective performance measurement and reporting foster accountability and drive continuous improvement in sustainability practices. Strategy Unfolding facilitates organizational learning and knowledge sharing in the realm of sustainability. As organizations implement and evaluate their strategies, they gather valuable insights and lessons learned. This knowledge can be disseminated internally to foster learning and enable continuous

improvement. Furthermore, organizations can contribute to the broader sustainability field by sharing their experiences, best practices, and research findings with the wider community⁷.

Additionally, certain schools of thought have equated strategy implementation with strategy unfolding. Strategy unfolding, as proposed by a scholar, is one such management tool that can help an organisation concentrate its efforts, make sure its members are all pulling in the same direction, and adapt to a shifting external environment⁸. The correlation between SMMEs' strategy unfolding processes and their financial success was found to be positive by a researcher⁹. Research finds similar results regarding the connection between strategy unfolding and organisational success. In addition, the results of this analysis corroborate a study, which found that the strategy unfolding process positively impacts financial performance¹⁰.

Some researchers argue that the manner in which a company's strategy is put into action has a significant impact on its bottom line^{11,12,13,14}. Similar results were found in a study which confirms these results¹⁵. According to research in the Thai pharmaceutical business, the rate at which a company's strategy is unveiled and put into action is a major factor explaining significant difference in organisational success. Scholars looking at the components involved in strategy execution have concluded that strategic unfolding has a major impact on business outcomes¹⁶.

In a study, the researchers concluded that strategic planning is relevant within the context of medium-sized organisations in the Czech Republic and the Slovak Republic. The researchers hypothesized that companies with well-written strategic plan documents outperformed those without¹⁷. As a corollary, significant institutional performance does not spontaneously occur, therefore institutions need a deliberate strategy to reach their objectives. Other researchers came

to the same conclusion in their own research on the topic. Although the researchers conducted their research in a different geographical environment than others, they were able to confirm those researchers' findings^{18,19,20}. In their study, some researchers found that moderate users of strategic planning at medium-sized firms in Western Sri Lanka saw significant improvements in operational performance²¹.

When it comes to strategic planning, strategy implementation, organisational excellence, and OP, some scholars confirmed the good and strong connections between these four factors²². In a related study, some researchers found that strategic planning and innovation had a favourable and significant impact on the efficiency of the Dubai Police Department²³. The research of some scholars confirmed the importance of strategic planning metrics in boosting business effectiveness^{21,22,23,24}. Some researchers discovered that strategic planning has a moderately beneficial and statistically significant effect on organisational performance²⁵. While a researcher found that strategic planning in general improved organisational performance, it found no meaningful effect on strategy implementation in manufacturing firms that prioritised strategic planning²⁶. That is, businesses care less and less about how well their strategies are planned to be implemented. According to a study, the majority of Ghana's family-run businesses are doing okay. The outcomes of this study demonstrated a substantial beneficial association between strategic planning and family firm performance, however it was also found that strategic planning activities are not commonly pursued among family firms in Ghana²⁷.

According to research, strategic planning has a major impact on the success of businesses²⁸. The results underline the importance of strategic planning for business owners and entrepreneurs in achieving a sustainable competitive advantage. A study found a positive correlation between

strategic planning and SMMEs' bottom lines. It was also discovered that the formulation, execution, assessment, and control stages of strategic planning all had a favourable correlation with financial results²⁹. The research conducted by a scholar found that strategic planning implementation improved strategic performance across all of its dimensions (financial, customer, internal business processes, and learning and growth)³⁰. A research shows that, in the modern business world, strategic planning is positively correlated with company success³¹. In conclusion, Strategy Unfolding provides a dynamic and adaptable approach to sustainability that enables organisations to incorporate sustainability into their core strategies, be responsive to change, engage stakeholders, drive innovation, measure performance, foster organisational learning, and contribute to the wider sustainability agenda. By adopting Strategy Unfolding, businesses may help solve some of the world's most critical environmental and social problems³².

The results of regression analysis for the effect of strategic response capability on financial sustainability of sugar manufacturers in Nigeria revealed that strategic response capability has a positive and significant effect on financial sustainability of sugar manufacturers in Nigeria. Conceptually strategic response describes the actions taken by organizations to address challenges and opportunities in their operating environment. These responses can have a significant impact on sustainability, which involves meeting the needs of the present without compromising the ability of future generations to meet their own needs. By aligning strategic responses with sustainability goals, organizations can contribute to a more environmentally, socially, and economically sustainable future³³. Extant literature has provided logical explanation of how strategic response can impact sustainability in the following ways. For instance, organizations are recognizing the need to adopt sustainable business models that

integrate economic success with environmental and social considerations. Strategic responses involve rethinking traditional approaches to business, such as embracing circular economy practices, developing eco-friendly products, and investing in renewable energy sources. These actions promote sustainability by reducing resource consumption, minimizing waste generation, and contributing to climate change mitigation³⁴.

Also, effective strategic responses involve engaging with stakeholders, including employees, customers, suppliers, communities, and regulatory bodies. By involving stakeholders in decision-making processes, organizations can better understand their concerns, values, and expectations regarding sustainability. This engagement helps organizations align their strategic responses with stakeholder interests, leading to more sustainable outcomes that address social and environmental issues³⁵. Similarly, strategic responses can enhance sustainability by effectively managing risks and uncertainties. Organizations are increasingly recognizing the importance of identifying and mitigating environmental and social risks to ensure long-term viability. By incorporating sustainability considerations into risk assessment and management practices, organizations can minimize negative impacts on the environment and society, safeguard their reputation, and create value for all stakeholders³⁶.

Strategic responses can drive innovation and collaboration, leading to sustainable solutions. Organizations are encouraged to seek innovative approaches to address sustainability challenges, such as developing new technologies, processes, and business models. Strategic collaborations with other organizations, research institutions, and NGOs can accelerate the development and adoption of sustainable practices, enabling shared learning, resource optimization, and collective action towards sustainability goals³⁷. Strategic responses include transparent reporting

on sustainability performance. Organizations are increasingly adopting sustainability reporting frameworks and standards, such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB), to disclose their environmental, social, and governance (ESG) practices³⁸. Transparent reporting not only allows organizations to assess their own performance but also facilitates informed decision-making by stakeholders, encourages accountability, and supports the transition to a more sustainable economy³⁹.

By incorporating these elements into their strategic responses, organizations can contribute to the achievement of sustainable development goals, such as those outlined in the United Nations Sustainable Development Agenda. The literature emphasizes the importance of integrating sustainability considerations into the core strategies and operations of organizations to ensure long-term success and a positive impact on the environment and society. It is important to note that this response is based on the available literature up to 2021³⁰. There may be more recent studies and developments in the field that could further enhance our understanding of the impact of strategic responses on sustainability.

Scholars of strategic management stress the importance of a company's strategic response capability as a prerequisite to achieving superior firm performance in an ever-evolving environment characterized by unpredictable consumer behavior, intense global/local competitive rivalry, inconsistent government policies, disruptive innovations, and weak purchasing power³¹. According to the storyline presented in, businesses can gain a lot by having and using strategic reaction capacity. According to one school of thought, businesses have a better chance of long-term success if they put their attention on developing a strategic response to the ever-shifting conditions of the market. Increased market share, satisfied fickle consumers,

rapid new product development, and reduced operating costs due to environmental shocks are just some of the many benefits that can accrue to businesses that practice greater responsive agility³². A researcher in the field of Kenyan manufacturing proposed that the success of small and medium-sized enterprises (SMEs) in export markets was directly related to their strategic response capability. In a similar vein, it was found that Malaysian SMEs can benefit from, and are better able to implement, strategic reaction skills in adaptive and sensing capacities³³.

Local oil marketing enterprises in Kenya have an opportunity to deal with intense competition according to research showing that strategic reaction capability has a positive and significant correlation with firm performance³⁴. Strategic responses, management methods, and customer loyalty were found to have a substantial correlation. Theoretically, this study shows that companies with high customer loyalty will attract and retain a dedicated customer base, leading to increased profits for their business³⁵. Scholars in the oil and gas industry, the banking industry, the textile industry, the agrochemical industry, the manufacturing industry, and the service industry have all conducted empirical studies on strategic response capability that explain a positive and significant contribution to short term performance and long-term sustainability³⁶. In light of these findings, it is clear that the ability to implement strategic responses is critical to business sustainability. The authors of this study argue, based on this discussion, that a sugar manufacturer's sustainability is heavily impacted by their strategic response capability³⁷.

The results of regression analysis for the effect of crisis management leadership on financial sustainability of sugar manufacturers in Nigeria revealed that crisis management leadership has a positive and significant effect on financial sustainability of sugar manufacturers in Nigeria.

Conceptually, Crisis management leadership describe the ability of leaders to effectively navigate and manage crises or disruptive events within organizations. The concept of sustainability, on the other hand, involves the integration of economic, social, and environmental factors to ensure the long-term well-being of individuals, organizations, and the planet³⁸. While the literature on crisis leadership and sustainability may not have directly linked these two topics extensively yet the few that did offer insights as to the expected outcomes of this interaction. According to prior studies, the crisis leadership plays a critical role in building adaptive capacity, which is the ability to respond and adapt to changing circumstances. Sustainable organizations need to be adaptable to effectively address environmental and social challenges³⁹. Crisis leaders who are proactive, innovative, and capable of making quick decisions can enhance an organization's adaptive capacity, leading to better sustainability outcomes⁴⁰.

Also, effective crisis leaders understand the importance of engaging various stakeholders, including employees, customers, communities, and regulators. In the context of sustainability, stakeholder engagement is crucial for building trust, fostering collaboration, and incorporating diverse perspectives⁴¹. By involving stakeholders in decision-making processes, crisis leaders can promote sustainable practices and ensure that the organization's actions align with stakeholder expectations and environmental considerations. Sustainability requires ethical decision making, considering the long-term consequences of actions on the environment and society. Crisis leaders who prioritize ethical decision making and demonstrate integrity can set a strong foundation for sustainable practices within an organization. They can establish a culture of responsibility, accountability, and transparency, which are essential for fostering sustainability⁴². Sustainability and crisis management are inherently linked, as both involve

identifying and managing risks. Crisis leaders who prioritize resilience planning and risk management can mitigate the negative impacts of crises on sustainability. By identifying potential threats, developing contingency plans, and implementing measures to reduce vulnerabilities, crisis leaders can enhance an organization's ability to withstand crises and maintain sustainable operations⁴³.

Crisis situations often present opportunities for learning and innovation. Effective crisis leaders foster a culture of learning from failures and successes, promoting continuous improvement and innovation. By encouraging experimentation, embracing new technologies, and supporting sustainable innovation, crisis leaders can drive organizational sustainability by finding creative solutions to complex challenges⁴⁴. Often considered as an authentic leader, studies suggest that the authentic leadership is the positive form of leadership used to develop the trust and positive working environment to foster the employee for higher self-performance; and has been found to influence high-performance working system^{44,45}. Some scholars' description of the relevance the authentic leader found support in a researcher narration. The authentic leader is associated with positive and genuine self-awareness with transparent, consistent, and behavioural integrity needed to encourage and enhance positive outcomes in employees and the organisation as a whole⁴⁶. From the empirical study done by the researcher which focused on the health practitioners (nurses) in India, found that authentic leadership is positively linked to contextual performance of nurses. Often considered as a crisis-management leader, the scholar averred that in times of uncertainties and environmental complexities, the authentic leader have the potentials to promote employee creativity, inspire confidence and drive employee and organisational performance^{46,47}.

In a study, the researcher reveal that affective commitment mediates the relationship between AL and employees' performance⁴⁸. In other words, leaders' authenticity promotes employees' affective commitment which, in turn, increases their individual competitive performance⁴⁹. A study showed a positive relationship between employee training, authentic leadership and employee performance in Jeddah Islamic Port of Kingdome of Saudi Arab. Furthermore, the findings of the study have shown a positive significant mediating role of authentic leadership between employee training and employee performance, in other words, the authentic leader is very important for the effectiveness of employee training and employee performance^{50,51}. Findings show that AL has a positive impact on organisation citizenship behaviour, employee creativity, and individual performance⁵². The outcomes are critical to the competitiveness of firms. The researcher submission offered support for another study by providing a path through which the authentic leader can enhance project performance of South Korean establishments⁵³. Moreover, that the authentic leader is a prerequisite for improving firm competitiveness.

On which leadership orientation offer higher adaptive performance, the researcher posits that servant leadership offered stronger impact on adaptive performance compared to the authentic leadership⁵⁴. Despite this result, Kaya and Karatepe still found relevance for AL in aiding organisational performance. In a related study in the health industry in Busan South Korea, some researchers through their study reveal that the Head nurses' authentic leadership and nurses' performance were strong correlates⁵⁵. Similar to the South Korea study, some researchers equally provides empirical evidence that authentic leadership is positively related to subordinates' proactive behavior needed to attain competitiveness. Likewise, there is a level of commitment that employee must exhibit to enhance competitiveness⁵⁶. That level of commitment is achieve through an employee validation that the leader is an authentic one⁵⁷.

Authentic leader's orientation has been found to boost work place happiness and employee affective commitment⁵⁸. The implication of the outcome is that positive work atmosphere and affective commitment potentially will influence the efficiency and enhance the firm competitive potentials⁵⁸. Focussing on academic environment in Indonesia, researchers pointed out that the authentic leadership behaviour exhibited by the university lecturers were critical for the academic performance observed by their students^{59,60}. Some researchers align with earlier scholars to offer explanation as to how authentic leader can drive firm competitive nature through having positive psychological influence on employee^{60,61,62}. Overall, these submissions have provided different research contexts yet one underlining truth is that a crisis/authentic leader is essential for firms that intend to stay competitive and achieve long-term sustainability⁶³.

The results of regression analysis for the effect of business resilience on financial sustainability of sugar manufacturers in Nigeria revealed that business resilience has a positive and significant effect on financial sustainability of sugar manufacturers in Nigeria. Conceptually, business resilience describe an organization's ability to adapt, recover, and thrive in the face of various disruptions and challenges, such as economic downturns, natural disasters, supply chain disruptions, and other unforeseen events. Sustainability, on the other hand, refers to the long-term ability of a business to operate in an environmentally and socially responsible manner, meeting the needs of the present without compromising the ability of future generations to meet their own needs⁶⁴.

Recent studies have highlighted the significant impact that business resilience can have on sustainability. First Business resilience strategies focus on identifying and mitigating risks

that can disrupt operations. By implementing proactive measures, such as diversifying supply chains, developing alternative sourcing options, and investing in renewable energy sources, companies can reduce their vulnerability to environmental, economic, and social shocks. This enhances the stability of their operations and contributes to long-term sustainability⁶⁵.

Second as the impacts of climate change become more pronounced, businesses need to adapt to changing environmental conditions to ensure their long-term viability. Resilient businesses are better equipped to respond to climate-related risks and incorporate sustainable practices⁶⁶. For example, companies can implement energy-efficient technologies, reduce greenhouse gas emissions, and adopt circular economy principles to minimize waste generation and resource consumption. Third business resilience measures that prioritize sustainability can enhance stakeholder trust and reputation. Customers, investors, employees, and communities increasingly expect businesses to operate in an environmentally and socially responsible manner. By demonstrating resilience through sustainable practices, companies can strengthen their relationships with stakeholders and foster a positive brand image⁶⁷.

Resilience and sustainability often go hand in hand when it comes to cost savings and operational efficiency. For instance, investing in energy-efficient technologies can reduce energy consumption and lower operational costs. Similarly, implementing sustainable supply chain practices, such as responsible sourcing and waste reduction, can lead to cost savings and improved resource management. Also, business resilience strategies that incorporate sustainability considerations help organizations comply with evolving

regulations and standards. By proactively aligning their practices with emerging environmental and social requirements, businesses can reduce compliance risks and avoid potential penalties. Moreover, anticipating and adapting to sustainability trends can future-proof companies, enabling them to stay ahead of regulatory changes and market demands⁶⁸.

Furthermore, why do some organizations cope with adverse environmental conditions better than others? What processes lead to the creation and adoption of new ways of working? These are questions addressed by resilience⁶⁹. Some researchers offer more specific answer by advocating that firm with resilience mechanism are more prone to excel better than firm that do not⁷⁰. A scholar point was corroborated by another scholar that stressed resilience becomes a critical characteristic of a strategic firm with the capability to excel during environmental disruption^{71,72}.

Within supply chain literature, some scholars found relevance for resilience capability. The study posits that external resilience enhance supply chain performance. The implication of their study submission is that organisations need to build resilience capability with their SC partners to ensure stable material supply as well as continuous product and service delivery so that the end customers' needs can be satisfied and they can improve SC performance¹⁷³. This result is supported by previous studies^{71,72,74,75}. For instance, some scholars emphasized that firm resilience contributes to firms' survival and sustainability by helping firms to behave as complex dynamic systems, operating within dynamic systems of SC partners⁷⁶.

In their study, the scholars found that Resilience positively and significantly influences firm performance⁷⁷. Adaptive resilience has a significant influence on business performance⁷⁸. Study showed planned resilience had a significant and positive influence on adaptive

resilience. Planned resilience had no statistically significant influence on financial performance but, despite the small effect, adaptive resilience had a positive and significant influence on financial performance⁷⁹. In a related study to another scholar but offering a different outcome in terms of the unit of analysis is submit that employee-level resilience affect performance positively when the entrepreneur has a strong propensity towards personal resilience⁸⁰.

Some researchers predicted that the owner's resilience has a positive impact on the owner's CSE and firm innovation respectively⁸¹. A direct positive relationship between the owner's CSE and firm innovation, this was also supported. Predicted that resilience has a direct positive effect on firm performance, this was not supported; the owner/manager's degree of resilience does not directly lead to a higher level of performance for the firm⁸². However, further examination of the results revealed that resilience has an indirect effect on performance through the mediating variables of CSE and innovation⁸³. In the presence of supply-chain-resilience capabilities in the apparel industry, study finds that supply-chain risk-management culture positively affects supply-chain-resilience capabilities, namely re-engineering, agility and collaboration⁸⁴.

Despite the submission of several resilience scholars about its relevance and significance contribution to firm performance in different context, contrary findings were observed⁸⁵. In a study, the scholar found no direct positive and significant influence of adaptive resilience on firm performance⁸⁶. More so, the business owner manager's resilience did not result in higher level of firm performance. Nonetheless, further analysis revealed that resilience provided the boundary condition through which creative-self efficacy and innovation

influenced firm performance. Stressing that resilience is more of a second-order construct as against a first order construct with a direct impact on performance. The ability to cope with challenging situations and to deal with adversity, as well the self-belief in problems solving is positively related to building creative capabilities and a willingness to search for innovative solutions in business, these in turn become important drivers of firm performance⁸⁷. In conclusion, by integrating resilience measures that encompass environmental and social considerations, businesses can mitigate risks, adapt to changing conditions, build stakeholder trust, achieve cost savings, comply with regulations, and position themselves for long-term success in a rapidly evolving business landscape⁸⁸.

The results of regression analysis for the effect of BCMFs on financial sustainability of sugar manufacturers in Nigeria revealed that BCMFs has a positive and significant effect on financial sustainability of sugar manufacturers in Nigeria. Conceptually BCMFs play a crucial role in enhancing sustainability within organizations. recent studies emphasize the importance of strategy unfolding in BCM⁸⁹. Organizations that have a well-defined and adaptable BCM strategy are better equipped to navigate disruptions and crises. By continuously reviewing and updating their strategies, businesses can identify vulnerabilities, assess risks, and implement mitigation measures. This proactive approach enhances their ability to withstand unexpected events and maintain sustainability over the long term.

Effective crisis management leadership is a critical aspect of BCM and sustainability. Leaders who possess strong crisis management skills and can make informed decisions during crises have a direct influence on an organization's ability to recover and sustain operations. Research highlights that leaders who display qualities such as clear

communication, strategic thinking, and the ability to coordinate resources effectively can guide their organizations through turbulent times, minimizing disruptions and maintaining sustainable operations⁹¹. The ability to respond swiftly and effectively to disruptions is key to sustainability. Recent studies highlight that organizations with robust BCM plans that outline specific response protocols are more likely to achieve sustainability in the face of crises. These plans should encompass various scenarios, outlining the actions to be taken, resource allocation, and communication strategies. Organizations that can quickly adapt, implement their response plans, and address critical issues are better positioned to minimize the impact of disruptions and maintain operations.

Furthermore, based on previous research, business continuity management was related with performance^{24,25,26}. The research article by a scholar explains that business continuity management has been widely known by many organizations especially higher education institution. The organization should pay attention the importance of strategic planning, proactive management, risks identification to globally compete and obtained the maximum performance of business²⁶. In a related literature, the scholar stressed that business continuity management must concern on critical factors that must be considered by institution to ensure maximum productivity as well as avoid existing risks^{27,28}. Considering the previous researches, the business continuity management is a very important factor to make the organization runs sustainably. According to the previous research, the business firms that implement BCMFs get an edge over their competitors in terms of resiliency^{32,33}. This enables the business to get out from crisis and restart critical functioning with minimized impacts. In conclusion, recent studies highlight the critical role of strategy unfolding, crisis management leadership, strategic response, and business resilience in

promoting sustainability within organizations. By incorporating these factors into their BCM practices, businesses can enhance their preparedness for disruptions, minimize the impact of crises, and maintain sustainable operations over time⁹².

The results of hierarchical regression analysis for the moderating effect of eco-efficiency on the interaction between BCMFs and financial sustainability of sugar manufacturers in Nigeria revealed that BCMFs has a positive and significant moderating effect of eco-efficiency given the linkage between BCMFs and financial sustainability of sugar manufacturers in Nigeria. Conceptually, eco-efficiency guaranty maximizing resource efficiency and minimizing environmental impacts. By integrating eco-efficiency principles into their operations, sugar manufacturers can effectively address both the short-term challenges of business continuity and the long-term goal of sustainability.

Scholars have positioned that eco-efficiency can lead to cost savings, which is a crucial factor in business continuity management. By improving energy efficiency, optimizing water consumption, and reducing waste generation, sugar manufacturers can lower their operational costs. This not only enhances their financial stability but also allows them to allocate resources towards business continuity planning and risk mitigation. The cost savings can be used to invest in backup power systems, establish alternative supply chains, or develop contingency plans, thereby increasing the resilience of their operations.

Furthermore, eco-efficient practices align with the growing demand for sustainable products and responsible business practices. Consumers and stakeholders are increasingly concerned about the environmental and social impacts of the products they purchase. By adopting eco-efficiency measures, sugar manufacturers can reduce their carbon footprint, minimize water

pollution, and promote sustainable land use. This not only enhances their reputation and brand image but also opens up new market opportunities and ensures the long-term viability of their business.

In addition to the immediate benefits, integrating eco-efficiency into the operations of sugar manufacturers can contribute to the overall sustainability of Lagos State. Nigeria, like many other countries, faces pressing environmental challenges, including climate change, deforestation, and pollution. By adopting eco-efficient practices, sugar manufacturers can contribute to mitigating these issues by reducing greenhouse gas emissions, conserving natural resources, and promoting circular economy principles. This proactive approach towards sustainability can help foster a conducive business environment and garner support from regulators, communities, and investors⁹³.

Furthermore, in the context of sugar manufacturers, eco-efficiency plays a crucial role in moderating the interaction between business continuity management factors and sustainability and academic literature have provided a possible linkage. For example, eco-efficiency enables sugar manufacturers to optimize their resource utilization and reduce environmental impacts. A study conducted by a scholar analyzed the eco-efficiency of sugar mills in Brazil and found that efficient use of resources, such as water, energy, and raw materials, led to reduced waste generation and lower environmental pollution. By implementing eco-efficient practices, sugar manufacturers can minimize their ecological footprint and contribute to the long-term sustainability of the industry⁹⁴.

Also, eco-efficiency fosters resilience and adaptability in the face of business continuity management challenges. Sugar manufacturers are often exposed to various risks, such as

climate change, fluctuating market demands, and supply chain disruptions. According to a study, eco-efficient strategies, such as adopting cleaner production techniques, diversifying energy sources, and implementing waste management systems, enhance the resilience of sugar manufacturers. These practices not only minimize environmental risks but also improve operational efficiency and ensure business continuity during turbulent times⁹⁵.

Furthermore, eco-efficiency contributes to the overall profitability and competitiveness of sugar manufacturers. Sustainable practices can lead to cost savings through reduced resource consumption and waste generation. A study emphasized that eco-efficiency measures, such as energy efficiency improvements and waste reduction, positively influence the economic performance of sugar manufacturers⁹⁶. By integrating sustainable practices into their operations, sugar manufacturers can enhance their brand image, attract environmentally conscious consumers, and gain a competitive edge in the market.

Moreover, eco-efficiency aligns with evolving regulatory frameworks and stakeholder expectations. Governments and society are increasingly demanding sustainable practices from businesses. By incorporating eco-efficiency into their operations, sugar manufacturers can comply with environmental regulations, mitigate reputational risks, and maintain a positive relationship with stakeholders⁹⁷. A study emphasized that eco-efficiency initiatives can help sugar manufacturers build trust and credibility with communities, environmental organizations, and investors. In conclusion, eco-efficiency can act as a moderating factor between business continuity management factors and the sustainability of sugar manufacturers in Lagos State, Nigeria. By implementing eco-efficient practices, sugar manufacturers can enhance their resilience, reduce costs, meet the growing demand for

sustainable products, and contribute to the overall sustainability of the region. It is essential for sugar manufacturers to recognize the interplay between business continuity and sustainability and embrace eco-efficiency as a means to achieve long-term success in a dynamic and environmentally conscious business landscape⁹⁸.

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Chapter Five

Conclusion

This chapter discusses the summary of the findings, conclusions and recommendations of the study. The findings of this study concisely summarize the contributions of the study to knowledge whilst also emphasizing respective limitations to study as well as suggestions to further studies.

5.1 Summary of Findings

The study examined the effect of BCMFs vis-à-vis strategy unfolding, strategic response, crisis management leadership, and business resilience on financial sustainability of sugar manufacturers in Nigeria. It precisely assessed the individual effect of strategy unfolding, strategic response, crisis management leadership, and business resilience on financial sustainability of sugar manufacturers in Nigeria. Further analysis was done to determine the moderating effect of eco-efficiency on the interaction between BCMFs and financial sustainability of sugar manufacturers in Nigeria. From the analyses and interpretation of hypotheses, the following can be summed up as the major empirical findings of this study:

1. Strategy unfolding has positive and significant effect on financial sustainability of sugar manufacturers in Nigeria($R^2= 0.231$, $F(1,277)= 83.049$, $p= 0.000$)
2. Response strategy has positive and significant effect on financial sustainability of sugar manufacturers in Nigeria($R^2= 0.380$, $F(1,277)= 170.060$, $p= 0.000$)
3. Crisis management leadership has positive and significant effect on financial sustainability of sugar manufacturers in Nigeria($R^2= 0.278$, $F(1,277)= 106.784$, $p= 0.000$).

4. Business resilience has positive and significant effect on financial sustainability of sugar manufacturers in Nigeria($R^2= 0.397$, $F(1,277)= 182.247$, $p= 0.000$)
5. BCMFs has positive and significant effect on financial sustainability of sugar manufacturers in Nigeria ($R^2= 0.452$, $F(1,277)= 228.570$, $p= 0.000$).
6. Eco-efficiency has positive and significant moderating effect on the interactions between BCMFs and financial sustainability of sugar manufacturers in Nigeria($\Delta R^2= 0.010$, $\Delta F = 7.230$, $P= 0.008$)

5.2 Conclusion

Based on the empirical findings, this study concluded that there was a statistically significant effect of BCMFs (strategy unfolding, strategic response, crisis management leadership, and business resilience) on financial sustainability of sugar manufacturers in Nigeria which include profitability, resource diversification and firm growth. Further analysis showed that eco-efficiency has significant moderating effect on the interaction between BCMFs and financial sustainability of sugar manufacturers in Nigeria.

Theoretically, the outcome of this study is in line with the dynamic capability theory and the contingency theory which provided the theoretical underpinnings for this study. The theories were selected to guide this study because their perspectives relate to the variables under investigation. The strength of the DCT provided the link between the sugar manufacturers and the macro-environment in which they operate and was responsible for the identifying variables with dynamic attributes critical to BCMFs. DCT emphasizes that activities that make up the dimension of BCMFs are change activities that holds potential for enhancing the financial sustainability of sugar manufacturers in Nigeria. Drawing from the interactionist perspective in

other words, contingency theory of fit as a moderator, the success of a firm is contingent on its strategic fit with the environment. Specifically, the contingency theory of fit as a moderator suggest that when the interaction between the independent variable and the dependent variable is enhanced with the introduction of a third variable then a moderating-effect has taken place. Based on explanatory powers of these theories, the contingency theory offers explanation for the potential of deploying eco-efficiency as a contingent factor that moderate the interaction between BCMFs and financial sustainability of sugar manufacturers in Nigeria.

5.3 Recommendations

Based on the findings of this study, the following recommendations are made;

1. The study established that strategy unfolding significantly contributes to financial sustainability of sugar manufacturers in Nigeria. However, the effect is weak suggesting that more effort is required by management of the sugar manufacturers in Nigeria to encourage staff input in planning strategy, demarcate resources to enhance strategy planning, define goal indicators in order to monitor strategy success and designate who is responsible for each strategic action.
2. Strategic response capability has significant effect on financial sustainability of sugar manufacturers in Nigeria. Nevertheless, the effect is not at the optimum level suggest that the management must collaborate with competitors to address common goals, be very quick to adapt their business to suit changing business environment and consistently explore new markets to take advantage of opportunities that can guaranty its financial sustainability.

3. The study established that crisis management leadership significantly contributes to financial sustainability of sugar manufacturers in Nigeria, however, the effect is weak. Understanding that leadership appropriateness is key for long time business viability for the sugar manufacturers. Hence, evoking crisis leadership is critical to ensure achieving business continuity during uncertain and complex business times. All effort must be made to ensure management imbibe crisis management leadership orientation during this challenging and turbulent business times.
4. Business resilience have significant and fairly strong effect on financial sustainability of sugar manufacturers in Nigeria. Despite this fairly significant effect management must ensure it permits new knowledge, even when it conflicts with well-accepted experience and knowledge, develop a culture that values and practices open communication, acquire new technologies/knowledge from various channels, and set clear objectives, supported by staff. These activities should enhance the development of resilience capability needed to attain financial sustainability.
5. BCMFs with emphasis on strategy unfolding and crisis management leadership orientation need to be revisited by the management of the sugar manufacturers given their insignificant relative effect on financial sustainability.
6. Eco-efficiency act as a significant moderator which enhance the interaction between BCMFs and financial sustainability of sugar manufacturers in Nigeria. With a significant moderating effect, it is critical that sugar manufacturers in Nigeria take advantage of developing and deploying eco-efficiency capabilities. By integrating eco-efficiency principles into their operations, sugar manufacturers can effectively

address both the short-term challenges of business continuity and the long-term goal of sustainability.

5.4 Contributions to Knowledge

The finding of this study made important contributions to academia and practitioners in the following ways:

1. This study identified and filled conceptual gaps in literature regarding the BCMFs linkage with financial sustainability of sugar manufacturers in Nigeria.
2. Likewise gap regarding the moderating role of eco-efficiency on the linkage between BCMFs and financial sustainability of sugar manufacturers in Nigeria. was equally addressed.
3. The conceptual model developed for the study suggests another area in which this study has contributed to the body of knowledge conceptually because no known similar studies, both theoretical and empirical, have utilized the model in their studies. Hence, adding to models that can explain the link between BCMFs, eco-efficiency and financial sustainability of sugar manufacturers in Nigeria.
4. This study equally contextualized BCMFs to suit the research context and the measurement of variable include strategy unfolding, strategic response, crisis management leadership, and business resilience. The measurement of variable which derives from the DCT is another methodological contribution to knowledge.
5. The outcome of this study offered additional support for the tenets of the dynamic capability theory and the contingency theory, which provided the theoretical underpinnings for this study. Specifically, these theories offered a complementary explanation to substantiate the

interaction of BCMFs, eco-efficiency and financial sustainability of sugar manufacturers in Nigeria.

Therefore, on the strength of the outcomes of theory testing (see 4.2 Test of hypotheses), this study confirms that via the complementary role played by the dynamic capability theory and the contingency theory, this study has made a significant contribution to theory application and offers future studies the ability to infuse two theories to provide theoretical basis and explanation for the achievement of the objective of a study.

7. This study evaluated the interactions of BCMFs, eco-efficiency, and financial sustainability of sugar manufacturers in Nigeria. The empirical outcome of this study contributes to the existing literature and empirical findings in the area of BCMFs, eco-efficiency, and financial sustainability in Nigeria. and equally served as a reference material for future researchers. Specifically, the empirical findings from the test of hypotheses suggested that strategy unfolding, strategic response, crisis management leadership, and business resilience are critical BCMFs with the potential to enhance financial sustainability of sugar manufacturers in Nigeria, given that individually and collectively, they exert positive and significant effects on financial sustainability of sugar manufacturers in Nigeria. Moreover, this study positioned the value relevance of having and deploying eco-efficiency mechanism given that it can help sugar manufacturers maximize their resource utilization and ensuring minimum impact on the environment. Consumers and stakeholders are increasingly concerned about the environmental and social impacts of the products they purchase. By adopting eco-efficiency measures, sugar manufacturers can reduce their carbon footprint, minimize water pollution, and promote sustainable land use. This not only enhances their reputation and

brand image but also opens up new market opportunities and ensures the long-term viability of their business.

These empirical submissions are a product of hypotheses testing, and they offer future researchers the opportunity of having a robust finding to aid their empirical reviews in their studies and the basis to corroborate and present a contrary outcome as with this study's submission, hence pushing forward the frontier of knowledge in the field of finance and strategic management. Overall, these above-mentioned points lay emphasis on the fact that this study offers significant contribution to knowledge and has practical implication for the sugar manufacturers in Nigeria that were investigated.

5.5 Suggestion for Further Studies

The limitations of this study offer opportunity and suggestions for future study.

1. With the rise in manufacturing companies shutting down operation in Nigeria, future could explore BCMFs from a qualitative methodology perspective to enhance deeper insight to the development and with the hope that the appropriate policy(s) to salvage the development can be implemented.
2. Future studies may consider a multi-industry study that will incorporate other organisation in FMCG, Automobile and service industry in the country to enhance the generalization of this study's findings.
3. In order to provide explanations of causality between the variables studied over time, future studies may consider a longitudinal study.
4. Future studies may consider incorporating environmental turbulence to evaluate the performance-effect of each dimension.

5. A comparative study focused on local and multinational aquaculture firms with regards to the performance effect of response strategy and adaptive resilience factors will present interesting research.

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Unpublished Theses

Janet, M. *"Strategic response to changes in business environment by commercial banks in Kenya."* PhD diss., University of Nairobi, 2018.

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Lead City University Ibadan DO NOT COPY

Questionnaire
Lead City University, Ibadan
Department of Management and Accounting

Dear Respondent,

As part of the requirement for a Doctor of Philosophy degree in Accounting, I am carrying out a study on “**Business Continuity Management Factors, Eco-Efficiency, And Financial Sustainability Of Sugar Manufacturing Companies In Nigeria**”. This study is mainly an academic exercise as all information provided would be treated with the utmost confidentiality. In any case, you feel uncomfortable to proceed; you may withdraw your consent at no cost. Below is the questionnaire that addressed the objective of this study. Please feel free to tick the option that best express your personal views.

Thank you.

Akinsanya Tunde

1. Kindly rate your **knowledge** of the overall organisational activities and performance of your organisation on the scale below.

Very low

Excellent

1	2	3	4	5	6	7	8	9	10
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Section A: Demographic Information

Please carefully go through each item and tick (√) as appropriate.

2. Gender: Male () Female()
3. What is your age bracket: 21- 30 () 31- 40() 41-50 () 51 – 60() 61 - 65 ()
4. What is your highest academic qualification: ND/NCE () B.Sc/BA/HND () PGD/MBA/MSc/MA () MPhil () PhD () Others, (please specify).....
5. Job Level: Top management () Middle management () Operational management ()
6. Length of Service: Below 5yrs (), 6-10yrs (), 11-15yrs () 16yrs + ()

Section A: Business Continuity Management Factors

The statement in this section concerns business continuity management factors applicable to your company. Using the six-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organization by selecting one of the options provided (6, 5, 4, 3, 2, 1).

6 = Very High extent; 5 = High extent; 4 = Partially High extent; 3 = Partially Low extent; 2= Low extent; 1 = Very Low extent

I		VHE	HE	PHE	PLE	LE	VLE
Strategy Unfolding							
To what extent, does your firm do the following?							
1	Establish specific actions to implement the strategy	6	5	4	3	2	1
2	Encourage staff input in planning strategy	6	5	4	3	2	1
3	Demarcate resources to enhance strategy planning	6	5	4	3	2	1
4	Designate who is responsible for each strategic action	6	5	4	3	2	1

5	Engage managers in defining resources required to achieve plan	6	5	4	3	2	1
6	Define goal indicators in order to monitor strategy success	6	5	4	3	2	1
7	Able to comprehensively monitor the implementation of the strategy	6	5	4	3	2	1
II Strategic Response		VHE	HE	PHE	PLE	LE	VLE
To what extent, does your firm do the following?							
1	We have a flexible business process that respond to market changes quickly	6	5	4	3	2	1
2	We are sensitive to opportunities presented by market changes	6	5	4	3	2	1
3	We can deploy quick changes to company policy to accommodate environmental challenges	6	5	4	3	2	1
4	We collaborate with competitors to address common goals	6	5	4	3	2	1
5	We actively conduct market scanning for opportunities	6	5	4	3	2	1
6	We consistently explore new markets	6	5	4	3	2	1
7	We are quick to adapt our business to suit changing business environment	6	5	4	3	2	1
6 = Very frequently; 5 = Frequently; 4 = Occasionally; 3 = Rarely; 2= Very Rarely; 1 = Never							
II Crisis management Leadership		VF	F	O	R	VR	N
How often does your firm's leadership exhibit the following?							
1.	Actively listen to diverse points of view to address organisation's concern	6	5	4	3	2	1
2.	Follow through on promises he/she makes	6	5	4	3	2	1
3.	Genuinely celebrate others commitment to organisation value	6	5	4	3	2	1
4.	Treat others with dignity and respect	6	5	4	3	2	1
5.	Give people a great deal of freedom and choice in deciding how to do their work	6	5	4	3	2	1
6.	Show genuine concern for employee's	6	5	4	3	2	1

	wellbeing						
7.	Encourage learning and development across units	6	5	4	3	2	1
8.	Demonstrate genuine self-discipline	6	5	4	3	2	1
9.	Builds a system of shared purpose for all employees	6	5	4	3	2	1
10.	Show significant understand of task that need to be achieved	6	5	4	3	2	1
I V	Resilience To what extent, does your firm exhibit the following?	VHE	HE	PHE	PLE	LE	VLE
1	We can identify emerging threats and understand their impact on all aspects of the business; workers and their broader community	6	5	4	3	2	1
2	We have strong and supportive relationships with key stakeholders	6	5	4	3	2	1
3	We have Staff who are committed to working as a unified team	6	5	4	3	2	1
4	We set clear objectives, supported by staff	6	5	4	3	2	1
5	We enjoy clear direction from leadership	6	5	4	3	2	1
6	We acquire new technologies/knowledge from various channels	6	5	4	3	2	1
7	Permits new knowledge, even when it conflicts with well-accepted experience and knowledge	6	5	4	3	2	1
8	Invest resources necessary to closely connect with customers						
9	Develop a culture that values and practices open communication						

Section B: Sustainability Performance

The statement in this section concerns sustainability performance indicators as applicable to your firm. Using the six-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organization by selecting one of the options provided (6, 5, 4, 3, 2, 1).

6 = Very High extent; 5 = High extent; 4 = Partially High extent; 3 = Partially Low extent; 2= Low extent; 1 = Very Low extent

V Profitability		VHE	HE	PHE	PLE	LE	VLE
In the last 5 years, to what extent, does your firm achieve the following relative to industry average?							
1	Increase between 2017 and 2018	6	5	4	3	2	1
2	Increase between 2018 and 2019	6	5	4	3	2	1
3	Increase between 2019 and 2020	6	5	4	3	2	1
4	Increase between 2020 and 2021	6	5	4	3	2	1
5	Increase between 2021 and 2022	6	5	4	3	2	1
6	Increase between 2022 and September 2023	6	5	4	3	2	1
VI Resource Diversification		VHE	HE	PHE	PLE	LE	VLE
To what extent, does your firm achieve the following?							
1	I believe that diversifying our resources is essential for long-term financial sustainability.	6	5	4	3	2	1
2	Our organization actively explores new sources of funding or revenue to reduce reliance on a single source.	6	5	4	3	2	1
3	We regularly assess the risks associated with relying too heavily on a specific resource or income stream.	6	5	4	3	2	1
4	Our organization has a well-defined strategy for diversifying resources.	6	5	4	3	2	1
5	I feel that resource diversification enhances our ability to adapt to changing economic conditions.	6	5	4	3	2	1
6	We actively seek partnerships or collaborations to access new resources or markets.	6	5	4	3	2	1
7	I believe that resource diversification contributes to our organization's overall resilience and competitiveness.	6	5	4	3	2	1
VIII Firm growth with respect to productive capacity		VHE	HE	PHE	PLE	LE	VLE
To what extent, does your firm							

achieve the following relative to industry average?							
1	Increase between 2017 and 2018	6	5	4	3	2	1
2	Increase between 2018 and 2019	6	5	4	3	2	1
3	Increase between 2019 and 2020	6	5	4	3	2	1
4	Increase between 2020 and 2021	6	5	4	3	2	1
5	Increase between 2021 and 2022	6	5	4	3	2	1
6	Increase between 2022 and September 2023	6	5	4	3	2	1

Section C: Moderators

The statement in this section concerns moderating variables which firm are exposed to. Using the six-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organisation by selecting one of the options provided (6, 5, 4, 3, 2, 1).

6 = Very High extent; 5 = High extent; 4 = Partially High extent; 3 = Partially Low extent; 2 = Low extent; 1 = Very Low extent

IX	Eco-Efficiency To what extent, does your firm achieve the following relative to industry best practice?	VHE	HE	PHE	PLE	LE	VLE
1	We train our staff to care for the environment	6	5	4	3	2	1
2	We allocate budgetary resources to minimize pollution	6	5	4	3	2	1
3	We advocate pollution prevention	6	5	4	3	2	1
4	We take responsibility to control pollution-related events	6	5	4	3	2	1
5	We employ the use of environmental management systems	6	5	4	3	2	1
6	We advocate zero-waste via recycling/reuse of materials/waste	6	5	4	3	2	1
7	We advocate for reduction of energy and water consumption in the production process.	6	5	4	3	2	1
8	We conduct environmental impact assessment of our products.	6	5	4	3	2	1

Thank you for participating in this study

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Bio-data

A. Personal Data

1. Full Names: Joshua Tunde AKINSANYA
2. Email: tundeakinsanya2003@yahoo.com
3. Phone no: +234 80 230 63152
4. Address: 2 Mercy Street, Alabidun Quarters, Airport Road, Ibadan.
5. Date and Place of Birth: Okeluse, October 27, 1974
6. Nationality: Nigerian
7. Name and Address of Next of Kin: Mrs Abidemi Falilat Akinsanya, 2, Mercy Street, Alabidun Quarters, Airport Road, Ibadan.

B. Educational Background with Dates

1. Educational Institutions Attended with Dates and Qualifications

- a. The Federal Polytechnic, Ado-Ekiti, 1994 to 1997. OND Financial Studies, Upper Credit.
- b. The Federal Polytechnic, Nasarawa, 1999 to 2022. HND Accountancy, Upper Credit.
- c. Osun State University, Oshogbo, 2011 to 2014. B.Sc Accounting, Second Class Upper Division
- d. Obafemi Awolowo University, IleIfe, 2006 to 2010, MBA, Finance, Pass.
- e. University of Lagos, 2018 to 2020, M.Sc Finance, Pass.

2. Academic Qualifications Obtained (with dates):

- a. OND 1997;
- b. HND 2002;
- c. B.Sc 2014;
- d. MBA 2010;

e. M.Sc 2020;

3. Professional Qualifications with Dates:

a. Associate, Chartered Institute of Management Accountant, June 2023. ACMA

b. Associate, Chartered Global Management Accountant, June 2023. CGMA

c. Fellow, Institute of Chartered Accountants of Nigeria, April 2017.FCA

d. Associate, The Chartered Institute of Bankers of Nigeria, June 2013.ACIB.

e. Associate, The Chartered Institute of Taxation of Nigeria, May 2011.ACTI

C. Working Experience with Dates

1. Treasury and Finance Consultant, Livin Housing Ltd, Spennymoor, UK. July 2023 to date.

2. Treasury Manager, Hayat Kimya Nigeria Limited, Lagos. Nov 2021 to July 2023.

3. Treasury Manager, Dangote Sugar Refinery Plc, Lagos. April 2019 to Nov 2021.

4. Head of Finance, Lubricant Business, Conoil Plc, Lagos. Dec 2016 to April 2019.

5. Regional Service Manager, South West, Sterling Bank Plc Oct 2008 to Dec 2016.

6. Management Accountant, Treasury Manager, Guinness Nigeria Plc, Mar 2007 to Oct 2008.

7. Funds Transfer officer, Branch Manager, Oceanic Bank Plc, 2003 to 2007.

8. Funds transfer officer, Gateway Bank, 2002.

9. Teller, Fountain Trust Bank Plc, 1998 to 2002.

D. Award and Fellowship (if any): Nil

E. Member of Academic Professional Bodies: Nil

F. Publication (s): Nil

G. Major Conferences Attended with Dates: Nil

H. References

- Mr Oyedele Akinlolu
Regional Business Executive South West
Sterling Bank Plc,
Opic Round about,
Abeokuta.
- Mr Tiamiyu Olamakinde
Financial Controller
Dangote Fertilizer Plc
Lagos



Signature

12/11/2024

Date

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The University Compliance Certification

This is to certify that this Thesis was written by **Tunde AKINSANYA** with Matric No.**LCU/PG/001923** in the Department of Management & Accounting, Faculty of Management and Social Sciences, Lead City University, Ibadan in full compliance with approved University format and style.

Signature

Date

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