Business Processes in Brain Re-Engineering and Enterprise Sustainability

For Hospitality Firms in Niger Delta Region

by

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A master thesis submitted in partial fulfilment of the requirements for the degree of Master of Business Administration (MBA)
at the Cavalla International University – School of Graduate Studies

Department of Business Management and Administration

CAVALLA INTERNATIONAL UNIVERSITY

School of Graduate Studies

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2024

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December 2024

Abstract

The hospitality industry plays a crucial role in the economic development of Nigeria, particularly in the Niger Delta region. However, the sector faces significant challenges related to employee retention, organizational efficiency, and enterprise sustainability, which impact long-term growth. This study explores the relationship between Brain Re-Engineering—defined as the radical redesign of business processes—and enterprise sustainability within the context of the hospitality industry, specifically targeting youth engagement in Rivers State. The research aimed to assess how Brain Re-engineering (BRE) can be used as a strategic tool to foster enterprise sustainability, focusing on its effect on employee productivity, operational effectiveness, and market competitiveness. The study adopted a survey research method, with primary data gathered from a sample of 182 respondents selected from a population of 335 staff members across ten prominent hospitality firms in Rivers State. Data collection involved administering structured questionnaires, and the analysis was conducted using Spearman Rank Order Correlation techniques. The results showed a significant positive relationship between BPR and various aspects of enterprise sustainability, including innovativeness, market share, and organizational adaptability. The findings highlight the importance of customer interface, needs analysis, technical change, and strategic adaptation as critical dimensions of Brain Re-engineering that contribute to enhancing the long-term sustainability of hospitality firms.

The study furthermore underscores the necessity of integrating technological advancements, training, and workforce development to address challenges such as high employee turnover, low job satisfaction, and poor service quality that have hindered the growth of the hospitality sector in the region. It was also observed that many firms in the industry fail to fully implement re-engineering processes, adopting localized and incremental changes that do not produce the desired radical transformation. The research suggests that comprehensive BRE initiatives, coupled with strategic human resource interventions, are essential for driving enterprise sustainability and enabling hospitality firms to remain competitive in an increasingly dynamic market. The study concludes by recommending that hospitality firms in the Niger Delta region should prioritize conducting thorough training needs analyses before implementing re-engineering programs. This would ensure that employees are equipped with the necessary skills and knowledge to align with new operational processes, thereby fostering innovation and improving service delivery. By focusing on youth participation and engagement in these re-engineering efforts, the research highlights the potential for transforming not only individual businesses but also the broader socioeconomic landscape of the Niger Delta, positioning the hospitality sector as a key driver of economic empowerment and sustainable development for the region's youth.

TRANSMITTAL & APPROVAL SHEET

This dissertation, entitled, "BUSINESS PROCESSES IN BRAIN RE-ENGINEERING AND ENTERPRISE SUSTAINAIBILITY FOR HOSPITALITY FIRMS IN NIGER DELTA REGION," prepared and submitted by **IKECHI KELECHI AGBUGBA** in partial fulfilment of the requirements for the Degree of **MASTER OF BUSINESS ADMINISTRATION** is hereby accepted and endorsed.

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Dedication

I wish to dedicate this noble work to the Holy Spirit: my best friend, my life-companion, my inspiration and stand-by. I enjoy(ed) immeasurable, unimaginable and overflowing blessings from HIS avalanche of grace. HIS still small, but powerful voice remains impregnable. Profound glory, praise and thanks remain HIS forever.

Acknowledgements

I wish to acknowledge the assistance of some individuals who have been a source of inspiration and have contributed to the success of this research work. Firstly, my unreserved appreciation goes to the Committee Chairperson, Business Faculty/Vice President CIU, Dr Valencia Johnson and Committee Member, Business Faculty/President CIU, Dr Horatius Williams for their combine effort, constructive criticisms and seasoned contributions in both scope and quality. The cordial relationship I enjoyed under them during this research period was indeed meaningful and remains indelible. May the mantle of greater accomplishments in their academic and career destinies yield more fruitful dividend.

I wish to express my warmest gratitude and copious appreciation to my very dear wife, Mrs Antonia Ugo-Ikechi Agbugba for being the support system at this time of life. Her unequalled encouragement inspires all the way. I am indebted to my erudite biological mother, and I wish to express profound gratitude to her - Ezinne (Lady) Mrs Nworie Kelechi Agbugba (*Omasiridiya*) for all her prayers and consistent morale support she has given at such time. With her continued pieces of advice from my childhood days at the University of Nigeria Nsukka Campus, she and my father of blessed memory +Hon (Pa) S.K. Agbugba laid the formidable foundation for my academic and research career. May I express gratitude to my eldest sister and sibling, Prof Lady Ada Carol Ngwogu *JP* for her continued support in pursuing this MBA degree even when all hope was gone. Her husband (Prof Sir Ken Ngwogu), their children and grandson have also been awesome. May I express thanks to my CIU colleagues - Dr Charles Ihejirika and Dr Ebitari Binaebi. To my mentees/students turned colleague - Dr Augustine Okochukwu, I am very grateful for all the time he spent to proof-read my work.

I am indebted to my adorable nephew and mentee, Dr Kelechi Ngwogu and Engr Chukwuka Ikevude, who were the first readers of this work. In addition, I am grateful to my MSc student at Rivers State University, Nathan Piawa for preparing the first draft of this work. I am indebted to Prof. Pamela I. Eze-Uzomaka, Rev Eliakim Ikechukwu and his family, Surv Alex Nwokedi, Barr Harrison Chinwuko, Dr Vin Okafor and the Igbo Anglican Church Birmingham UK for all their goodwill and prayer support during this time. Lastly, I am grateful to all my colleagues at EUTECH (such as Dr Beatrice Bischof), Rivers State Uni, York St John Uni, Rome Business School and Uni of Birmingham, Lovely Professional Uni, Africa Organisation of Tech. in Agriculture, Tennessee State Uni, among others for all their moral support at this time.

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CHAPTER 1: INTRODUCTION

1.1 Background of the Study

The hospitality industry is a pivotal sector within the global service economy, focused on addressing the fundamental needs of customers, visitors, and guests. These needs are primarily related to accommodation, food, and beverages. Contemporary definitions of hospitality emphasize the relationship between a host and a guest, highlighting the industry's role in fostering interaction and building relationships (Walker, 2010). This sector encompasses hotels, guesthouses, restaurants, and other establishments that provide food, drink, and shelter services (Kivela, 1994). According to Chan (2013), the core characteristics of the hospitality industry include a product-service mix, relationship-building, labour intensiveness, two-way communication, and cultural diversity.

The effectiveness and success of hospitality firms are heavily reliant on their workforce, who must exhibit reliability and dedication to leadership and their assigned duties. Loyal and motivated employees significantly contribute to the overall effectiveness and prosperity of organizations, from the front-desk reception to the seamless ushering of guests, thus enhancing the firm’s brand image. In recent years, the hospitality industry has experienced significant growth, particularly in terms of alliances, mergers, and acquisitions, reflecting a shift in international hotel businesses (Abdullah, Baroto, Ismail and Tat, 2009).

Considering these industry shifts, *Brain Re-engineering* emerges as a modern management methodology designed to bring about radical and holistic changes within organizational operations. This approach, though underutilized, has been instrumental in improving and developing organizational processes across industries. For many organizations, Brain Re-engineering has not only enabled survival but has also led to enhanced performance and market repositioning (Agbugba, 2024). In today's highly competitive global economy, re-engineering is

not merely an option but a prerequisite for success, particularly for industries like hospitality, where efficiency and customer satisfaction are paramount.

Davenport (2003) defines a business process as the structured ordering of work activities across time and space, with a clearly defined start and end point, accompanied by identifiable inputs and outputs. Business processes are essentially collections of activities that transform inputs into outputs valued by customers (Agbugba 2023). As businesses increasingly face external pressures to adapt, the need for innovative approaches to process improvement becomes essential. This is where Brain Re-engineering (BRE) comes into play.

The focus of BRE, especially within industries like hospitality, is rooted in reshaping perceptions and approaches—particularly among youth—to ensure a transformation that aligns with modern economic demands. With the world's population growing and natural resources like land and water becoming scarcer, re-engineering offers organizations in the hospitality sector the means to meet these challenges head-on while improving customer satisfaction (Herzog, Polajnar & Tonchia, 2017; Agbugba, 2023; Agbugba, 2024).

Business process re-engineering (BPR) is a management discipline borders on the Brain Re-engineering concept. The BRE is concerned with the analysis and redesign of existing business processes to improve efficiency, effectiveness, and overall business performance. However, the BPR process involves defining the scope of re-engineering, creating specialized teams, and examining both current and future processes to identify opportunities for improvement (Sentanin, Santos & Jabbour, 2018; Agbugba and Okoye, 2024). Furthermore, BRE clarifies that it hinges on downsizing or automating existing systems, but about implementing dramatic changes to organizational structures, management systems, employee responsibilities, and performance

metrics. It also involves the adoption of new technologies to support an organization's goals (Park, Camara and Agbugba, 2023).

The importance of engaging young individuals in this transformation is increasingly apparent, especially in industries like agriculture and hospitality, where productivity and sustainability are tied to technological advancements (Allen *et al.*, 2016). Governments and organizations must develop policies and programs that encourage youth to adopt innovative technologies and gain access to essential resources, such as land, credit, and markets. Doing so will not only address the challenge of unemployment but will also create sustainable business opportunities, particularly in value-added supply chains (Agbugba and Isukul, 2020).

Business process & brain re-engineering strategies are particularly relevant in the Nigerian context, where the hospitality industry plays a critical role in economic growth. Hammer and Champy (2013) describe BPR as a fundamental rethinking of business processes aimed at achieving significant improvements in cost, quality, service, and speed. Similarly, Davenport (2003) defines it as a radical redesign of cross-functional processes, often aided by modern technology, with the goal of achieving breakthrough improvements. In essence, BPR and BRE are about abandoning outdated and inefficient methods and embracing new ideologies of managing people, processes, and technologies to achieve better and sustainable results (Agbugba, 2024). This practice, when effectively applied, can help organizations—particularly in hospitality—meet the challenges of a rapidly changing global market. BPR has become a vital tool for modern businesses, allowing them to adapt to technological and market changes and minimize costs while maximizing profits (Dimgba, Morris and Agbugba, 2023).

Given the volatility of customer needs and preferences in today's competitive markets, organizations must continuously find new and efficient ways to manage their businesses. BPR has

emerged as a reliable managerial tool for tackling these challenges, ensuring that organizations remain functional, productive, and innovative (Ogbo *et al.,* 2015). This re-engineering process is integral to not only maintaining but also expanding market share and improving customer satisfaction in the hospitality industry.

Re-engineering was first introduced by Hammer and Champy (1993), who defined it as the "fundamental rethinking and radical redesign of business processes to achieve significant improvements in contemporary critical measures such as cost, quality, service, and speed" (Omidia and Khoshtinata, 2016). This approach involves a thorough review and overhaul of current processes, aiming to enhance organizational efficiency and effectiveness. Business Process Re-engineering (BPR) signifies not just incremental change but dramatic transformation, impacting core aspects of an organization such as its structures, management systems, employee roles, and performance measures (Ab-llah, 2011). BPR has the potential to reshape every facet of modern business, offering the possibility of radical improvements that traditional methods may fail to deliver.

On the other hand, BRE hinges on creating awareness and providing education to young individuals and youths (Republic of Zambia, 2015). This is a paradigm shift that entail building of ideologies and knowledge levels of youths to volunteer their willingness to change the negative or wrong ideologies and mindset creativity to appropriate a correct or right perceptive and engaging in an enterprise or ventures entrepreneurially so as to employ technology solutions to drive a sustainable change (Yami *et al.,* 2019; Agbugba, 2024). The institutions that can actualise this are institutions or platforms such as educational institutions (formalised and non-formalised), and the social media (Mdoda *et al.,* 2023; Agbugba and Okoye, 2024).

Colbert and Kurucz (2017) define sustainability as the capacity to "keep the business going," while Boudreau and Ramstad (2015) expand on this by describing sustainability as achieving present-day success without compromising the ability to meet future needs. Enterprise sustainability, in this context, emphasizes the importance of running a business that remains viable, grows steadily, and maintains profitability while considering the aspirations and needs of both internal stakeholders (such as employees) and external ones (such as customers and society).

Previous studies exploring the relationship between Business Process Re-engineering and enterprise sustainability in the hospitality sector have primarily relied on secondary data, often gathered through behavioural or graphical rating scales (Reilly, 2003; Tongo, 2005; Pearce, 2010). Research conducted by Nweke (2009), Risher (2003), and Schmidt and Adams (2008) indicate that much of the existing literature is focused on foreign contexts, leading to findings that may not fully reflect the nuances of BPR and enterprise sustainability within hospitality firms operating in Port Harcourt. Given the cultural, socioeconomic, and operational differences, the results of these studies may be inapplicable or less relevant to the unique dynamics of the hospitality industry in the region. This underscores the necessity for a study like the present one, which deviates from previous research by using primary data to analyse the specific relationship between BPR and enterprise sustainability within the framework of hospitality firms in Port Harcourt, Niger Delta.

By focusing on the formal exchange relationships inherent in these firms, this study aims to offer a fresh perspective on how BPR can impact enterprise sustainability in this context. Consequently, this research explores the intersection of Business Process Re-engineering and enterprise sustainability in hospitality firms located in Niger Delta. The findings are expected to provide valuable insights into how re-engineering processes can be implemented effectively in a

region-specific context to foster long-term sustainability and growth within the hospitality industry.

1.2 Statement of the Problem

The hospitality industry is a potential growth sector within the service industry. However, this growth is hindered by high employee turnover rates. Many hospitality firms face difficulties retaining employees due to their inability to identify the factors that contribute to job satisfaction and loyalty. Kusluvan and Kusluvan (2010) argue that employees leave the hospitality industry due to low job satisfaction, poor working conditions, and a lack of motivation. Even during economic downturns, recruiting and retaining quality employees remains challenging (Deery, 2012).

However, a cursory look at the performance of some of the organizations indicates that some have failed because they adopted localized and incremental approaches in the implementation of the re-engineering process, and these have created extremely complex processes that contribute little to the overall effectiveness and efficiency. On the other hand, proper implementation of Brain Re-engineering empowers some organizations to remarkable improvement in their performance. This study therefore seeks to examine Brain Re-Engineering and Enterprise Sustainability of Hospitality Firms in Niger Delta Region.

1.3 Conceptual Framework

The conceptual framework presents the relationship between the dimensions of brain re-engineering and the measures of enterprise sustainability. Business Process Re-engineering (BPR), the independent variable, includes dimensions such as customer interface, needs analysis, technical change, and strategic adaptation. The dependent variable, enterprise sustainability, is measured

through innovativeness and market share. This study aims to explore the relationship between these variables.

1.4 Purpose of the Study

The general purpose of this study is to examine the relationship between brain re-engineering and enterprise sustainability in hospitality firms in Niger Delta. The specific objectives are:

1. To examine the extent to which Customer Interface relates with Enterprises Sustainability of Hospitality firms in Niger Delta.
2. To examine the extent to which Need Analysis relates with Enterprises Sustainability of Hospitality firms.
3. To examine the extent to which technical change relates with Enterprises Sustainability of Hospitality firms ich Strategic Adaptation relate with Enterprises Sustainability of Hospitality firms.

1.5 Research Questions

RQ1: To what extent does Customer interface with Enterprises Sustainability of Hospitality in Niger Delta?

RQ2: To what extent does Need Analysis relate with Enterprises Sustainability of Hospitality?

RQ3: To what extent does technical change relate with Enterprises Sustainability of Hospitality firm?

RQ4: To what extent does Strategic Adaptation relate with Enterprises Sustainability of Hospitality firm?

1.6 Research Hypothesis

The following null hypotheses were formulated for the above specific objectives:

***Ho₁*:** There is no significant relationship between Customer Interface and Innovativeness of Hospitality firms in Niger Delta.

***Ho₂*:** There is no significant relationship between Customer Interface and Market Share of Hospitality firms.

***Ho₃*:** There is no significant relationship between Need Analysis and Innovativeness of Hospitality firms.

***Ho₄*:** There is no significant relationship between Need Analysis and Market Share of Hospitality firms.

***Ho₅*:** There is no significant relationship between Technical Change and Innovativeness of Hospitality firms.

***Ho₆*:** There is no significant relationship between Technical Change and Market Share of Hospitality firms.

***Ho₇*:** There is no significant relationship between Strategic Adaptation and Innovativeness of Hospitality firms.

***Ho₈*:** There is no significant relationship between Strategic Adaptation and Market Share of Hospitality firms.

1.7 Significance of Study

This study can benefit several areas of the Hospitality industry. First of all, the study would be of benefit to the development of the Hospitality firms because cultivating the Enterprises Sustainability can improve the productivity of the company. Productivity results from how hard and how smart the employees' work. Therefore, the satisfied employees can give a better external

service quality that received and evaluated by the customers which can interest the word of Mouth. The study is useful to all categories and levels of hospitality firms, as a framework for understanding, study and manage customer relationships in hotel enterprises.

For policymakers, the study serves as a valuable input for policy formulation and implementation, aimed at regulating, monitoring, and supervising hospitality firms. Additionally, it provides essential insights for entrepreneurs and prospective investors who are considering investing in, operating, or managing a hotel business. This research will enable them to stay ahead of the competition, make informed decisions, and maximize their investment potential.

Furthermore, enhanced enterprise sustainability can help the hotel industry retain employees, as higher sustainability often leads to greater job satisfaction. This study also aids the hotel industry in identifying the factors that influence enterprise sustainability, enabling management to focus on areas that can improve sustainability and, in turn, achieve company objectives and goals. Additionally, it serves as a valuable reference for future researchers exploring the topic of enterprise sustainability.

1.8 Scope of the Study

This study is confined by scope to three main areas namely: Content scope; geographical scope and unit scope:

Content scope: This study addresses theoretical content bordering on Brain Re-Engineering and Enterprises Sustainability.

Geographical scope: This study focuses on selected hospitality firms, specifically hotels located within the Port Harcourt metropolis of Rivers State. The research includes a range of hotels chosen for their accessibility and prominence in the area. These hotels include: Hotel Presidential,

Novotel Hotel, Visa Carina Hotel, Tokyu Grand Hotel, Mangrove House Hotel, Dannic Hotel, Amanda Hotel, Blue Ribbon Suites, and Beverly Hill Hotel.

Unit scope: The unit scope of the analysis covers the individual elements and staff of Hospitality industry.

1.9 Operational Definition of Terms

Enterprises Sustainability operates a business so as to be viable, grow and earn a profit.

Business process & brain re-engineering (BPR) is a management practice in which the related tasks required to obtain a specific business outcome are radically redesigned.

Customer interface is a component of a business model that refers to the way in which a firm interacts with its customers.

Needs analysis helps organizations become proactive in approaching potential issues before they become actual problems.

Change is the project, initiative or solution being introduced in the organization to improve the way work gets done, solve a problem, or take advantage of an opportunity.

Adaptation is the process of changing an existing product or service so that it is suitable for different customers.

Innovativeness is ‘‘the skill and imagination to create new things’’, which speaks to the duality of the attribute but just scrapes the surface of the importance of innovativeness to business growth and sustainability.

Market share is the percent of total sales in an industry generated by a particular company.

CHAPTER 2: REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Brain Re-Engineering: A Conceptual Reimagination

The concept of Brain Re-engineering Concept and Reimagination BRECR focuses on addressing the perception problem and offers a viable strategy to revive struggling economies through the agricultural or agribusiness sector (Agbugba, 2024). This is particularly important in the current age of heightened environmental concerns and climate change issues, where sustainable farming is a crucial topic (Ngigi & Muange, 2022). As the global population continues to grow, the scarcity of land and water poses a significant threat to human existence (Apeh *et al.*, 2023). While politicians may hesitate, agriculture technology start-ups are actively taking steps to tackle these challenges.

It is essential to recognize that advancements in machinery have revolutionized the scale, speed, and productivity of farming equipment (Onomu *et al.*, 2020). This, in turn, enables more efficient cultivation of various inputs and variables on productive lands. Improvements in seeds, fertilizers, and irrigation systems have greatly contributed to helping farmers increase their yields in crops, livestock, agroforestry, and fisheries.

Pillars to Brain Re-Engineering Concept and Reimagination (BRECR): Focus on Food Production

The foundation of the BRECR relies on raising awareness and providing education to young individuals and youth (Republic of Zambia, 2015). This paradigm shift involves enhancing the ideas and knowledge levels of youth, empowering them to willingly challenge negative ideologies and creatively adopt a more accurate perspective. By engaging in agriculture or agro-related ventures entrepreneurially, they can leverage technological solutions to drive sustainable change (Agbugba, 2023c). Institutions that can facilitate this transformation include both formal and

informal educational platforms, as well as social media (Mdoda *et al.,* 2023). As indicated in Figure 1, the pillars of Brain Re-engineering are summarized. More specifically, Table 1 presents a comparative analysis of the Brain Re-engineering Pillars and Sustainable Agriculture.

i. *Altering Perceptions:* This involves identifying the wrong ideologies and mindset about agriculture and willingness to drop them. This thought process must be frank, sincere and intentionally approached in interchanging the wrong mindset or way they perceive agriculture.

ii. *Ideation and Entrepreneurship:* This can be addressed on a dual basis and entails formation of new ideas or concepts, as well as building or developing their entrepreneurship capacity. Having or showing initiative and resourcefulness is intended to be accompanied by expressing some good degree in being innovative which is all about being original, creative and introducing some new business ideas.

iii. *Technology Integration:* Following ideation and enterprising, the next step involves the application of scientific knowledge to practical aspects of human life, encompassing the manipulation and transformation of the human environment. Furthermore, training in various technological solutions is an integral part of this process. Modern agriculture extensively utilizes advanced technologies, including robots, temperature and moisture sensors, aerial imagery, and GPS technology. These sophisticated tools, combined with precision agriculture and robotic systems, enhance profitability, efficiency, safety, and environmental sustainability within agricultural businesses.

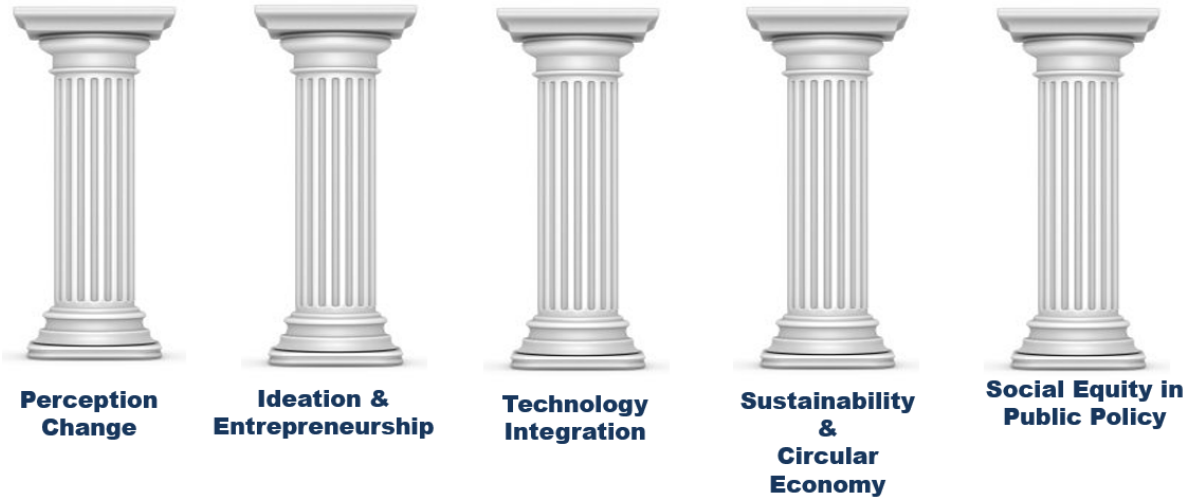

Figure 1: Pillars of Brain Re-Engineering

Source: Researcher's Concept

- *Sustainability and Circular Economy:* This pillar revolves around being intentional, consistent, and productive in agro enterprises or agro businesses over time. Every activity and practice—from production, manufacturing, processing, or value addition to marketing and distribution—must incorporate training and education; research and innovation; cross-sector collaboration; regenerative practices; nature-based solutions; as well as transparency and traceability. The production and marketing of food and agro products and services should be meticulously managed until they reach the hands of the end users. This pillar can be operational and sustainable in both developing and developed countries, provided it includes cost and returns analysis, alongside policy formulation strategies that can effectively shape the world's largest industries.
- *Social Equity in Public Policy:* This conceptualises the description from an expression of impartiality, fairness, and justice for all people especially agripreneurs in social policy (Agbugba, 2023a). Social equity considers systemic inequalities to ensure everyone in a community has access to the same opportunities and outcomes (Agbugba, 2023b). The key

component of social equity in public policy revolves around social equity, impartiality, justice, inclusivity, public policy (both fiscal and monetary policies), community, government. This whole idea fosters equal privileges for key players, as well as practitioners in supply and value chains of food and agricultural systems such as equal rights to resources and government assistance such as subsidies, funding and agtech solutions. We must understand that social equity is about whether citizens of different social groups are treated equitably or fairly and whether they receive the same treatment (Agbugba, 2023c).

Bridging the Gap to Sustainability: Unlocking Fourth Industrial Revolution (4IR)

The fourth industrial revolution (4IR) is characterized by the convergence of the physical, digital, and biological worlds, resulting in a fusion of diverse innovation systems and advancements (Ndungu and Signe, 2020). An innovation system encompasses the knowledge, technology, infrastructure, and cultural aspects that people have developed and are experimenting with sustainability in the hospitality industry. Examples of innovation systems include surveillance drones, blockchain technology, artificial intelligence, Internet of Things (IoTs), automation, and Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR).

Through the integration of advanced technological solutions like chemicals and larger tractors, entrepreneurs' farmers can effectively manage larger land areas with reduced labour. Government policies often encourage farmers to expand their operations, capitalizing on the benefits of economies of scale (Isukul*et al.,* 2019). Among the latest and highly productive technology options in agriculture, drones play a crucial role. These unmanned aerial vehicles are employed for various purposes, including crop monitoring and the application of fertilizers and pesticides. This technological advancement is revolutionizing the agriculture sector by reducing

labour requirements and enhancing efficiency. Table 1 presents a sustainable approach to comparing the brain re-engineering pillar.

Table 1: Comparative Analysis of the Brain Re-engineering Pillars: Towards Sustainable Enterprises

S/N	Aspect	Pillar 1: Altering Perceptions	Pillar 2: Ideation and Entrepreneurship	Pillar 3: Technological Integration	Pillar 4: Sustainability	Pillar 5: Social Equity in Public Policy
1.	**Definition**	Changing entrenched mindsets about agriculture to foster a new, enlightened understanding.	Encouraging the development of innovative ideas and fostering entrepreneurial capabilities in the agriculture sector.	Utilizing modern technologies to enhance various aspects of agricultural operations.	Developing strategies to ensure the long-term viability and environmental sustainability of agro-enterprises.	Enhancing impartiality, fairness and justice for agripreneurs and agro-allied firms in social policy taking into account systemic inequalities to ensure equal access for everyone.
2.	**Key Components**	Awareness creation, Education initiatives, Media campaigns	Innovation workshops, Entrepreneurship training, Resource management programs	Technical training, Integration of modern tools, Research and development	Continuous education, Research and innovation, Regenerative practices, Policy formulation	Social equity, Impartiality, justice, inclusivity, Public policy (fiscal and monetary policies), Community, Government
3.	**Focus Area**	Perception and Mindset	Ideas and Business Development	Technology Application and Utilization	Long-term Business Viability and Environmental Conservation	Impartiality, Fairness, Justice and Inclusivity for all people in Social Policy
4.	**Beneficiaries**	Young individuals, General public	Aspiring entrepreneurs, Young individuals	Farmers, Agribusiness entrepreneurs	Society at large, Environment	Entrepreneurs in food and agricultural systems, Key Players in Agricultural

S/N	Aspect	Pillar 1: Altering Perceptions	Pillar 2: Ideation and Entrepreneurship	Pillar 3: Technological Integration	Pillar 4: Sustainability	Pillar 5: Social Equity in Public Policy
						Supply and Value Chains
5.	**Expected Outcomes**	Improved perception of agriculture, Increased interest in agro-related ventures	Rise in innovative agro-startups, Boost in agricultural entrepreneurship	Enhanced productivity and efficiency in agriculture, Technological advancements in farming practices	Sustainable agribusinesses, Environmental conservation, Economic growth	Equal privileges for key players in supply and value chains of food and agricultural systems
6.	**Challenges**	Overcoming deeply entrenched misconceptions, Effective communication of new perspectives	Access to capital for startups, Nurturing a culture of innovation	High initial costs of technology, Skills and knowledge gap in technology utilization	Implementing sustainable practices at scale, Policy constraints and bureaucratic hurdles	Lack of infrastructure base, access to technology, affordable housing, criminal justice and access to education.
7.	**Tools & Platforms Involved**	Educational institutions, Social media platforms	Business incubators, Innovation hubs	Research institutions, Technological platforms	Governmental bodies, Community organisations	Enterprises, Business incubators, Farmers, Families, Community organisations

Source: Researcher's Concept

Addressing the Perception Problem: Enhancing Youth Engagement in Enterprise Sustainability

The projected 70% increase in global food demand by 2050, driven by rapid population growth, poses a daunting challenge, particularly considering that 9.9% of the global population still suffers from hunger, according to a recent UN study (FAO, 2009). To tackle this issue amidst unpredictable environmental changes, innovation in agricultural technology is crucial. However, an outdated and negative perception of farming and agribusiness among African youths hampers

their active involvement. Rectifying this perception problem is essential, highlighting the need for brain re-engineering and reimagination to promote agriculture as a prospective strategy for enhancing youth engagement and building their entrepreneurial capacity. Previous studies by high-level panels of experts (HLPE) emphasize the significance of youth in driving transformation. They highlight the following key points:

i. Youth are at the forefront of building future food systems, but they also face substantial risks from climate change, social and economic disparities, and political marginalization.

ii. While food systems offer diverse opportunities for youth engagement and employment worldwide, these jobs often lack decent work conditions, meaningful livelihoods, and adequate support.

iii. Policies and initiatives aiming to protect and strengthen youth engagement in food systems should be grounded in principles of rights, equity, agency, and recognition. Redistributing resources, knowledge, and prospects for youth innovation and involvement in the development of context-specific employment and labour policies can generate jobs for youth and facilitate transitions toward sustainable food systems.

In conclusion, addressing the perception problem surrounding agriculture is crucial for effectively engaging youth in agriculture and establishing sustainable food systems. We can unlock their potential to drive transformative change in the agricultural sector by promoting positive perceptions, empowering youth, and implementing supportive policies.

Agricultural Production in the Fourth Industrial Revolution (4IR): Exploring the Brain Re-Engineering Concept

Traditionally, agricultural production has been attributed to physical factors such as soil quality, water availability, and climate. However, the current need is to drive economic

transformation by embracing the new dimensions of technology. The concept of brain re-engineering seizes this opportunity, leveraging the advancements of the fourth industrial revolution (4IR) and technologies such as Artificial Intelligence (AI), Blockchain, Internet of Things (IoTs), Agricultural Drones, and other innovative solutions operating in the realm of cyberspace. Throughout history, technological innovations have significantly influenced the agriculture sector. In the era of 4IR, we witness an array of cutting-edge solutions that revolutionize farming practices (Karunathilake*et al.*, 2023). Examples include Bee Vectoring technologies, precision agriculture, indoor vertical farming, livestock farming technologies, laser scarecrows, farm automation, real-time kinematic (RTK) technology, mini-chromosome technology, farm management software, and water management technologies. From the invention of the plough to GPS-driven precision farming equipment, humans have constantly developed new approaches to enhance farming efficiency and productivity.

Empowering Minds and Transforming Agriculture: Youth-Focused

The concept of brain re-engineering and reimagination not only holds potential for empowering youths but also for empowering women. In communities where traditional values hinder women's empowerment, re-engineering their mindset, ideologies, and perceptions can create opportunities for them. Women play a significant role in agricultural production and household food security (Ezihe *et al.,* 2014). Despite the crucial role that the evolving agriculture sector offers to the youth, younger generations are hesitant to pursue careers in agriculture due to misconceptions and limited awareness of opportunities. Insufficient connections between the agriculture sector and the amplification of the fourth industrial revolution have driven youths to seek non-agricultural career paths.

The youth are the future of society and can contribute their ideas and energy to solve social issues and make a positive impact. They have the potential to advance technology, education, politics, and peace, while also preserving cultural values and contributing to national development. Youth involvement in agriculture is crucial for higher crop productivity, reduced water and chemical usage, and the preservation of natural ecosystems. Their role can contribute to stabilizing food prices and minimizing the environmental impact of agricultural practices (Egwue*et al.,* 2020).

The critical role of youth in building the future of food systems in both developed and developing nations cannot be overstated. Despite facing significant risks from climate change, social and economic inequities, and political marginalization, youth continue to drive innovation in agriculture. Through the utilization of automated harvesters, drones, autonomous tractors, and advanced implements for seeding and weeding, young farmers are transforming traditional farming practices. Technology has enabled them to automate repetitive tasks, freeing up time to concentrate on more essential aspects of food production (Oteh *et al.,* 2021)**.**

Brain Re-Engineering and Reimagination (BRECR): Empowering the Younger Generation

Engaging young individuals in farming is contingent upon the productivity and profitability of the sector, both now and in the future (Allen *et al.,* 2016). This necessitates agricultural policies and programs that facilitate youth adoption of innovative technologies and access to productive resources such as land, credit, and markets. Creating these opportunities is crucial in attracting young people and fostering their interest in pursuing viable and attractive careers in agriculture.

It is important to note that the term "youngsters" typically refers to individuals aged between 15 and 24 years, constituting approximately 35 to 40 percent of the population (African Development Bank, 2017). The term "youth" is more multifaceted, encompassing both young

individuals and the phase of life characterized by youthfulness. Encouraging governments of developed and developing nations to attract youths to the agriculture sector will contribute to tackling unemployment issues, creating job opportunities within the supply chains and value chains, and fostering economic growth and development (Agbugba and Isukul, 2020). To make agriculture appealing to youths, it is necessary to showcase the benefits of agriculture as a business and challenge their preconceived notions that agriculture is synonymous with laborious field work using outdated tools. Leveraging social media platforms can help rebrand agriculture, highlighting the advancements of the fourth industrial revolution, including Artificial Intelligence, Blockchain, Internet of Things (IoT), augmented reality, metaverse, and other technological solutions. Over the years, agriculture has suffered from insufficient support, leading many young individuals to perceive it as unattractive.

Recognizing that there are diverse paths to economic engagement for youths in agriculture, it is important to emphasize that not all involvement requires physical labour (Mulema *et al.*, 2021). Young people should be encouraged to participate in activities supporting agricultural production, capacity building, goods and services, logistics, and value addition as service providers and entrepreneurs within the agriculture and agribusiness domains. I firmly believe that youths can play a pivotal role in driving impactful changes in the agriculture sector through various avenues.

i. Repackaging Agriculture for the Youth: Recognizing the image-conscious nature of today's youngsters, it is essential to rebrand and reframe farming activities and agricultural operations. Stereotypes associated with agriculture, such as low wages and mundane manual labour, can deter young individuals. By incorporating new ideologies and innovative agricultural practices, utilizing compelling images in editorials, and showcasing successful role models in the field, we can potentially influence and attract the youth (Plecher, 2020).

ii. Harnessing the Power of Technology in Agriculture: Embracing technology solutions in the era of the fourth industrial revolution (4IR) can drive impactful and scalable changes and tackle food wastes and losses by creating a formidable circular economy for a rechannelling into use (Bellu, 2016). Digital tools for weather information, crop production, and market access empower farmers to make informed decisions and enhance productivity.

iii. Promoting Agribusiness as a Viable Career Option: Presenting farming as a business opportunity can attract young individuals to engage in agribusiness. The agricultural sector not only plays a pivotal role in job creation and food security but also contributes to economic and social development outcomes. With a less saturated market compared to the formal economy, agribusiness offers promising prospects for young entrepreneurs, particularly in the context of post-pandemic job losses.

iv. Addressing Productivity and Efficiency Gaps: To enhance young people's participation in value chains, it is crucial to tackle key bottlenecks such as limited access to production information, financial resources, and market intelligence. Addressing these issues with a focus on youth needs will be a priority.

v. Fostering Value Addition in Food Supply Chains: Encouraging value addition in the agricultural sector can enhance entrepreneurial capacity and introduce emerging agribusiness models, including circular economy principles and opportunities for value addition through the adoption of productive use of energy technologies.

vi. Subsidized Access to Farm Implements: Government support in providing farm machinery like ploughs, riggers, tractors, and cultivators at affordable rates can incentivize and facilitate youth participation in agriculture.

Brain Re-Engineering Concept: Youth-Focused action-based Solution

Gain multidisciplinary skills by becoming involved in setting-up an enterprise (learning and doing). It will increase, as well as ensure the likelihoods of entrepreneurial success in other areas. Find out how the youths can gain leverage over game-changing technological solutions (not available to past generations), as well as gain the entrepreneurial skills to drive a sustainable change in the industry. As soon as they set-up an enterprise, find out the interested players who will adopt and improve sustainable practices that can mitigate the effect of climate change in ways that drives values proposition and profitable business ventures. Youths will stand a better chance when they gain market advantage in both developed and developing societies and will become successful operators/managers in the many professional areas that the agribusiness sector encompasses.

Unlocking Transformation in the Hotel Industry: Empowering the Hospitality Industry through Entrepreneurship Development and Youth Engagement

Entrepreneurship has proven to be a key strategy for economic progress and employment generation in both developed and developing economies (Kritikos, 2014). The concept of innovation, creativity, and risk-taking has fuelled the generation of new businesses and ventures, driving growth and prosperity. In the agriculture and agribusiness sector, technological advancements are revolutionizing traditional practices and empowering farmers to maximize resources and increase productivity. Automation, robotics, drones, and precision agriculture are reshaping farming operations, enabling more efficient monitoring and decision-making processes (YourStory, 2023).

By embracing entrepreneurship and leveraging technology, agricultural entrepreneurs can access funding and modern solutions, leading to higher productivity and improved efficiency.

Information systems tailored for agribusiness provide valuable insights directly from the field, optimizing production flow and reducing costs (FAO, 2017).

The breakdown of agricultural processes into microservices enhances overall production efficiency, facilitating the adoption of better technologies and practices (Li *et al.*, 2023). With the integration of entrepreneurship, youth engagement, and technology, agriculture is poised for a transformative journey towards a sustainable and prosperous future.

2.2 Theoretical Review

2.2.1 Business Action Theory

The underpinning theory of this study is Business Action Theory which was propounded by Goldkuhl (1996). The theory assumes that the changing environment of business operations predisposed organizations to take certain business actions in re-evaluating their performance in the light of the stated objective of the organization. This, however, is premised on the ground that the dynamism of business environment, and as such, organizations must exert considerable efforts to improve their performance by strategically redesigning their business processes in meeting the demands of the environment.

Goldkuhl (1996) identified six critical but largely divergent phases that predisposed organizations to take business actions. They are the following: business establishment phase, exposure to business environment actions, contact establishment phase, contractual phase, fulfilment phase and completion phase. These phases described various business actions that enable organizations to interact with its environment especially when re-evaluating the business processes. The assumptions of the theory are as follows:

i. Improved organizational performance is especially enhanced when operations managers proactively respond to its changing environment.

ii. The ability of organization to re-evaluate their business processes sustain and improve their competitiveness.

iii. Organization takes certain business actions in redesigning their business processes in attempt to meet the demands of the environment.

The theory overtly relates to the present study as it laid emphases on the organizations to take abreast of its changing environment in order to effectively re-design its business process for improved competitiveness. The aforementioned presupposes that organizational performance largely depends on the way operations managers re-evaluate and re-engineer their business processes giving the dynamism of business environment.

2.2.2 Business Process & Brain Re-engineering

Business process is a structured, measured set of activities designed to produce a specified output for a particular customer or market. It implies a strong emphasis on how work is done within an organization (Davenport, 2013). Business processes are characterized by three elements: the inputs, (data such customer inquiries materials), the processing of the data or materials (which usually go through several stages and may necessary stops that turn out to be time and money consuming), and the outcome (the delivery of the expected result). The problematic part of the process is processing. Business process & brain re-engineering mainly intervenes in the processing part, which is reengineered in order to become less time and money consuming (Zygiaries, 2010) cited by Achilike (2014), Mlay, Zlotnikova and Watundu (2013) citing Rose and Moore (2016) Stated ‘‘that Business Process is a set of logically related tasks performed to achieve a defined business outcome’’.

A Business Process is designed to add value for the customers and therefore should not include unnecessary activities. It has a goal, specific inputs and outputs, uses the resources, has a

few activities that are performed in some order, may affect more than one organizational unit and creates value for the customer (Meyer *et al.* as cited in Muthu, Whitman and Cheraghi (1999) and now cited by Mlay, Zlotnikova and Watundu (2013). Process is not simply the management fad of re-engineering, but a more pervasive issue, requiring serious attention. 'Process thinking has become mainstream' (Grover *et al.,* 2010). Process is simply the management fad of re-engineering, but a more pervasive issue, require serious attention.

Re-engineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality, service and speed. Michael Hammer and James Champ the BPR originators maintained that re-engineering had a wider significance than mere processes. It applied to all parts of an organization, and it had a lofty purpose (Hindle, 2018). Hammer in 1991 emphasized the need for fundamental organizational change and for the first time using the term Business Process Re-engineering. BPR focuses on redesigning work processes to enhance productivity and comparativeness. The demand for a new approach to organization restructuring has been occasioned by the awareness that many of the existing business logic is built on premises of considerable age.

These existing processes were first designed as a set of sequential manual procedures, and then automated parallel with the accelerating development of technology. However, this automation did not change the strong efficiency orientation pushing for optimizing functions and a maximum level of control; neither did it address the organizational externalities, such as customer demands. Re-engineering has the potential to elevate information technology to its promised level as a business tool with the ability to have a major impact on the bottom line. Perhaps the greatest contribution of re-engineering is that information technology's potential is being

recognized (and in some instances, embraced) by those outside its traditional boundaries. Many executives are realizing that organizations that use technology effectively and creatively as the basis for the design of their core operations will outperform those organizations that do not. However, to sustain the current focus on process re-engineering through information technology and ensure a higher probability of success, much needs to be learned about the phenomenon.

Organizations operate in changing environments an environment, which is characterized by constant change, forcing them to search for appropriate solutions that enable them to successfully adapt to changing environmental conditions, thus ensuring continuity and growth (Pratiwi and Dachyar, 2020; Al-Anqoudi *et al.,* 2021; Budiman *et al.,* 2021). Organizations may achieve survival in the presence of creative department managers who are able to understand and anticipate change and have the skills to manage. Dealing with changes requires organizations to find radical solutions to various problem s by re-designing and innovating its operations (re-engineering) in a manner commensurate with the requirements of quality continuous development with a focus on providing high quality services to customers.

Moreover, re-engineering enables organizations to reduce time and costs of completing work, to overcome the problems of repetition and overlap in the completion of work, and the problem of integration lack in information and the problem of organizational boundaries, which is one of the requirements of decision-making. Business processes are characterized by three elements: the inputs, (data such as customer inquiries), the processing of the data or materials (which usually go through several stages and may necessarily drop and turn out to be time and money consuming), and the outcome (the delivery of the expected results). The problematic part of the processing part, which is reengineered to become less time and money consuming (Orugbu, Onyeizugbe and Onuzulike, 2015).

Business process & brain re-engineering is defined as a total transformation of a business, an unconstrained reshaping of all business processes, technologies and management systems as well as organizational structure and values to achieve quantum leap in performance throughout the business (Agbugba, 2023c). It is the analysis and redesign of workflow within and between enterprises (Hammer and Champy, 2000). (Stoica, Clawat and Shin 2004), see business process & brain re-engineering as the evaluation and amendment of strategy, process, technology, organization and culture which involves plummeting organizational goals that are no longer valid and could not achieve result. It helps organization that is aggressive to stay om top or transform an organization that is in the verge of bankruptcy to become an effective competitor.

Business Process & Brain Re-engineering entails reinventing processes by abolishing the old ones and finding imaginative ways of accomplishing work while designing completely and radically new process (Goksoy, Ozsoy and Vayvay, 2011). Effectively, BPR has risen as a solution for companies to improve their performance by assuring a higher quality of product and services at lower cost, larger added value and faster response time, thus increasing their efficiency and gaining competitive advantage in this permanently changing and developing world.

The definitions implicitly suggest that firms concentrate on processes rather than the function as the focus of the redesign and management of business activity. Thus, the outputs of the business processes should not only achieve the company's objective, but also need to satisfy customer's requirements and expectations. Business processes are characterized by three elements; the inputs, (data such as customer inquiries), the processing data or materials (which usually go through several stages and may necessarily stop and turn out and more consuming), and the outcome (the delivery of the expected results). The problematic part of the process is the processing. Business Process Re-engineering mainly intervenes in the processing part, which is

reengineered to become less time and money consuming (Orugbu, Onyeizugbe and Onuzulike, 2015).

Paul and Cespedes (2015) confirm that re-engineering as an approach that achieve radical development in the performance of organization in a relatively short time. It was defined as achieving tools changes in organizations to meet customer needs through synthesizing the best thinkable tools based on modern technology (Parker, 2013). Hamal an Barahaled deemed re-engineering as a radical change that can be made by redesigning managerial processes from scratch regardless of the applicable system, if the information system is part of the new organization, and not just a means of assistance in work, and this requires the abolition of work in managerial functions, and shift to managerial processes.

The process of re-engineering is fully aware that the work within the organization is fragmented into sub-processes carried out by many specialized technical departments within the organization (Ongeri *et al.,* 2020; Jiang *et al.,* 2020). Often, no one is responsible for the overall performance of the entire process. Process re-engineering keeps improving the performance of the sub-processes, which can lead to many advantages, but significant improvements, cannot be achieve if the process itself is ineffective (Agbugba and Okoye, 2024). For the reason, restructuring focuses on re-engineering the business to bring the significant improvements by rethinking how work is done within the organization, which would distinguish the process of re-engineering from other efforts aimed at improving operations within the organization in general (Djan & de Vries, 2020; Weerakkody *et al.,* 2021).

2.3 Dimensions of Business Process & Brain Re-engineering

Business Process & Brain Re-engineering entails reinventing process by abolishing the old ones and finding imaginative ways of accomplishing work while designing completely and

radically new processes (Goksoy, Ozsoy and Vayvay, 2011). Four dimensions will be used, Customer interface, Need Analysis, Technical Change and Strategic adaptation.

2.3.1 Customer Interface

The term interface will be reserved for a function of interactive exchange of information and knowledge, and sometimes of cooperative implementation, between the user's organization and the service-provider. Customer interface means the system interface software, or the front-end interface software (automated or otherwise) created by either Company or a third part that allows Company's systems or Company's clients' systems, if applicable, to interact with a CME interface, AbdEllatif, Farhan and Naglaa (2017). Examples of interface points include a customer entering a bank for a service, a patient coming into a doctor's office for an appointment, or a patron siting down at a restaurant table. In all these situations, customer directly interface with your resources. Business Interface is appointed of access where a Business is made available to the environment. The functionality provided by a Business Role is exposed to its environment by means of one or more Business Interface. Customer Interface is interpreted as the online virtual representative of online retailers to provide needed and relevant information to the customers (Chang and Chen, 2018). In fact, website is a place for customers to interface with e-retailers in the digital world (Gehrke and Turban, 2019).

Customer interface is a component of a business model that refers to the ways in which firm interact with its customers (Tsao, 2015). The type of customer interaction depends on how a firm chooses to complete. For example, Amazon.com sells book solely over the internet, while Barnes & Noble sells through both its traditional bookstores and online. Customer interface refers to the services, system, or mechanisms that a business system uses to interface with the customers of business system. User interface is important to meet user expectations and support the effective

functionality of your site. A well-executed user interface facilities effective interaction between the user and the program, app or machine through contrasting visuals, clean design and responsiveness.

User Interface (UI) is the features of a device or an application that allow a user to interact with it. It makes it easier for your target audience to interact with it. It makes it easier for your target audience to clearly see what products are. It is designed in a way to display the services that you offer without ambiguity, in order to draw your visitors and keep them on your site. A good User Interface is important because it can turn potential visitors to buyers as it facilitates interaction between the users and your website or application. It does not only focus only on the aesthetics but also maximizes responsiveness, efficiency and accessibility of a website. Benefits of a good User Interface for your web or mobile application.

Customer Confidence

A good UI design will give your potential customers confidence in your company and your brand. If elements of your site do not work properly or look shoddy, they will interpret this as a direction on your company. If you cannot deliver a good-looking website, how can you deliver a great product or service?

Capitalize on competitive advantage

Top benefit of great User Interface is the ability to convert customers with ease. If you make the lives of your visitors easier through a great UI, you are likely to convert them to customers and outperform your close competitors and you will reap benefits in no time.

Reduced costs

If you design an application that is easy to use and does not frustrate the users, you will find that your customer support line will receive fewer calls on issues on the apps or web as clients can complete everything they need to do online without additional help.

2.3.2 Need Analysis

An analysis of the business needs or other reasons the training is desired. An analysis of the organization's strategies, goals, and objectives. Needs Analysis is an effective way to identify skills gaps. It involves gathering information to identify areas where your employees can improve their performance to their benefit and that of your business. An organizational needs analysis helps you to compare the current skills in your company with the skills you need to meet future business objectives. If, for example, you want to move into a market that demands high levels of after-sales service, you must ensure that you have people with the skills to deliver service. The needs analysis highlights any gaps in your skills, enabling you to plan a training or recruitment program. Needs analysis definition involves the process of identification and evaluation of needs. It is the first step that should be taken in order to successfully develop an effective training program (Bleich, 2018). It is a vital process that helps business determine the specific training period they need to provide their employees for them to become productive and efficient (Morrison, 2020). Needs analysis and needs assessment are often used interchangeably, but instead of being synonymous terminologies, they play different but related roles in the process of identifying performance issues and/or opportunities and analysing if training is necessary to address them or not (Christensen, 2018). Christensen further explains that needs assessment ‘‘value-added solution’’ to a performance problem. These steps, however, can be tricky when terms are ‘‘misunderstood and used

incorrectly'' as the process offers a systematic approach, which involves a proper transition between steps in order to achieve positive results.

A need analysis involves collecting information to determine if a training need exist and, if so, what kind of training is required to meet this need. The analysis also should address why the need exists. If the problem identified is not attributable to worker performance, training may not be the best solution. For instance, a company might discover that its employees have received appropriate training to perform their jobs but are not motivated to do so. In this situation, it would be more appropriate for the company to reconsider its system of compensation and awards.

There are many different methods for conducting the needs analysis. Generally, and organization should use as many as possible to obtain the most accurate status of training needed. Among available assessment methods are as following:

HR records: HR record can include accident and safety reports; attendance records; grievance filings; exit interviews; performance evaluations; and other company records such as production, sales, and cost reports.

Individual interviews: People to consider interviewing for information on training needs include Affirmation Action officers, employment recruiters, managers, and top executives.

Focus groups. Unlike individual interviews, using focus groups involves simultaneously questioning several individuals about training needs.

Observations. Sources for observation include on-the-job performance, simulations of work settings, or written work samples.

Surveys or questionnaires. Surveys or questionnaires generally use a standardized format and can be administered by mail, phone, or hand.

Samples for use. Sampling is like surveying and focuses on a smaller, selected group.

Group tests. Tests can identify areas that need to be addressed, as well as employees who need training.

Benefits of Needs Analysis. Needs analysis offers an array of benefits to organizations such as the following (Morrison, 2020).

Identify knowledge and skills gaps. Needs analysis helps organizations become proactive in approaching potential issues before they become actual problems. Being able to figure out the gaps in employees' knowledge and skills before these gaps start creating real issues that can affect the organization is just one of needs analysis' important benefits.

Helps prepare training ahead of time. Planning the training programs for an entire organization is not an easy feat. But instead of simply assuming the type of training that should be included, training needs analysis helps an organization make informed decisions based on actual and accurate data.

Identify the areas that need to be prioritized. Despite knowing what type of training program be included in the training schedule, there is still the issue of which training is more urgent, and which is not really needed at the moment.

Identifying the individuals who need training and the type of training they need. A training program will not be effective regardless of how good it is if it is not directed to the right individuals. Training needs analysis help in this area by identifying the individuals who need

further training and what training programs are appropriate to address their knowledge or skills gaps.

2.3.3 Technical Change

A technical change is a term used in economics to describe a change in the amount of output produced from the same number of inputs (Davenport Kirby, 2015). A technical change is not necessarily technological as it might be organizational, or due to a change in a constraint such as regulation, input prices, or quantities of inputs (Daft and Lengel, 2016). Technical change will have an impact on all organizations. There will be a need for new types of managerial, diplomatic, and social skills and a concomitant need for a new type of decision-making process that will not be accommodated by existing organizational structures.

Technical change will force changes in basic managerial functions. There will be increased responsibility on management for organization outcomes leading to added emphasis on planning, decision making, control, and coordination, (Deci and Ryan 2012). These will often rely on computer-based management science techniques which demand a higher intellectual capability of managers. This will produce strain on managers and other individuals, potentially affecting morale, productivity, and output Technological change can positively affect individual values leading to increased time for consideration of both the brain in decision-making, (Dewhurst and Willmott 2014). This may lead to greater moral sensitivity and more tolerance and compassion for others, all coupled with a more rational approach to decision making.

A positive effect of technological change may be increased loyalty to ones' organization (Agbugba, 2023). The effect of technological change on the manager's quest for self-actualization is still debatable. Technological changes are changes made in response to clearly defined issues or challenges, Andreini and Bettinelli, (2017). These solutions are relatively straightforward, and the

leaders or experts within an organization can usually address them without consulting the rest of the company. Technological change can be defined as an increase in the outputs possible with a given level of inputs through the processes of invention, innovation, and diffusion. Technological change means the technological knowledge used in the production of capital and machinery. The various changes in technology lead to an increase in the productivity of labour, capital and other production factors. Technological process comprises of skill, new means of production, new uses of raw materials and the widespread use of machinery, Ebel, Bretscneider and Leimeister (2016). Technological change devices new goods and techniques of production. The development of new technical knowledge can be defined as the growth of the new technique that can produce goods and services at lesser cost of production, Cinquini, Minin and Varaldo (2013).

2.3.4 Strategic Adaptation

Adaptation can be defined as the action of the entrepreneur and his/her team in processing information inputs from the environment and adjusting his feedback (Mcke *et al* 2019). It involves changes in strategic behaviour, to improve competitive posture and achieve better fit between the organization and its environment or ecological niche. No organization can be completely static over time, and so some level of adjustment, change of adaptation that occur, and the outcome of this adaptation are likely to vary considerably as a function of a variety of factors (Chakravarthy, 2012).

Adaptation strategy concerns specific ways in which the firm makes, adjustments, as it seeks to survive and capitalize on external circumstances. Such adjustments can be made in a variety of product, market and resource management areas (Ginsberg, 2018; Snow and Hrebiniak, 2010). Strategic adaptability helps business thrive when handling the challenge of a variable

environment. Understanding the variety of factors that affect a business can influence strategy and help develop flexibility, enabling you to adjust to these factors. Developing adaptability business.

In this article, we explain strategic adaptability and how it benefits you in the workplace, with tips on how to achieve adaptability strategies in your company. Strategic adaptability is a process you can use to prepare for changes in the workplace or industry. Having a plan to adjust business or environmental changes helps a business thrive. For example, factors such as the market can create changes unexpectedly for a business, but you can use strategic adaptability to predict market trends and prepare production plans for sudden change. Often, developing a strategy involves training employees to take additional responsibilities. This Achieving Enterprises sustainability is not a quick process. It requires dedication and working diligently. Using the Resource Development Sustainability Pyramid, we can provide organizations manageable action steps to reach the optimal goal of Enterprises sustainability.

Colbert and Kurucz (2017) identify the colloquial definition of sustainability as being to ‘‘keep the business going’’, whilst another frequently used term in this context refers to the ‘‘future proofing’’ of organizations. Broudreau and Ramstad (2015), refer to achieving success today without compromising the needs of the future’’. The Charter of the sustainability Committee created by the Board of Director at Ford focuses on sustainable growth, which it defines as ‘‘the ability to meet the needs of present customers while taking into account the needs of future generations’’ (Ford, 2012). Sustainable growth encompasses a business model that creates value consistent with the long-term preservation and enhancement of financial, environmental and social capital. According to the Chartered Institute of Personnel and Development (CIPD, 2012), the essence of sustainability in an organizational context is ‘‘the principle of enhancing the social, environmental and economic systems within which a business operates.’’ This introduces the

concept of a three-way focus for organizations striving for sustainability. This is reflected also by Colbert and Kurucz (2007), who state that sustainability ‘‘implies a simultaneous focus on economic, social, and environmental performance’’. This notion may of course relate to the growth of so called ‘‘Triple bottom line accounting’’, which will be explored later in this paper. Perhaps Enterprises Sustainability is more related to organizational culture rather than specific policies and procedures?

Eccles *et al.* (2011) noted that organizations are developing sustainability policies, but they highlighted that these policies are aimed at developing an underlying ‘‘culture of sustainability’’, through policies highlighting the importance of the environmental and social as well as financial performance. These policies seek to develop a culture of sustainability by articulating the values and beliefs that underpin the organizations’ objectives.

Sustainability organizations are: (1) organized groups of people that aim to advance sustainability and/or (2) those actions of organizing something sustainably. Unlike many business organizations are not limited to implementing sustainability strategies which will provide them with economic and cultural benefits attained through environmental responsibility. For sustainability organizations, sustainability can also be an end in itself without further justifications. Recently, the natural environment has become a key strategic issue in both the business and academic communities. Through ‘‘implementing sustainability strategies, firms can integrate long-run profitability with their efforts to protect the ecosystem, providing them with opportunities to achieve traditional competitive advantages of and cost leadership and market differentiation via environmental responsibility’’. Sustainability strategies have been persistently employed in number of organizations.

2.5 Measures of Enterprises Sustainability

There are many factors that can be used to measure sustainability in Hospitality firms in Rivers State. Therefore, for the purpose of this study Innovativeness and Market Share will form the measures of enterprises sustainability.

2.5.1 Innovativeness

Innovation defined as the development and use of new ideas or behaviours in organizations manifested in terms of a new product, service, technology, or organizational structure (Damanpour and Wischnevsky, 2016). A firm adopting an innovative style relies on knowledge that is possessed by players of the market (Mahmood and Rufin, 2015). Innovativeness is the predisposition to support new ideas and favour change (Rauch *et al., 2019*). It embraces creativity in technology adoption, and internal processes (Baker and Sinkula, 2019).

Innovation is regarded as a key business process that organizations are using to achieve competitive advantage. Innovations are currently a fundamental prerequisite of competitiveness (Bloch & Bhatacharya, 2016; Ariguzo, Abimbola and Egwakhe, 2018). Innovativeness involves the tendency to engage in and support new ideas, novelty, experimentation and creative processes (Mohammad, Armanu, and Achmad, 2013). Successful companies are currently the ones that implements innovative strategies, invests in research, development and innovations. The basic precondition for the creation and use of innovation in the enterprise is well formulated and implemented innovative strategy. Innovation is a central component in an entrepreneurial orientation as posited by Presutti and Odorici (2018). Lumpkin and Dess (2006) credited Schumpeter with being amongst the first to emphasize the role of innovation in the entrepreneurial process, in the form of process of creative destruction, by which wealth was created when existing

market structures were disrupted by the introduction of new goods or services reallocating resources from existing firms to new firms and growth.

Hitt, *et al.* (2005) defined innovativeness as the extent to which firm develop the tendency to generate new ideas, experimentation and creative process that may prompt a new product development, new services and new technological processing methods. This shows that innovativeness is the ability of entrepreneurs to form the habit of digging out new ways of promoting the value of the existing or new products so as to remain in entrepreneurial operations. Silas and Joyce (2017) defined innovation as the willingness to depart from existing technologies or practices and the creation or adoption of an idea or behaviour new to the organization and venturing beyond that current state which resulted in new products and services.

Furthermore, innovativeness is the intentional generation, promotion and realization of new ideas within a work role, workgroup or organization by an employee in order to benefit role to performance, the group or the organization (Gilbert, 2018; Margaret, Patrick and Dennis, 2009). Innovative work behaviour is defined as an individual's behaviour aiming to achieve the initiation and intentional introduction of new and useful ideas, processes, products or procedures and also a propensity to adopt new ideas that lead to the development and the launch of new products (Rubera and Kirca, 2012). Lisetchi and Brancu (2013), away from direct competition with other companies and those that aggressively pursue their competitors' target markets.

Innovation is also an important component of a firm's strategy mainly because it constitutes one of the principal means through which it can seek new business opportunities (Lumkin and Dess, 2011). But innovativeness is cumbersome and can be stressful because it entails an employee figuring out new ways to accomplish tasks, thinking in alternative ways, searching for

improvements, applying new wok methods looking for new technologies, investigating and securing resources to make new ideas happen (Akpan and Akpan, 2011).

Keh *et.al* (2007) defined innovativeness with a firm's tendency to engage in creative processes, experimentation of new ideas, which may result in the institution of new methods of production or bringing new products or services to current or new markets. As a firm specific, valuable and socially complex resource that is easily transferable nor imitable by other firms, innovation could confer a unique competitive advantage to exporting (Hult and Ketchen, 2011). Innovativeness is the company's inclination to involve itself in new ideas, development and creative processes which results in new products, services and technological development (Lumkin and Dess, 1996). The earlier research dedicated to the concept of innovativeness concentrated on the organization's ability to launch new products and services (Kimberly, 2001). The definition of innovation was later expanded by Knight (2007) to include the entire activities performed by the organizations in its attempt to creative solutions to challenges in developing new products and services. Moreover, innovativeness encapsulates the entire managerial and administrative activities and technological processes of the firm (Agbugba and Okoye, 2024).

According to Igwe and Asiegbu (2015), Innovativeness is a self-motivated policy that guides firm to generally envisage, grow and implement the entire process through which the organization's critical points are upturned. Though, some have termed innovation to be drastic and total out-phasing of a practice to a totally new workable system or process (Gracia and Calantone, 2012). In this work, innovation and innovativeness were used inter-changeably. As supported, innovation is frequently used in manufacturing-based organizations while innovativeness is of the service-based organizations which mostly involves small and incremental changes in processes and procedures and often used as a measure of the degree of ‘‘newness’’ of an innovation and

modelled as the degree of discontinuity (Gracia and Calantone, 2012). In essence, innovation can be seen from two perspectives: changes in things (goods) which an organization offers, and changes in the ways in which they are produced and delivered (services), these changes are however seen as product and process innovation (Tidd *et al*, 2011). Arguably, changes are advertently or inadvertently pervasive hence innovation initiates the process of getting use to these changes.

2.5.1 Market Share

Market share according to Adeyemi (2010) is the proportion of the total market controlled by organization's products. It is the volume of patronage organizational products enjoyed relative to other products in the same industry. Adeyemi (2010) contends that high market share justifies high performing organizations; therefore, it is a measure of organizational performance. O'Regan (2012) defines market share as a company's sales in relation to total industry sales for a certain period. Peace and Robinson (2013) also use the same definition that market share is sales relative to those of other competitors in the market. Market share can be equated with success whereas decrease market share is a manifestation of unfavourable actions by firms and usually equated with failure. The most common explanation as to why market share leads to higher profitability are higher economies of scale, experience and market power (Buzzle, 2014).

Kalu (2018) defined market share as the percentage measure of the share obtained by an individual company from the total market available. Market shares refer to an entire industry, narrow segments or a particular geographic area and can apply to the past, present or future time periods. In this study, market share will be represented by the percentage of sales of a firm's market against total market share. Maret share is the portion percentage of sales of a particular product or services in each region that are controlled by a company.

Market share is used by business to determine the strength in a sector as compared to other company in the same sector. It also allows you to accurately assess your business from year to year. Managing market share therefore, is a very important aspect of managing a business. Market share is the percentage of a market (defined in term of either units or revenue) accounted for by a specific entity. Marketers need to be able to translate and incorporate sales targets into market share because this will demonstrate whether forecasts are to be attained by growing with the market or by capturing share from competitors. This latter will almost always be more difficult to achieve. Market share is closely monitored for signs of change in the competitive landscape, and it frequently drives strategic or tactical action.

2.6 Relationship between Business Processes and Brain Re-engineering for Enterprise Sustainability

Testing the effect of business process & brain re-engineering on organizations' competitiveness, Deeb (2009) pointed out the business process brain re-engineering results in improved competitiveness. Similarly, Satti and Irum (2014) analysed the effect of information technology capabilities on the effect of process re-engineering on banks' performance. Process re-engineering is engineering exerts a significant effect on banks' performance. Process re-engineering is redesigning or reinventing how we perform our daily work, and it is a concept that is applicable to all industries regardless of size, type, and location. Process re-engineering as a body of knowledge or as an improvement initiative, takes the best of the historical management and improvement principles and combines them with more recent philosophies and principles, which make all people in an organization function as process owners and reinvent processes. It is this combination of the old and the new as well as the emphasis on dramatic, rapid reinvention that makes process re-engineering an exciting concept.

Business Process & Brain Re-engineering (BPR) is defined as the fundamental rethinking and redesign of business processes to achieve dramatic improvements in critical, contemporary measures or performance, such as cost, quality, service and speed (Hammer & Champ, 1993; Agbugba, 2024). This definition means that BPR requires radical transformation as opposed to incremental change and hence the fundamental question an organization must address before adopting BPR is if there is a compelling business case for change. Business Process and Brain Re-engineering involves changes in structures and in processes within the business environment (Agbugba, 2023).

2.7 Empirical Review

Magutu, Nyamwange and Kaptoge (2010) investigated on business process and brain re-engineering for competitive advantage. The research was conducted by collecting primary data from the employees of the Wrigley Company. Online questionnaires based on the competitive measure and BPR implementation key success factors were used to collect data from which certain finding were deduced. The researchers established the Wrigley Company gain competitive by implementing BPR. Ensermued and Moorthy (2013) carried out research on assessing the effect of business process & brain re-engineering on organizational performance of Bureau Finance and Economic Development (BOFED).

Questionnaires and interview were used for data collection and Likert scale was used for analysis. Major findings were that the customers of (BOFED) were satisfied with speed of service delivery quality of service, cycle time. Mohammed and Elaheh (2014) researched on the effect of business process re-engineering factors in Organizational Agility in Ports and Maritime Organization in Iran. BPA factors are operationalized by cultural factors, communications, methodology, project management, strategic alignment, information technology, and leadership

empowerment and performance management. Questionnaires were developed and were distributed to marine training, assessment, financial and information technology division of Port and Maritime organization.

Using path analysis with partial standardized regression coefficient, the result revealed that leadership and empowerment variables had effect on organizational agility the other variable. Abdi, Zarei, Vaisy and Parvin (2011) carried out conceptual research on innovation models and business process redesign. It was based on the innovation mode using Dublin's methodology. This innovation concept makes a new environment that drives employee the innovate and look forward to new processes where employees should make significant changes in jobs, workflows and IT, and increases the chances of BPR project success.

Sidikat and Ayanda (2008) investigated on the impact assessment of business process re-engineering on organizational performance. The bank operation and function which are intended to meet emerging challenges of bank consolidations, slashing operating cost, outsourcing, portfolios investment, payments and settlement systems are operationalize through BPR. The data was obtained from primary source and was analysed through simple percentage analysis and regression re-engineering has become useful weapon for any corporate organization that is seeking for improvement in their current organizational performance.

Samuel, Oartey and Lamptey (2013) investigated on quality management system of Unilever Ghana Ltd. The study examines Unilever Ghana Limited quality systems, policies, procedures and activities within the company. In other words, finding out whether the company has a well-documented and comprehensive policy on quality performance system if it does, whether this policy meets international standards. If this quality management policies on quality performance system meet international standards, then this study undiscover whether the policy is

being implemented according to industry best practices and also, whether the implementation is yielding the expected results (Agbugba and Okoye, 2024). The project employed a qualitative research methodology based on the case study method. The research project finds that not only are all of the research hypothesis verifiable by scanning the research library, but also, Unilever has some way to go before it claim a quality crown from other fierce competitors. The recommendation is made based on the four hypotheses in which it is recommended that Unilever Ghana add-on a knowledge management program that would align its quality management strategy with the company's and its management's perspectives and opinions.

Xin James He (2009) investigated on comparative study of business process & brain re-engineering in China. The research investigated the current status of business process & brain re-engineering (BPR) in China by answering the following two questions: How do Chinese business executives view benefits, critical success factors, and major obstacles of BPR implementation? What are the managerial implications of BPR in China? Data were collected by means of survey questionnaires to senior managers in Beijing and Shanghai. Statistical analysis results indicated that while BPR has played an important role in making the enterprise China more effective and efficient; its implementation has been uneven among various types of business sectors and ownerships. He found out that management support, cross-functional communications, cross-unit project team, and measurable BPR objectives are top of the list for critical success factors, whereas a culture that resists changes and new ideas, lack of innovation incentives to state-owned enterprises, seniority, not performance, based promotion, and unemployment pressure of process restructuring are the top for obstacles in China.

Ringin, Razalli and Hasnan (2012) carried out conceptual research on critical success factors for business process management for small and medium banks in Nigeria. They

investigated on a large-scale survey of organizations in financial sector and applied a rigorous research methodology and carried out five critical success factors of BPM implementation, which are IT investment, volume of financial activities, personal commitment, strong capital based and effective reward system. among these factors, its investment, personal commitment and volume of financial activities have significant relationship with overall organizational performance (cost reduction, customer service management and operational efficiency performance) while effective reward system is only. The study contributed to research by identifying the success factors by business process management adoption in primary mortgage finance and Microfinance Bank.

Rodriguez (2010) carried out conceptual research on business process re-engineering within the bicycle industry. He found out that bicycle leader brands have shifted production overseas to reduce the cost of labour and to implement new technological way of production based on economics of scale that aims cost per unit reduction. He then proposed solutions to improve the current operational processes: first, implementation of just-in-time management system and relocation of assembly facilities second, to benchmark like a core methods designing products for supply chain and that customer assemble the furniture themselves.

Mashari, Irani and Zairi (2001) studied business process re-engineering, a survey of international experience, they emphasize on the lack of integrated implementation approach to exploiting BPR and a relative void in literature is the scarcity of suitable models and frameworks that addresses the implementation issues surrounding BPR. A survey was therefore designed to collect data from a sample of organization. The survey assesses the level of importance placed on the essential element of integrated BPR implementation.

Eke and Achilike (2014) studied business process re-engineering in organization performance in Nigeria banking sectors. It was conceptual research which the objective was to

analyse BPR in organizational performance in the Nigeria Banking sector. The study advocates that Business Process Re-engineering, the ultimate solution for increasing productivity and quality while costs at the same time putting the customer first has finally been found.

Ringin, Razalli and Hasnan (2012) investigated on the moderating effect of IT capability on the relationship between business process re-engineering factors and organizational performance of banks. The objective of the paper was to investigate the moderating effect of IT capability in the relationship of Business Process and Brain Re-engineering (BPR) factors and the organizational customer focus, management commitment, IT investment, and adequate financial resources. Data was collected through a hand-delivery method by sending questionnaires to 560 banks Commercial, Microfinance and Mortgage. The study used stratified random samplings proportionate to the numbers of the banks for sample selection. The findings show that IT operation, IT objects and IT knowledge are the most important dimensions of IT capability attributes that contribute to higher organizational performance.

Bogdanoiu (2012) investigated on business process re-engineering method versus Kaizen Method. The study was conceptual comparative research. He defined BPR by Hammer and Champy as the fundamental reconsideration and radical redesign of organizational processes in order to achieve drastic improvement of current performance, in cost, service and speed, and that Kaizen Method is a management concept for incremental change, the key elements of Kaizen method are quality, effort involvement of all employees' willingness to change and communication. He found out that both method addresses the entire value system of a process, Kaizen usually starts out with a change of success. He concluded that BPR is harder to implement, technology-oriented enable radical change; on the other hand, Kaizen Method is easier to implement, is more people oriented and requires long term discipline.

Maarjtje (2009) in ensuring employee satisfaction in new office suggested a tool kit; the purpose of the study is to present a toolkit to measure employee satisfaction and perceived labour productivity as affected by different workplace strategies questionnaire was used for data collection. The data from the case studies and cross case analysis was used to explore and test hypothesis about best possible fit between people, process and place. He concluded that satisfaction about the working environment has a fairly limited effect on the perceived productivity, the result show that employee retention factors like (proper leadership, training and development, good work environment, work-life balance, participation in decision promotion and opportunity for growth, reward and recognition, compensation) exist in the organization, it will not only help to attract new employees into the organization but will also lead to the retention of the existing employees into the organization .

Ramalall (2003) investigated on managing employee retention as a strategy for increasing organizational competitiveness. The aim is to determine the factors that most significantly influence employee's decision to remain employed at a particular organization and possible reasons for choosing to leave, through a series of surveys, observation and interviews. He determined that the location of the company and its compensation package were the most common factors in remaining with the company and the compensation and lack of challenge and opportunity were the most common factors in contemplating leaving the organization.

Aminu, Tella and Mbaya (2012) examined the public policy formulation and implementation in Nigeria being conceptual research, the study analysed the important problems and factors influencing public policy formulation and implementation. This study revealed that there is lack of full practice of federalism in Nigeria as enshrined in the 1999 constitution rather what is obtained now is synonymous to unitary system of government. The study recommends the

need for government to be proactive, sensitive in formulating and implementation of public policy decision that will have direct impacts on its citizenry.

Das and Baruch (2013) looked at employee retention, a review of literature the study aimed at reviewing the various available literature and research work on employees, the study adopted a descriptive research method and secondary data was used. They concluded that the most difficult task faced by an organization today is retaining as well as satisfying.

Among all the studies reviewed above, none of the authors except one was able to use a questionnaire method, determining the sample size and using four-point likert scale, to carry out his or her analysis and most of the researches were conceptual and the only one empirical was carried outside the country in order to fill in the gap with the use of Z-test analysis which will properly clarify the relationships between Business Process & Brain Re-engineering and organizational performance in the Nigeria Context.

Figure 3.1: Map of Nigeria (indicating Niger Delta Region)

Source: International Business Times, UK (2015)

CHAPTER 3: RESEARCH METHODOLOGY

This chapter focus on the analysis of the methods and procedures that were used in carrying out the research on the Business Process & Brain Re-engineering and Enterprises Sustainability in Hospitality Firms in Rivers State, heart of Niger Delta Region. It also outlined the methods and sequences by which data for this study is collected, and to be analysed to test the hypothesis for this research work.

3.1 Research Design

The method that was employed in this study is the survey research method. The method was chosen by the researcher because data were collected directly from the participants. Survey research is the systematic gathering of information from the participants for the purpose of understanding and/or predicting some aspect of the behaviour of the population of interest.

3.2 Population of the Study

Okeke (2005), defined population of the study as the collection of element units or individuals about which information is sought. In the light of the above, population of the study includes junior, senior and management staff of all the Hospitality firms in Port Harcourt City, Niger Delta. Presently there are 140 (one hundred and forty) Hospitality firms duly registered with the Rivers State Ministry of Culture and Tourism operating inn Port Harcourt, these are otherwise known as the target population of the study, because of the logistics and challenges involve in studying he entire target population, the researcher selected ten best Western Hospitality firms in Port Harcourt as the accessible population namely; hotel presidential, Novotel hotel, Visa Carina hotel, Tokyu grand hotel, Mangrove House Hotel, Dannic Hotels, Tiffany Hospitality and Towers, Blues Ribbon Suite and Beverly hill hotels in Port Harcourt, Niger Delta.

Table 3.1: Population of Managers/Supervisors under study

Name of Hospitality firms	Management Staff
Hotel Presidential	46
Novotel Hospitality	26
Visa Carina hospitality	33
Tokyu grand hospitality	35
Beverly hill hospitality	29
Tiffany Hospitality and Towers	35
Danni hotels	35
Mangrove The hospitality	30
Amanda The hospitality	35
Blue Ribbon Suites	31
Total	**335**

Source: Field Survey, 2022

Therefore, the staff strength of the ten chosen hospitality firms is 335. This 335 (Three hundred and thirty-five) make up the accessible population for the study from where the sample size for the study was drawn.

3.3 Sample and Sampling Techniques

Sample is the proportion of the total or the universe to be studied as representatives of that total population forming the basis for generalization. It can also be referred to as the selection of a representative number from a given population, where it believed that a common element exists between the sample selected and the population. It is important to point out that there is no ‘‘best’’ method of drawing a sample from the population of interest. The nature and purpose of the study should dictate the sampling method to be used (Baridam, 2006). In determining the sample size

for this study, a formula known as Taro Yamene were adopted by the researcher, the formula for Taro Yamene is given as:

$$n = \frac{N}{1 + N\ (e)2}$$

Where:

n = sample population

N = the study population

e = the level of significance

The study population (N) 240

Level of significance = 0.05

$$n = \frac{N}{1 + N\ (e)2}$$

335

1 + 335 (0.0025)

335

1 + 0.8375

= 182

Therefore, the sample size for this study is 182.

3.4 Method of Data Collection

The main primary data that was used is the questionnaire. To facilitate useful information, self-developed questionnaire was administered. Questionnaire is one of the most useful tools for data collection, (Foddy, 2003). The secondary data was also used. These are already existing data

that can easily be gotten from various sources they can be from journals, bulletin, textbooks, newspapers, periodicals.

3.5 Instrument for Data Collection

The instrument for data collection in this study was a structured questionnaire titled ‘‘Brain Re-engineering and Enterprises Sustainability Questionnaire’’ (BPRESQ). The instrument comprises two of two sections A and B. Section A elicits personal information of the respondents while section B contains the main items of the instrument designed for answering the research questions. This section requires the respondents to respond to question items by ticking (√) were appropriate. Questionnaire was developed to enable the researcher gather quantitative data. The instrument was designed in rating scale format with the following options: Very High Extent = 4, High Extent = 3, Low Extent = 2, Very Low Extent = 1.

3.6 Instrument Validity

Validity refers to the degree to which a measurement procedure or a questionnaire measures the characteristic it is intended to measure (Mugenda & Mugenda, 2012) There are three dimensions from which validity can be examined. These are: Content, Construct, and criterion validity (Orodho, 2009). The study attempts to ensure that the findings were both valid and reliable. Validity is the extent to which the test-items measure what they purport to do. The instrument’s content validity was assessed using expert judgment by two academic staff experts in the Department of Office and Information Management.

3.7 Instrument Reliability

Reliability shows the extent to which the study instrument is without bias (Free of error) and ensures consistent measurements across time and across the various items in the instrument (Bryman, 2012). Reliability refers to the consistence of a score from one occasion to the next.

Through the expert judgment, construct validity was assessed to establish the extent to which the instruments measured special respondent attributes like perceptions, attitudes and opinions towards the effect of Business Process & Brain Re-engineering and Enterprise Sustainability.

Cronbach's alpha coefficient was used to test reliability or to assess the quality of measurement (Churchill, 1979). AN acceptance level of .70 of Cronbach's alpha was used for internal consistency for each of the constructs as recommended by McMillan (2012).

3.8 Instrument Administration and Retrieval

A total of two hundred and six (206) copies of the questionnaire were physically administered on management staff of ten selected Hospitality firms with help of two research assistants, and copies of the questionnaire. Through the help of Research assistants, the filled copies were retrieved in three weeks.

3.9 Methods of Data Analysis

The responses gathered from the questionnaire were collected and scored for analysis using frequency counts and then analysed withy the mean to answer the research questions. While hypothesis test was Spearman Ranking Order Correlation, with aid of Statistical package for social science (SPSS) given as.

$$r = 1 - \frac{6\Sigma d}{(n - n)}$$

Where Σd = sum of the squared differences in ranking of the n = number of subjects being ranked.

CHAPTER 4: DATA PREPARATION, ANALYSIS AND DISCUSSION OF THE FINDINGS

4.1 Data Presentation

The statistical tools applied herein comprises of both descriptive and inferential statistical techniques.

Table 4.1 Questionnaire and distribution and Retrieval

Names of Hotels	Copies Administered	Copies Retrieved	Copies not Retrieved
Hotel Presidential	28	18	10
Novotel hospitality	23	12	11
Visa Carina hospitality	21	13	8
Tokyu Grand hospitality	17	8	9
Beverly Hill hospitality	20	14	6
Tiffany Hospitality and Towers	17	10	7
Daanic Hotels	14	5	9
Mangrove House hospitality	13	8	5
Amanda The Hospitality firms	15	6	9
Blue Ribbon Suites	14	7	7
Total	**182**	**101**	**81**

Source: Survey Data, 2024

Table 4.1 shows the administration and retrieval of instrument including the figure not retrieved. Table 4.1 shows that 182 staff from ten hospitality firms in Port Harcourt in Niger Delta were served with the copies of questionnaire out of which 101 were duly completely and retrieved by the researcher for data analysis.

4.1.1 Descriptive Analysis on Gender Characteristics of the Sample

This study wanted to identify the gender characteristics among the respondents under study. The summary of their responses is as shown in the table 4.2 and figure 4.1

Table 4.2: Showing Gender Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	56	55.4	55.4	55.4
	Female	45	44.6	44.6	100
	Total	101	100.0	100.0	

Source: SPSS Output version 23.0

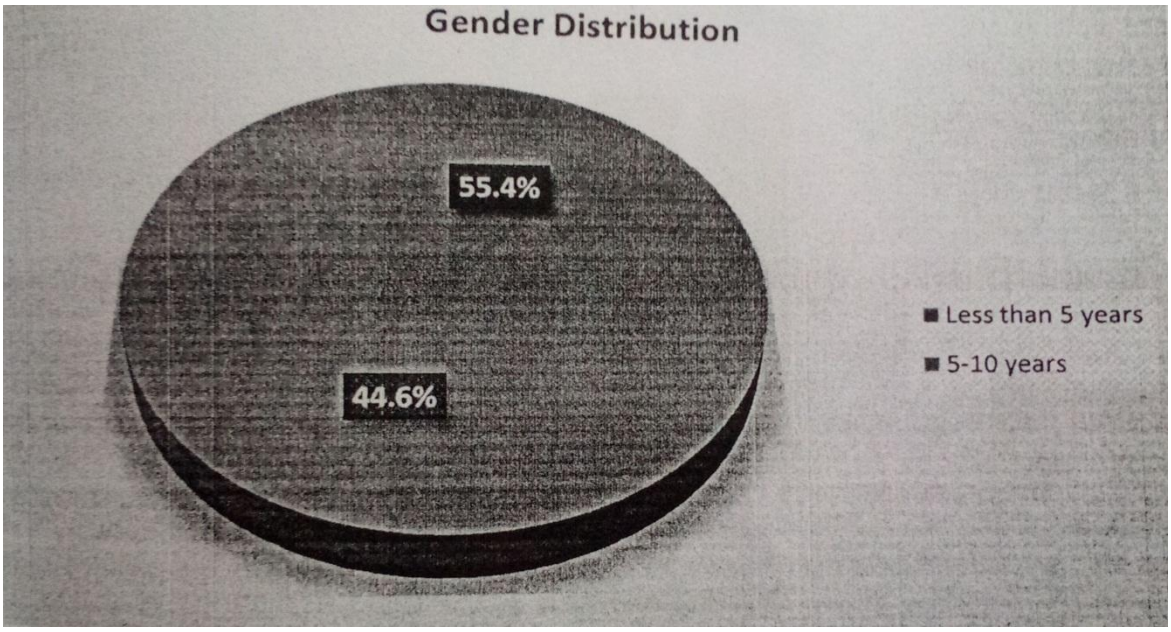

Figure 4.1: Pie chart showing the gender distribution

Table 4.2 and pie chart above displays the distribution according to the gender of the participants with male being 56 (55.6%) and female 44 (44.6%). The implication therefore is that the male respondents are in the majority.

4.1.2 Descriptive Analysis on Age Characteristics of the Sample

This study wanted to identify the age profile of the respondents in the hospitality firms in Port Harcourt under study. The summary of their responses is as shown in table 4.3 and figure 4.2.

Table 4.3: Showing Age Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 25	23	22.8	22.8	22.8
	25 – 39 Years	61	60.4	60.4	83.2
	40 – 59 Years	17	16.8	16.8	100
	Total	101	100.0	100.0	

Source: SPSS Output version 23.0

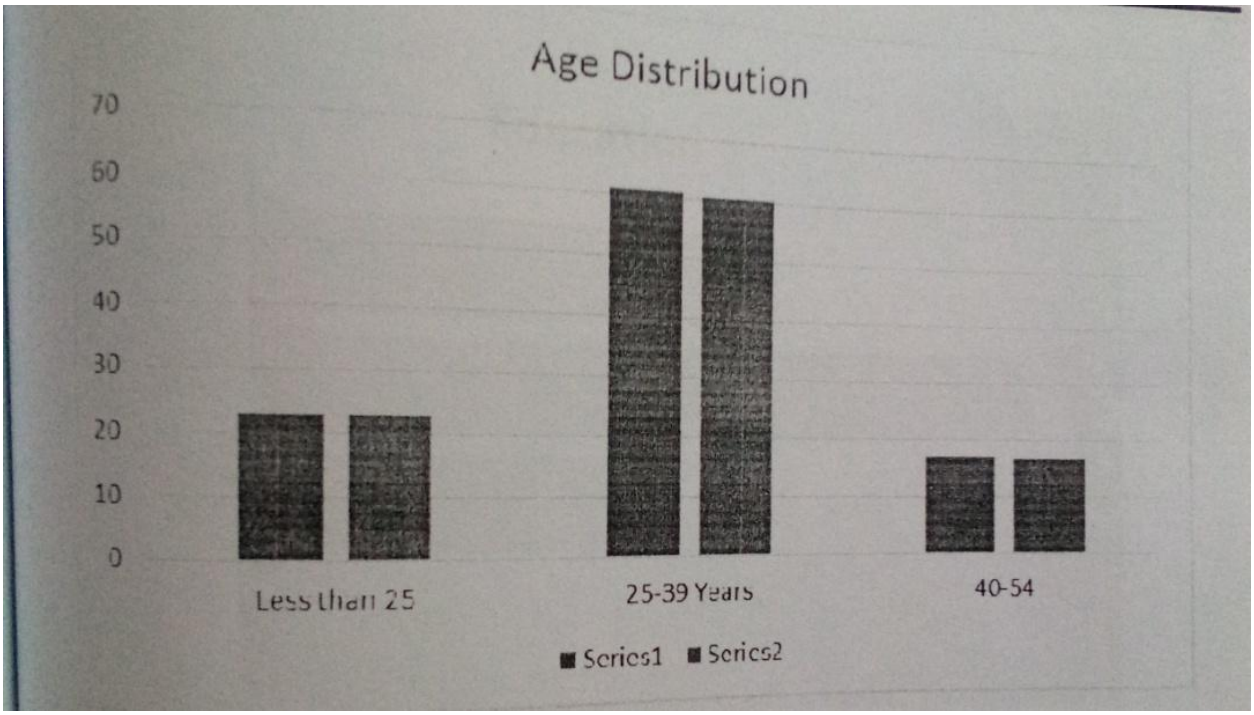

Figure 4.2: Bar chart showing the age of distribution

From the Table 4.3, it can be observed that 23 of the respondents representing 22.5% were less than 25 years. 61 respondents indicating 60.4% were within the age bracket of 25 – 39 years. 17 of the respondents indicating 16.8% were within the age bracket of 40 – 54 years.

4.1.3 Descriptive Analysis on Educational Characteristics of the Sample

This study wanted to identify the educational qualification of the respondents under study. The summary of their responses is as shown in Table 4.4 and Figure 4.3

Table 4.4: Showing Educational Levels of Respondents

	Degree	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MSc	23	22.8	22.8	22.8
	BSc/HND	49	48.5	48.5	71.3
	NCE/ND	29	28.7	28.7	100
	Total	101	100.0	100.0	

Source: SPSS Output version 23.0

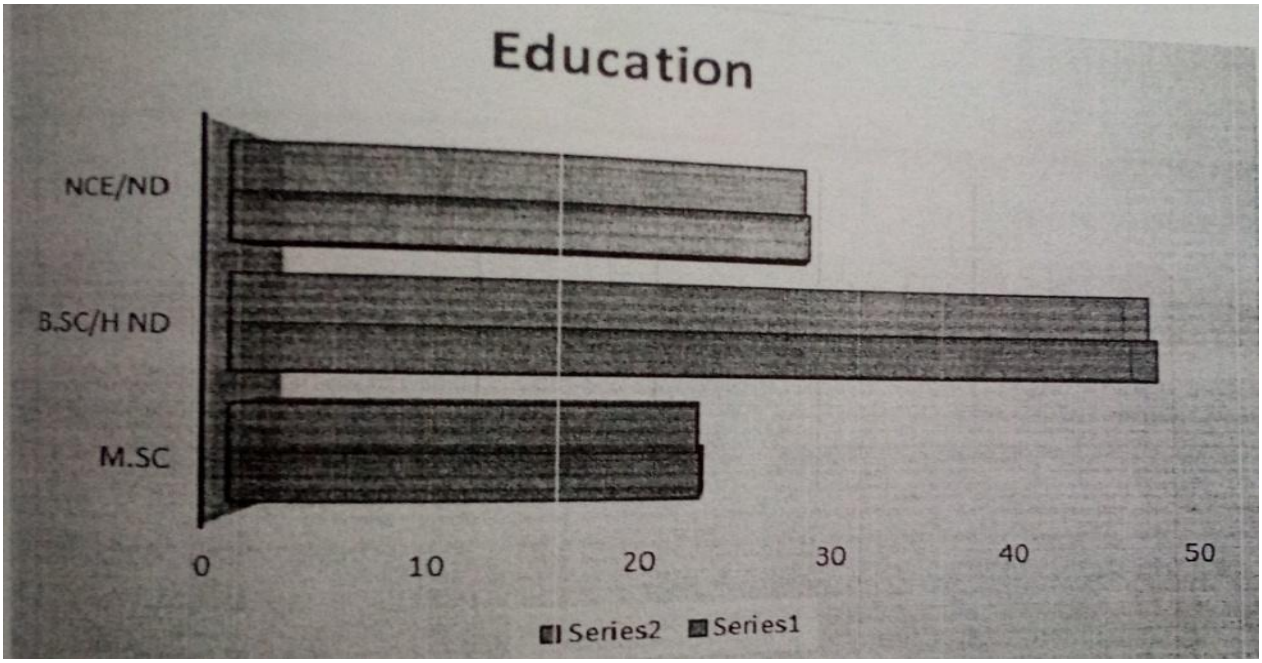

Figure 4.3: Bar Chart showing the Educational Qualification Distribution

The levels of educational qualification of the respondents were also considered. Table 4.4 showed that 23 respondents representing 22.8% possessed an MSc Degree, again 49 respondents indicating 48.5% possessed either BSc/HND and finally, the remaining 29 indicating 28.7%

possessed NCE/ND. The implication of this is that most of our respondents possess the intellectual capacity to respond the issues contained in our research instrument.

4.1.3 Descriptive Analysis on Years of Work Experience of the Sample

This study wanted to identify the years of work experience of the respondents under study. The summary of their responses is as shown in table 4.5 and figure 4.4

Table 4.5: Showing Work Experience of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 years	10	9.9	9.9	9.9
	5 – 10 years	81	80.2	80.2	90.1
	11 – 15 years	10	9.9	9.9	100
	Total	101	100.0	100.0	

Source: SPSS Output version 23.0

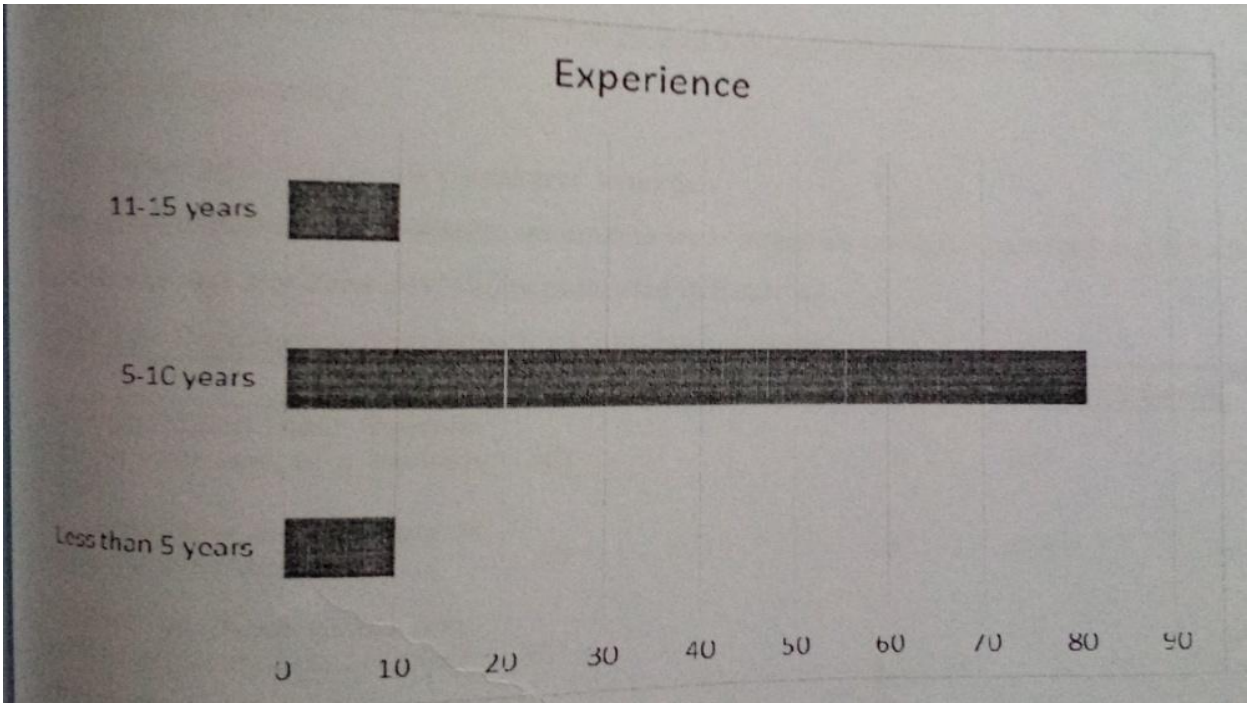

Figure 4.4: Bar Chart showing the Years of Experience

Table 4.5 and figure 4.4 above describes the distribution for respondents' years of experience or tenure with their various hospitality firms. From the data presented in Table 4.5, it can be observed that 10 respondents indicating 9.9% had worked for less than 5 years, 81 respondents which indicated 80.2% had worked for a period between 5 – 10 years, 10 respondents which indicated 9.9% had been working for a period between 11 – 15 years.

4.2 Data Analysis and Results

4.2.1 Descriptive Statistics of the Predictor Variable – Business Process and Brain Re-engineering

The interval scale was used in the research questionnaire, indicating five respond choices with Strongly Disagree = 5, Disagree = 4, Neutral = 3, Agree = 2 and Strongly Agree = 1. A base mean (X = 2.50) as a result of the scaling type (5-point Likert) was used to ascertain levels of affirmation to the indicators (where $x \leq 2.50$ = poor and weak level of affirmation to the indicator; where $x \geq 2.50$ substantial and adequate level of affirmation to the indicator). Also, this section presents the response mean scores and standard deviations on each item in the questionnaire on Customer Interface, Need Analysis, Technical Change, and Strategic Adaptation as dimensions of Business Process Re-engineering.

4.2.1.1 Items and Scores on Customer Interface

In the questionnaire, five research statements were stated on customer interface and the response mean scores and standard deviations presented in Table 4.6.

Table 4.6: Descriptive Statistics for Customer Interface

	N	Minimum	Maximum	Mean	Std. Deviation
Our organization uses interface with the customer of a business system	101	1	5	3.68	1.378

My organization use interface to interacts with its customer	101	1	5	3.68	1.402
Customer interfaces enable users to effectively control the computer	101	1	5	3.87	1.246
Interface provide a mechanism that allow hierarchically unrelated classes to implement the same set of methods	101	1	5	3.66	1.344
Our company place more emphasis on Customer Interface for the purpose of knowledge creation, sharing and retention.	101	1	5	4.20	1.114
Valid N(listwise)	101				

Source: SPSS Output version 23.0

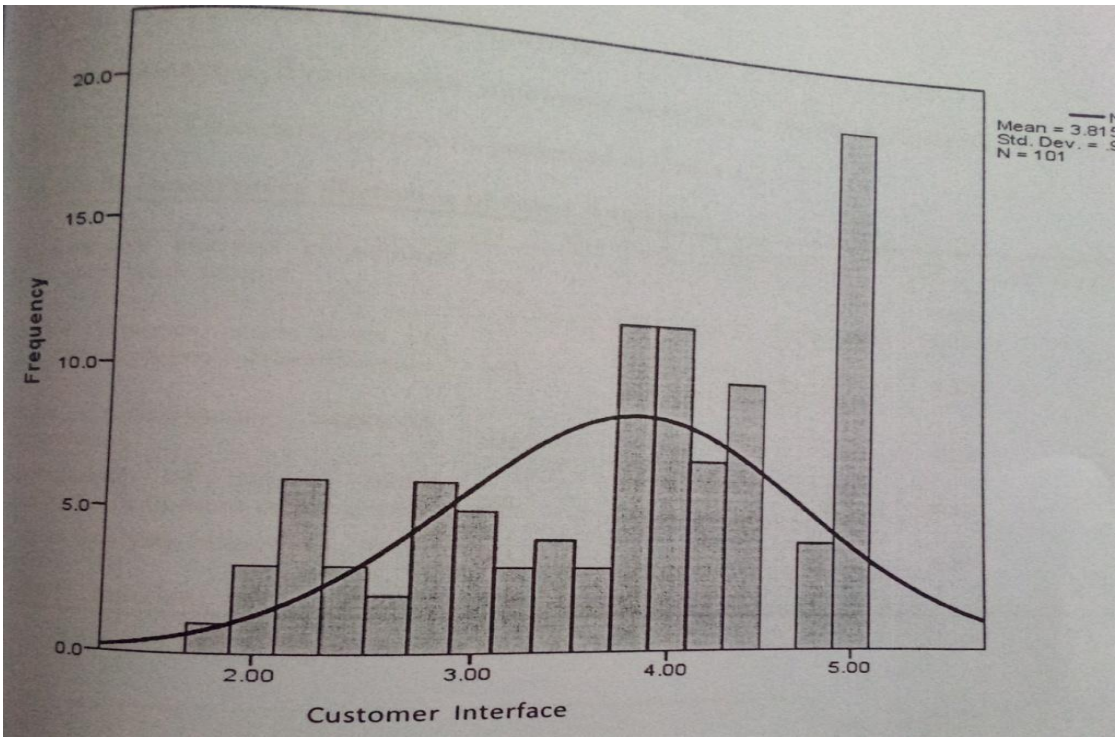

Figure 4.5: Histogram showing descriptive statistics for Customer Interface

Table 4.6 was to determine the manifestation of Customer Interface as a dimension of Business Process Re-Engineering in which five research statement were stated in the questionnaire. It represents the accumulated sum from respondents indicating the mean score and

standard deviation. Generally, Table 4.6 shows that the respondents agreed on all items of Customer Interface as dimension of Business Process Re-Engineering with a mean score >2.50, indicating a substantial and adequate level of affirmation. The results also indicate a low level of disparity in the responses (SD ≤ 2.00).

4.2.1.2 Items and Scores of Need Analysis

In the questionnaire, five research statements were stated on Need Analysis and the response mean scores and standard deviations presented in Table 4.7

Table 4.7: Descriptive Statistics of Need Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Organizational analysis contributes to increased work output	101	1	5	3.83	1.250
Content analysis contributes to increased employee job satisfaction	101	1	5	3.87	1.055
Needs Assessment Improves Performance	101	1	5	4.24	1.088
Determination of training needs helps in the attainment of set targets	101	1	5	4.12	.920
Person analysis improves work quality	101	1	5	4.06	.968
Valid N(listwise)	101				

Source: SPSS Output version 23.0

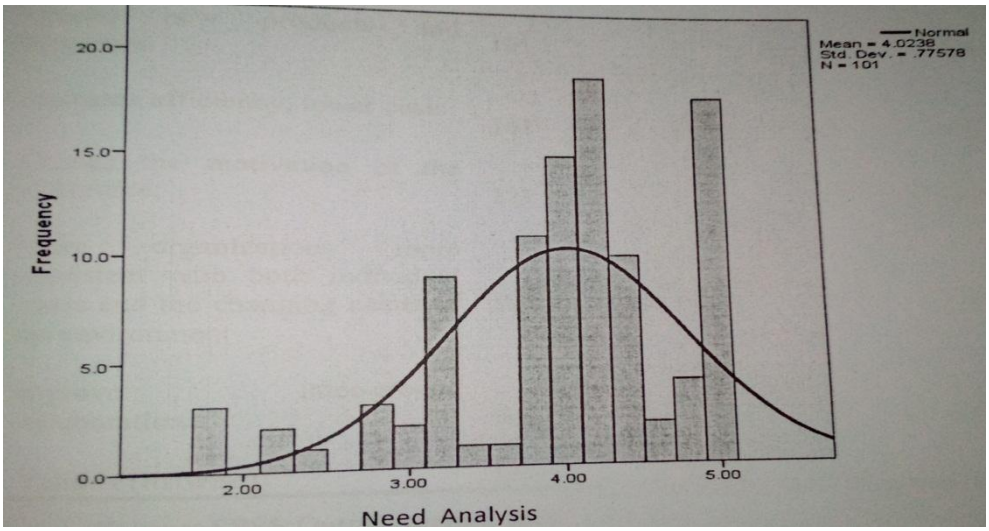

Figure 4.6: Histogram showing descriptive statistics for Need Analysis

Table 4.7 was to determine the manifestation of Need Analysis as a dimension of Business Process & Brain Re-Engineering in which five research statements were stated in the questionnaire. It represents the accumulated sum from the respondents indicating the mean score and standard deviation. Generally, Table 4.8 shows that the respondents agreed on all items of Need Analysis as dimension of Business Process & Brain Re-Engineering with a mean score > 2.50, indicating a substantial and adequate level of affirmation. The results also indicate low level disparity in the responses (SD ≤ 2.00).

4.2.1.3 Items and Scores on Technical Change

In the questionnaire, five research statements were stated on Technical Change and the response mean scores and standard deviations presented in Table 4.8

Table 4.8: Descriptive Statistics for Technical Change

	N	Minimum	Maximum	Mean	Std. Deviation
Creates new products and processes	101	1	5	4.29	1.143
Increases efficiency, lower costs	101	1	5	3.92	1.046
Change the motivation of the workforce	101	1	5	4.27	1.076

Make organizations more consistent with both individual needs and the change needs of the environment	101	1	5	3.93	1.267
Improve inter-groups collaborations	101	1	5	3.83	1.250
Valid N(listwise)	101				

Source: SPSS Output version 23.0

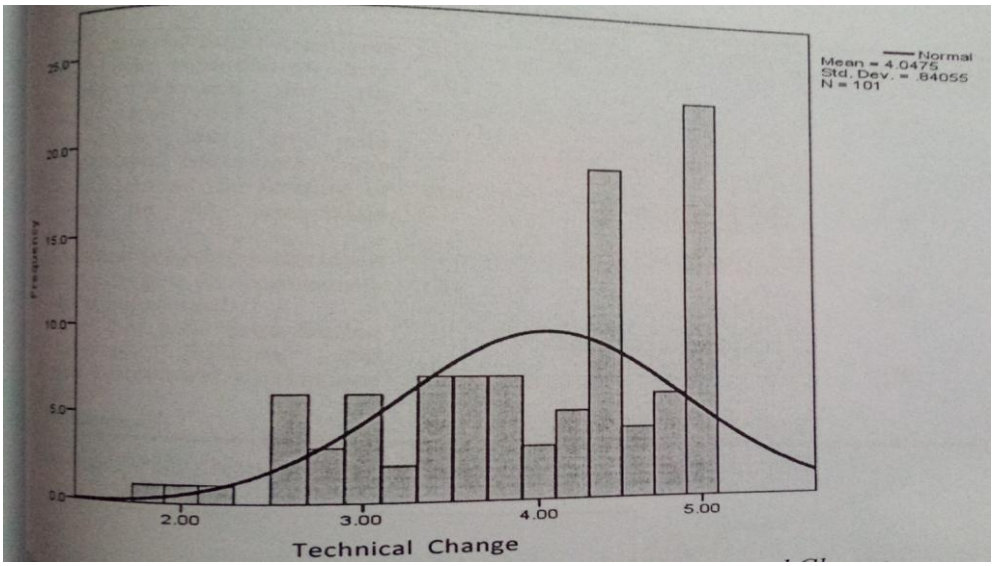

Figure 4.7: Histogram showing descriptive statistics for Technical Change

Table 4.8 was to determine the manifestation of Technical Change as a dimension of Business Process & Brain Re-Engineering in which five research statements were stated in the questionnaire. It represents the accumulated sum from the respondents indicating the mean score and standard deviation. Generally, Table 4.8 shows that the respondents agreed on all items of Technical Change as dimension of Business Process & Brain Re-Engineering with a mean score > 2.50, indicating a substantial and adequate level of affirmation. The results also indicate a low-level disparity in the responses (SD ≤ 2.00).

4.2.3.2 Items and Scores on Strategic Adaptation

In the questionnaire, five research statements were stated on Strategic Adaptation with the response mean scores and standard deviations presented in Table 4.9

Table 4.9: Descriptive Statistics for Strategic Adaptation

	N	Minimum	Maximum	Mean	Std. Deviation
Do you feel that the human resource practices in your organization show respect and concern for the wellbeing of employees?	101	1	5	3.26	1.433
Do you feel that in your organization the initiatives have positively influenced the welfare of the society in its immediate neighbourhood?	101	1	5	3.38	1.399
Do you feel that your organization is adequately engaged in community development initiatives?	101	1	5	3.51	1.419
Do you feel that your organization has instituted policies that appreciate the cultural dimensions in the society?	101	1	5	3.85	1.322
Valid N(listwise)	101				

Source: SPSS Output version 23.0

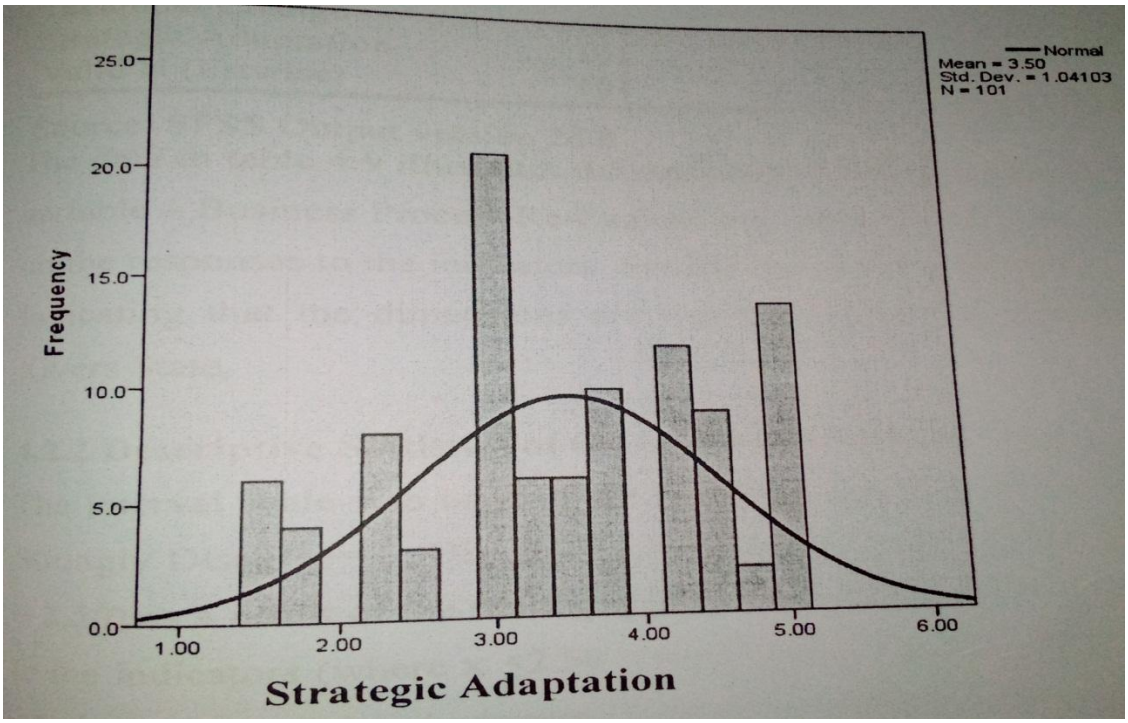

Figure 4.8: Histogram showing descriptive statistics for Strategic Adaptation

Table 4.9 was to determine the manifestation of Strategic Adaptation as a measure of Enterprises Sustainability in which four research statements were stated in the questionnaire. It represents the accumulated sum from the respondents indicating the mean score and standard deviation. Generally, Table 4.9 Shows that the respondents agreed on all items of Strategic Adaptation as a measure of Enterprise Sustainability with a mean score > 2.50, indicating a substantial and adequate level of affirmation. The result also indicates a low level of disparity in the responses (SD ≤ 2.00).

4.10: Descriptive Statistics for the dimensions of Business Process & Brain Re-Engineering

	N	Minimum	Maximum	Mean	Std. Deviation
Customer Interface	101	1.80	5.00	3.8158	.93196
Need Analysis	101	1.80	5.00	4.0238	.77578
Technical Change	101	1.80	5.00	4.0475	.84055
Strategic Adaptation	101	1.80	5.00	3.5000	1.04103
Valid N(listwise)	101				

Source: SPSS Output version 23.0

Figure 4.9: Histogram showing descriptive statistics for innovativeness

The data in table 4.10 illustrates the summary of the statistics for the dimensions of the predictor variable – Business Process & Brain Re-Engineering with summarized values for central tendency based on the responses to the indicators. Results reveal high affirmative summaries for each dimension, indicating that the dimensions are highly an observed phenomenon in Hospitality Firms in Rivers State.

4.2.2 Descriptive Statistics of the Criterion Variable – Enterprises Sustainability

The interval scale was used in the research questionnaire, indicating five respond choices with Strongly Disagree = 5, Disagree = 4; Neutral = 3; Agree = 2 and Strongly Agree = 1. A base mean ($x = 2.50$) as a result of the scaling type (5-point Likert) was used to ascertain levels of affirmation to the indicators (where $x \leq 2.50$ = poor and weak level of affirmation to the indicator, where $x > 2.50$ = substantial and adequate of affirmation to the indicator). Also, this section presents the response mean score and standard deviations on each item in the questionnaire on innovativeness and Market Share as measures of Enterprises Sustainability.

4.2.2.1 Items and Scores on Innovativeness

In the questionnaire, four research statements were stated on Innovativeness and the response mean scores and standard deviations presented I Table 4.11.

4.11: Descriptive Statistics for Innovativeness

	N	Minimum	Maximum	Mean	Std. Deviation
I am more creative when I work as a Team	101	1	5	3.81	1.074
My company employ workers who are ready to work as a team for innovation to develop the firm	101	1	5	4.24	1.088
I am valued by my company because I came up with innovative ideas.	101	1	5	4.10	1.162
My firm invests largely on training because of employee's perfect creativity.	101	1	5	3.26	1.419
My firm invests heavily in group research and development.	101				

Source: SPSS Output version 23.0

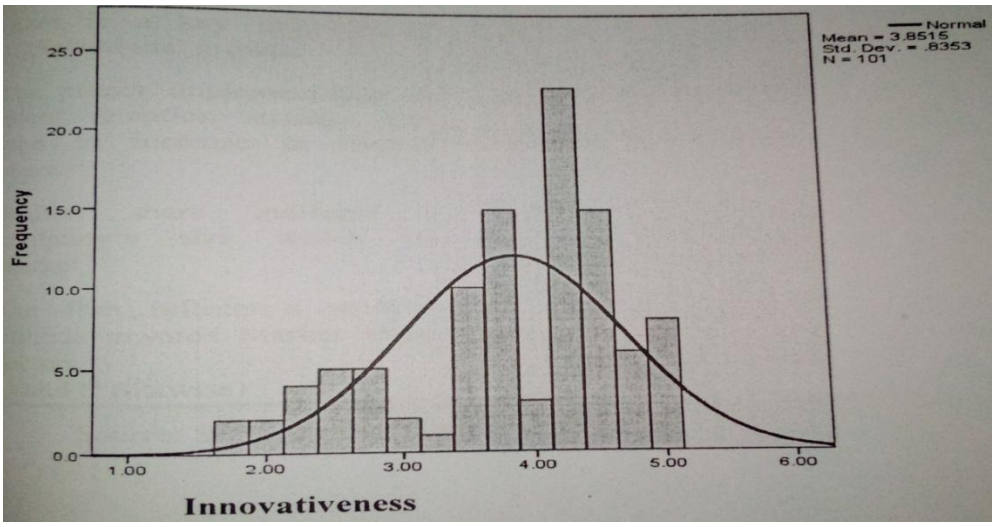

Figure 4.9: Histogram showing descriptive statistics for Innovativeness

Table 4.11 was to determine the manifestation of Innovativeness success as a measure of Enterprises Sustainability in which four research statements were stated in the questionnaire. It represents the accumulated sum from the respondents indicating the mean score and standard deviation. Generally, Table 4.11 shows that the respondents agreed on all items of Innovativeness as a measure of Enterprises Sustainability with a mean score > 2.50, indicating a substantial and adequate level of affirmation. The result also indicates a low-level disparity in the responses (SD ≤ 2.00).

4.2.2.2 Items and Scores on Market Share

In the questionnaire, four research statements were stated on Market Share and the response mean scores and standard deviations presented in Table 4.12

4.12: Descriptive Statistics for Market Share

	N	Minimum	Maximum	Mean	Std. Deviation
Do you agree that Market Share is a key indicator of organizational growth	101	1	5	3.48	1.308
The proper implementation of talent retention strategy will lead to increase in market share	101	1	5	3.81	1.332
Market Share indicates a company's size within its market	101	1	5	4.12	.668
Our firm reflects a positive attitude towards Market Share factors.	101	1	5	3.73	1.085
Valid N(listwise)	101				

Source: SPSS Output version 23.0

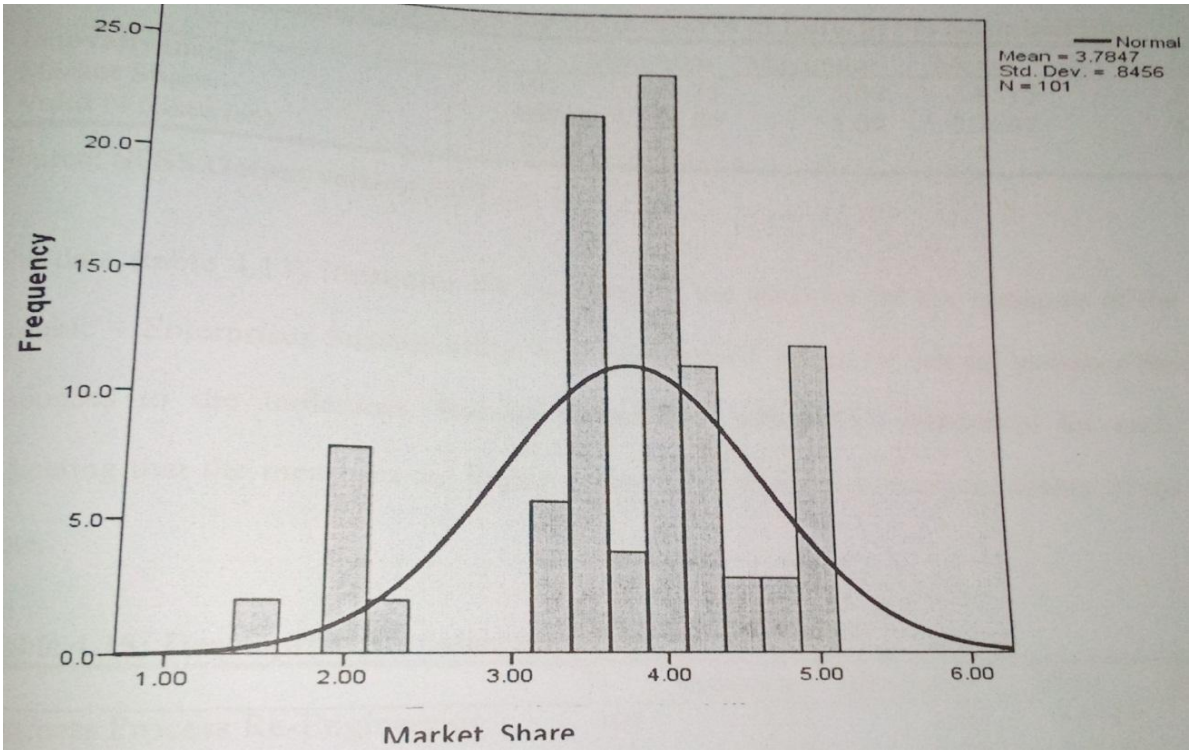

Figure 4.10: Histogram showing descriptive statistics for Market Share

Table 4.12 was to determine the manifestation of Market Share as a measure of Enterprises Sustainability in which four research statements were stated in the questionnaire. It represents the accumulated sum from the respondents indicating the mean score and standard deviation. Generally, Table 4.12 shows that the respondents agreed on all items of Market Share as a measure of Enterprises Sustainability with a mean score > 2.50, indicating a substantial and adequate level of affirmation. The result also indicates a low-level disparity in the responses (SD ≤ 2.00).

4.13: Descriptive Statistics for the measure of Enterprises Sustainability

	N	Minimum	Maximum	Mean	Std. Deviation
Innovativeness	101	1.75	5.00	3.8158	.83530
Market Share	101	1.50	5.00	3.7847	.84560
Valid N(listwise)	101				

Source: SPSS Output version 23.0

The data (table 4.13) illustrate the summary of the statistics for the measures of the criterion variable – Enterprises Sustainability with summarized values for central tendency based on the responses to the indicators. Result revealed high affirmative summaries for each measure, indicating that the measures are highly an observed phenomenon of Hospitality Firms in Rivers State.

4.14: Descriptive Statistics for study variables

	N	Minimum	Maximum	Mean	Std. Deviation
Business Process & Brain Re-Engineering	101	2.27	5.00	3.9624	.76672
Enterprises Sustainability	101	2.17	5.00	3.7120	.73518
Valid N(listwise)	101				

Source: SPSS Output version 23.0

The data (Table 4.14) illustrate the summary of the statistics for the study variables – Business Process & Brain Re-Engineering (predictor variable), Enterprise Sustainability (criterion variable). Result revealed high affirmative summaries for each measure. Indicating that the measures are highly an observed phenomenon of Hospitality Firms in Niger Delta Region.

4.2.4 Tests of Hypothesis

This section of the study presents the results on the test on bivariate and null hypothesis of the study. The bivariate level of analysis present evidence which illustrate the strength of the relationship between the dimensions of Business Process & Brain Re-Engineering which are: Customer Interface, Need Analysis, Technical Change and Strategic Adaptation; and the measures of the criterion variable, Enterprises Sustainability namely: Innovativeness and Market Share. The tests for this section are two-tailed and as such emphasizes on no direction. The assessment of the bivariate relationships was carried out using the Spearman's rank order correlation with the precision for error fixed at 0.05 given the choice of the confidence interval of 95%.

Decision rule: The decision rule which applies for all bivariate test outcomes is according to Bryman and Bell (2003) where:

Table 4.16: Shows the description of range of correlation (Rho) values, as well as the correlative level of association

Range of Rho (+ and – sign value)	Association strength
± 0.80 – 0.99	Very strong
± 0.60 – 0.79	Strong
± 0.40 – 0.59	Moderate
± 0.20 – 0.39	Weak
± 0.00 – 0.19	Very weak

Source: Bryman and Bell (2003)

Table 4.16 shows that the ‘‘+’’ sign of Rho points a direct and positive relationship, while ‘‘- ‘’ sign of Rho shows an indirect or inverse relationship. Thus, the Rho sign indicates the direction of relationship between the predictor and criterion variables.

This section was therefore used to present the answers to our research questions and test the earlier postulated hypothesis. However, we commenced by first presenting a proof of existing relationships using a scatter graph.

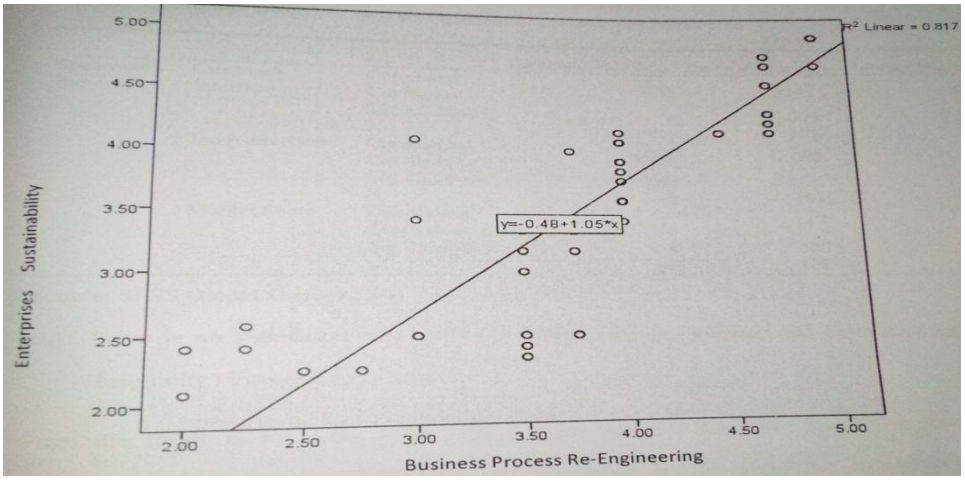

Figure 4.14: Scatter plot the relationship between Business Process & Brain Re-engineering and

Enterprises Sustainability

The scatter plot graph in Figure 4.14 shows at R^2 (0.817) linear line depicting a strong viable and positive relationship between the two constructs. The implication is that an increase in Business Process and Brain Re-Engineering at the same time brings about an increase in the level of Enterprises Sustainability. The scatter diagram has provided vivid evaluation of the closeness of the relationship among the pairs of variables through the nature of their concentration. The positive relationship is evidenced by the pattern of the points moving upwards from left to right. This positive relationship indicates that a higher value of the dependent variable is associated with higher values of the independent variable.

4.2.4.1 Customer Interface and Enterprises Sustainability Measures

			Customer Interface	Innovativeness	Market Share
Spearman's rho	Customer Interface	Correlation Coefficient	1.000	.534**	.815**
		Sig. (2-tailed)	.000	.000	.000
		N	101	101	101
	Innovativeness	Correlation Coefficient	.534**	1.000	.934**
		Sig. (2-tailed)	.000		.000
		N	101	101	101
	Market Share	Correlation Coefficient	.815**	.934**	1.000
		Sig. (2-tailed)	.000	.000	
		N	101	101	101

Source: SPSS Output version 23.0

Ho_1: There is no significant relationship between Customer Interface and Innovativeness of Hospitality Firms in the Niger Delta.

From the result in the table above, the correlation coefficient (rho) shows that there is relationship between Customer Interface and Innovativeness. The *correlation coefficient 0.534* confirms the magnitude and strength of this relationship and it is a moderate correlation between

the variables. The correlation represents is significant at p-0.000<0.01. Therefore, based on the study findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a statistically significant relationship between Customer Interface and Innovativeness of Hospitality Firms in the study area.

Ho_2: There is no significant relationship between Customer Interface and Market Share of Hospitality Firms in the Niger Delta.

From the result in the table above, the correlation coefficient (rho) shows that there is relationship between Customer Interface and Market Share. The *correlation coefficient 0.815* confirms the magnitude and strength of this relationship and it is a very strong correlation between the variables. The correlation represents is significant at p-0.000<0.01. Therefore, based on the study findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a statistically significant relationship between Customer Interface and Market Share of Hospitality Firms in Niger Delta.

4.2: Needs Analysis and Enterprises Sustainability Measures

			Customer Interface	Innovativeness	Market Share
Spearman's rho	Customer Interface	Correlation Coefficient	1.000	.527**	.770**
		Sig. (2-tailed)	.000	.000	.000
		N	101	101	101
	Innovativeness	Correlation Coefficient	.527**	1.000	.934**
		Sig. (2-tailed)	.000		.000
		N	101	101	101
	Market Share	Correlation Coefficient	.770**	.934**	1.000
		Sig. (2-tailed)	.000	.000	
		N	101	101	101

Source: SPSS Output version 23.0

Ho_3: There is no significant relationship between Need Analysis and Innovativeness of Hospitality Firms in Niger Delta.

From the result in the table above, the correlation coefficient (rho) shows that there is relationship between Need Analysis and Innovativeness. The *correlation coefficient 0.527* confirms the magnitude and strength of this relationship and it is a moderate correlation between the variables. The correlation represents is significant at p-0.000<0.01. Therefore, based on the study findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a statistically significant relationship between Need Analysis and Innovativeness of Hospitality Firms in Niger Delta.

Ho_7: There is no significant relationship between Strategic Adaptation and Innovativeness of Hospitality Firms in Niger Delta.

From the result in the table above, the correlation coefficient (rho) shows that there is relationship between Strategic Adaptation and Innovativeness. The *correlation coefficient 0.534* confirms the magnitude and strength of this relationship and it is a moderate correlation between the variables. The correlation represents is significant at p-0.000<0.01. Therefore, based on the study findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a statistically significant relationship between Strategic Adaptation and Innovativeness of Hospitality Firms in Niger Delta.

Ho_8: There is no significant relationship between Strategic Adaptation and Market Share of Hospitality Firms in Niger Delta.

From the result in Table above, the correlation coefficient (rho) shows that there is relationship between Strategic Adaptation and Market Share. The *correlation coefficient 0.815* confirms the magnitude and strength of this relationship and it is a very strong correlation between

the variables. The correlation represents is significant at p-0.000<0.01. Therefore, based on the study findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a statistically significant relationship between Strategic Adaptation and Market Share of Hospitality Firms in Niger Delta.

4.4 Discussion of Findings

This study examines the relationship between Business Process & Brain Re-Engineering and Enterprises Sustainability of Hospitality Firms in Rivers State. This also agrees with Orognu, Onyeizugbe and Onuzulike (2015) who pointed out that process innovation influences employee retention and this enhances organization's success. Supporting of this observation. Albert (2007) postulated that job redesign is the restructuring of the elements of work, responsibilities, tasks and duties of employees to make the job more inspiring and encouraging.

The idea is to maximize output and increase the level of satisfaction through placing the right person on the right job (Slocum & Sims, 2000). This finding is in agreement with Ringin, Razalli and Hasnan (2012) position that information technology capability plays a crucial role in moderating the relationship between business process re-engineering and organizational performance.

Thus, managers of organizations should restructure job activities to improve performance. In consensus with the findings, Aluko, Odugbean, and Osuagwu (2004) postulated that the effect of technological changes on organizations is profound, because it leads to chain of reactions. It changes the organizational structure, which consequently alter behaviour in organizations, especially in terms of social interaction pattern. Linked with technological changes in the manufacturing companies are changes in working hours, changes in the quality and type of supervision, disruption of informal work groups, changes in the extent of an employee's

jurisdiction over a given area of work and changes in employee's perception of job security and acceptable performance.

4.5.1 Customer Interface and Enterprise Sustainability

This study examined the relationship between Customer Interface and Enterprises Sustainability of Hospitality Firms in Port Harcourt, Niger Delta. This finding support's the earlier findings in a study by Karemu *et al.* (2014), on critical analysis of Customer Interface on medical employees' retention in public hospital in Kenya, which indicated that Customer Interface strategies impact positively on the retention of doctors and nurses at Kenyatta National hospital in Kenya.

The studied variables were career development, compensation and benefits attractiveness, nature of work climate and levels of training and development. The data obtained from the study indicated that Customer Interface strategies impact positively on the retention of doctors and nurses at Kenyatta national hospital in Kenya. A unit increase in career development opportunities would lead to effects in retention of with the findings of the current study which shows career development playing the greatest role in employee retention and Customer Interface.

4.5.2 Need Analysis and Enterprises Sustainability

This study examined the relationship between Need Analysis and Enterprises Sustainability of Hospitality firms in Port Harcourt, Niger Delta. This is consistent with the findings from a similar study by Chenevert and Trembly (2009) who found that good Need Analysis have a positive effect on performance. This contradicts Goldstein and Ford (2002) who noted that conducting a systematic needs assessment is a crucial initial step to training, design and development and can substantially influence the overall effectiveness of training programs.

It further contradicts Belcourt (1999) who stated that managers and HR staff should stay alert to the kinds of training that are needed, where they are needed, who needs them, and which methods will best deliver needed knowledge, skills and abilities (KSAs). Study found out that existence of poor Need Analysis between the junior staff and the senior management staff in many banks affected participation of junior staff in decision making process.

4.5.3 Technical Change and Enterprises Sustainability

This study examined the relationship between Technical Change and Enterprises Sustainability of Hospitality firms in Port Harcourt Rivers State. This finding reinforces views by Cosar (2011) who posited that with increasingly globalization, Technical Change is necessity for industrial productivity has continually attracted both academic and public interest even the oil gas sector Technical Change is widely acknowledged as an agent of national development.

4.5.4 Strategic Adaptation and Enterprises Sustainability

This study examined the relationship between Strategic adaptation and Enterprises Sustainability of Hospitality firms in Port Harcourt, the heart of the Niger Delta. The study findings agree with the findings of a study by Ndope (2010) who established that implementation of administrative strategic change effects organizational performance more than the implementation of administrative technical change. However, Fielder (2015) disagreed with Ndope (2010) by stating that the ability to engage in rapid and relentless technical and administrative change equally is a critical survival capability for firms in highly uncertain environments relying upon high organizational flexibility in adapting to the external environment by ensuring that each variable of change has specific level of impact on performance improvement.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Spearman's Rank Order Correlation Statistics was used to examine the relationship between Business Process & Brain Re-Engineering and Enterprises Sustainability of Hospitality firms in Port Harcourt, Niger Delta. In order to undertake this inquiry objectively, their research questions were raised that reflected the dimensions of Business Process & Brain Re-Engineering to include Customer Interface, Need Analysis, Technical Change and Strategic Adaptation; and the measures of Enterprises Sustainability which included innovativeness and Market Share. From the data generated and analysed, it was empirically discovered that a significant positive relationship exists between Business Process & Brain Re-Engineering and Enterprises Sustainability in Hospitality firms in Port Harcourt, Rivers State. In line with the specific objectives the following findings emerged:

i. There is no significant relationship between Customer Interface and Innovativeness of Hospitality firms in Niger Delta.

ii. There is no significant relationship between Customer Interface and Market Share of Hospitality firms in Niger Delta.

iii. There is no significant relationship between Need Analysis and Innovati.

iv. There is no significant relationship between Need Analysis and Market Share of Hospitality firms in Niger Delta.

v. There is no significant relationship between Technical Change and Innovativeness of Hospitality firms in Niger Delta.

vi. There is no significant relationship between Technical Change and Market Share of Hospitality firms in Niger Delta.

vii. There is no significant relationship between Strategic Adaptation and Innovativeness of Hospitality firms in Niger Delta.

viii. There is no significant relationship between Strategic Adaptation and Market Share of Hospitality firms in Niger Delta.

5.2 Conclusion

Re-engineering is necessary as it increases the enterprise mobility, it innovates potential, environmental friendliness of its activity; that is very important in organizations. It is difficult to give any general advice on how to execute re-engineering at a certain enterprise. The project of the business processes & brain re-engineering at each enterprise is unique. The first research objective was to ascertain the relationship between Customer Interface and Enterprises Sustainability of Hospitality firms in Niger Delta Region. The finding led to a conclusion that there was a positive and significant relationship between Customer Interface and Enterprises Sustainability of Hospitality firms in Niger Delta.

The second research objective was to ascertain the relationship between Need Analysis and Enterprises Sustainability of Hospitality firms in Niger Delta. The finding led to a conclusion that there was positive and significant relationship between Need Analysis and Enterprises Sustainability of Hospitality firms in Niger Delta.

The third research question was to ascertain the relationship between Technical Change and Enterprises Sustainability of Hospitality firms in Niger Delta. The finding led to a conclusion that there was positive and significant relationship between Technical Change and Enterprises Sustainability of Hospitality firms in Rivers State. This implies that Technical Change plays major role in organizations in trying to enhance sustainability.

5.3 Recommendations

Based on the findings, the conclusions and implications of the study, the following recommendations have been made:

i. The management should ensure adequate redesigning of jobs by describing employees' line of duties and place the right person on the right job to enhance adequate utilization of resource and opportunity exploitation.

ii. The management should adapt to changes in technology and training their employees to acquaint themselves with the current technologies of different organizations so as to have an edge over their competitors and in turn enhances their sustainability.

iii. The organization should emphasize the need to undertake training needs Analysis before implementing training programmes.

5.4 Contribution to Knowledge

This study having empirically verified that a significant positive relationship exist between Business Process and Brain Re-Engineering and Enterprises Sustainability of Hospitality firms in Rivers State, thus contributes to the body of knowledge. This study within the scope of our knowledge is one of the few in this geographical sphere to have investigated the Business Process & Brain Re-Engineering as a predictor of Enterprises Sustainability of Hospitality firms in Niger Delta.

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APPENDIX A: APPROVAL OF QUESTIONNAIRE

Business Management Programme,
Cavalla International University.
USA
16/02/2023

Dear Respondent(s),

Request for Completion of Questionnaire

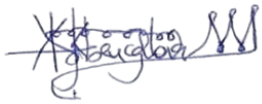
I am an MBA final year student of the above-mentioned Department and Institution, carrying out a research study on the topic: ‘‘**Business Process & Brain Re-engineering and Enterprises Sustainability of Hospitality Firms in Niger Delta Region.’’**

The study is geared towards the gathering of information for the completion of a degree programme in Office and Information Management, faculty of Management Sciences in Rivers State University.

Please you are required to fill the affected questionnaire accordingly ad all information supplied would keep in strict confidentiality and use for completion of this study only.

I sincerely, anticipate your cooperation.

Yours sincerely,



Ikechi Kelechi Agbugba
(Researcher)

A QUESTIONNAIRE ON "BUSINESS PROCESS & BRAIN RE-ENGINEERING AND ENTERPRISES SUSTAINABILITY OF HOSPITALITY FIRMS IN RIVERS STATE".

Part (A) Demographic Data

Respondent No:

Gender of respondent

Male ☐

Female ☐

Qualification of Respondent

First Degree Qualification ☐

PGD/Masters/PhD Degree ☐

Professional Certification ☐

Other Certification ☐

Part (B): Variables of the study

Scaling format

Strongly Agree	SA	4
Agree	A	3
Disagree	D	2
Strongly Disagree	SD	1

ADAPTING BUSINESS PROCESSES TO BRAIN RE-ENGINEERING

Customer Interface	**SD**	**D**	**A**	**SA**
Our organization use interface with the customers of a business system.				

My organization use interface to interacts with its customer				
Customer interfaces enable users to effectively control the computer				
Interfaces provide a mechanism that allow hierarchilly unrelated classes to implement the same set of methods				
Our company place more emphasis on Customer Interface for the purpose of knowledge creation, sharing and retention.				

Need Analysis	**SD**	**D**	**A**	**SA**
Organizational analysis contributes to increased work Output				
Content analysis contributes to increased employee job Satisfaction				
Need Assessment Improves Performance				
Determination of training needs helps in the attainment of set targets				
Personal analysis improves work quality				

Technical Change	**SD**	**D**	**A**	**SA**
Create new products and processes				
Increase efficiency, lower cost				
Change the motivation of the workforce				
Make organizations more consistent with both individual needs and the changing needs of the environment				
Improve inter-groups collaborations				

Strategic Adaptation	**SD**	**D**	**A**	**SA**
Do you feel that the human resource practices in your organization show respect and concern for the wellbeing of employee?				

Do you feel that in your organization the initiatives have positively influenced the welfare of the society in its immediate neighbourhood?				
Do you feel that your organization is adequately engaged in community development initiatives?				
Do you feel that your organization has instituted policies that appreciate the cultural dimensions in the society?				

Enterprises Sustainability

Innovativeness	**SD**	**D**	**A**	**SA**
I am more creative when I work as a team.				
My company employs workers who are ready to work as a team for innovation to develop the firm.				
I am valued by my company because I came up with innovative ideas.				
My firm invests largely on training because of employee's perfect creativity.				
My firm invests heavily in group research and development.				

Market Share	**SD**	**D**	**A**	**SA**
Do you agree that Market Share is a key indicator of organizational growth?				
The proper implementation of talent retention strategy will lead to increase in market share.				
Market share indicates a company's size within its market.				
Our firm reflects a positive Market Share factor.				

APPENDIX B: CIU IRB APPROVAL LETTER

Cavalla International University

IRB APPROVAL LETTER

December 11, 2024

Dr. Ikechi Agbugba, MBA Student
Cavalla International University
P.O. Box 130601
Roseville, MN 55113 USA

Subject: **IRB Approval Letter**

To whom it may concern:

This letter acknowledges that I have received and reviewed a request by Augustine Okochukwu to conduct a research project entitled, **"Business Process & Brain Re-engineering and Enterprises Sustainability of Hospitality Firms in Niger Delta Region",** and I **APPROVED** this research study to be conducted at a facility of your choice.

The researcher receives approval for her research project from the Cavalla International University's Institutional Review Board (CIU-IRB), which the researcher agreed to provide access for the approved research project. If we have any concerns or need additional information, please contact the Cavalla International University's IRB at (888) 233-5356 or **IRB@cavallauniversity.education** or **vjohnson@cavallauniversity.education**.

Sincerely,

Valencia Johnson

Dr. Valencia Johnson, PhD, EdD, LLM, JD, MBA, MSCS, MS, BS
Vice President/Executive Assistant to the President/Dean of Graduate Studies
Director of Cavalla International University- Institutional Review Board (CIU-IRB)
Office of the Vice Provost for Research Administration (OVRA)
Email: **vjohnson@cavallauniversity.education**

Cc: Dr. Horatius Williams, Committee Member (Content)
Dr. Valencia T. Johnson, Committee Member (Methodology)
Ms. Marjorie Ramos, Registrar

CURRICULUM VITAE

DR IKECHI AGBUGBA, PhD, FHEA

Provost Award
(Cavalla Int'l University, 2024)

Pioneer & Author, Brain Re-engineering Strategy
(Library of Congress, Washington DC, 2023)

Global Mentor of Change Awardee
(Global Council for the Promotion of International Trade, 2022)

Global Emerging Leader Award
(Global Council for the Promotion of International Trade, 2022)

Agro Economist of the Year
(Pan African Agricultural Journalists, 2017)

Profile

Dr Ikechi Agbugba is the Pioneer of the 'Brain Re-Engineering Initiative (BRI or BRECR), Strategy for actualising the UN SDGs.' This initiative is registered in the Library of Congress Copyrights Law at Washington DC USA. He is a profound food & agro economist with wide experiences in agriculture, business management, economics of agriculture, project management, entrepreneurship development, clean and renewable energy options, food security, technology in agriculture (such as blockchain, AI and IOTs).

He is a Lead Professor/Director in the Agribusiness Management Programme at Cavalla International University (CIU). He has intense experience in developing project proposals which has been delivered in South African communities and has also been part of EU Horizon Funding, NUFFIC, ARC and WRC among other opportunities aligning with the SDGs agenda of the United Nations. He has twice consulted for the United Nations under the International Organisation for Migration (IOM) Connecting Diaspora for Development Project focused on train-the-trainers programme spearheaded by the Hague Office in the Netherlands. He successfully delivered his assignments at the Food Crop Production Technology Transfer Station; and a Horticulture Research Institute (NIHORT), both in Nigeria. During the UN assignment, He developed a holistic strategy for horticulture ecosystem from production to consumption (hands of the end-user) thereby promoting safety of horticulture and arable crops in agrochemical usage to tackle pest incidence(s) as it complies with crop health regulations at the local, regional, national, and regional (EU) levels. Dr. Ikechi is the Director, Research and Development/Innovation, African Diaspora Collective, North and South America (ADC-NSA).

After defending his PhD (Agricultural Economics) in 2014 at University of Nigeria Nsukka, he proceeded to the University of Fort Hare, South Africa for his Postdoctoral Research Fellowship on a Smallholder Collaborative Study between Agricultural Research Council (ARC) and Faculty of Science and Agriculture UFH, and later on with a NUFFIC Project of which three South African Universities (Limpopo, Venda, and Fort Hare Universities) benefitted from. More so, he has garnered experiences as external examiner with Development Studies Department, University of Fort Hare and has been examining PhD students since 2018. More so, he has featured as external examiner for MSc students of Agricultural Economics, University of KwaZulu-Natal (UKZN), South Africa and Pince Abubakar Audu University (formerly Kogi State University), Nigeria. Since 2022, he has been receiving invitations to evaluate/assess the research outputs of professors of Agricultural Economics as a National Research Foundation (NRF) Scholar.

Dr Ikechi is an accredited member of the International Trade Council (ITC). He has also garnered wide experiences and affiliations in the academia and research domains as Advisory Board Member at Saudi Education & Technology Collective Alliance (SETCA); Advisory Board Member at Food Security Consortium USA; Honorary Associate Professor at the University of Birmingham, England; Lecturer at York St John University England; Faculty Member at School of Pan African Thought, London; Adjunct Graduate Faculty at Tennessee State University (TSU); Mentor on New Faces for Farming at Writtle University College, Chelmsford, England; Visiting Professor at Rome Business School (RBSN); Honorary Adjunct Professor at Lovely Professional University (LPU); Senior Lecturer at Rivers State University (RSU), Consultant on Agribusiness and Agricultural Economics at Nigeria Stored Products Research Institute (a Parastatal under the Federal Ministry of Agriculture and Food Security, Nigerian Government) among others. Since 2003, he has been carrying-out research on food and agricultural economics, agribusiness, food systems studies and development studies. To his credit, he has published over 60 papers in reputable journals and is working assiduously with colleagues to develop a formidable ecosystem agribusiness facility with the aim of revamping efficiency and sustainability for youth engagement in selected locations.

In many ways, Dr Ikechi Agbugba has been instrumental in creating visibility for RSU and his other affiliations even in his collaborations with other international organisations. In 2022, he received the Global Mentor of Change and Global Emerging Leader Awards by the Global Council for the Promotion of International Trade (GCPIT). Moreover, Dr Ikechi was recognised by the University of Rwanda as lead facilitator in cementing MoU with RSU with focus on spearheading formidable productive collaborations between UR's College of Agriculture, Animal Science and Veterinary Medicine (CAAVM) and Faculty of Agriculture RSU. To his credit, Dr Ikechi has published over 70 articles in reputable journals and conference proceedings, book chapters and issues.

More so, he is a Co-founder of the Africa Organisation of Technology in Agriculture (AOTA), a Rwanda based initiative poised to transform Africa's agriculture sector through targeted approaches for unlocking her food and agricultural potentials with the help of technology and business models for her key players. Jointly, AOTA, University of Rwanda, and Rwanda Ministry of Agriculture have twice delivered Int'l Conference on Business Models in Agriculture (IBMA). Also, Dr. Ikechi had served as Technical Adviser to NutriCare, Malawi (an initiative developing strong farmers' links and networks with the agriculture sector in specific regions thereby identifying farmer/farming needs, as well as building networks, partnerships, and relevant opportunities in line with the vision of actualizing food and nutrition secure communities through empowering women to increase availability of affordable nutritious foods.

In 2021, Dr Beatrice Bischof learnt about his passion in agriculture and incorporated Dr Ikechi as partner in the PETS Foreign Policy Ecosystem Programme she created for training African farmers who are majorly smallholders on developing smart dimensions, protected farming systems and relevant agtechs, as well as upgrading farmers' knowledge and skills on indigenous technologies provided food production is efficient. Dr Bischof, a German ambassador enrolled him as EUTECH advocate. As an EUTECH advocate & Board Member, Food, Farming & Fisheries Alliance, he has participated in different workstreams as either expert, consultant, or speaker, since 2021. In addition, he partners with agribusiness leaders and establishments across the global south (especially sub-Sahara Africa) in advising on efficient, effective and actionable ways for driving the needed transformation in specific communities of Africa.

In 2015, Dr Ikechi facilitated a plenary session on Food Security and Agribusiness at the International Food and Agribusiness Management Association (IFAMA) World Congress which held at St Paul Minneapolis, Minnesota, USA. In 2017, he earned the excellence award as 'Agro-Economist of the Year' by the Pan African Agricultural Journalists. That same year, he was selected as academic/researcher in the stakeholder roundtable at the Feed-the-Future initiative of the USAID Global Food Security Strategy Whole-System Workshop. Moreover, in 2021, Dr Ikechi was invited to facilitate the Rivers State Nigeria Chapter of the Michigan State University Collaboration Research Workshop with World Bank, USAID, FAO and Worldfish on 'the impact of COVID-19 on farmers' incomes and food systems in urban and rural communities of Nigeria.' At this event, key staff from the Ministry of Agriculture, Poultry and Fishery Farmers' Association, among other stakeholder members were in attendance and all attendees were compensated monetarily.

CONTACT ADDRESS: Apartment 17, 206 Aldridge Road, Birmingham, B42 2FX, England, United Kingdom

E-MAIL: iykeagbugba1@yahoo.co.nz i.agbugba@cavallauniversity.education.org

TELEPHONE LINES: +2348036483852; +447533389932

EDUCATIONAL INSTITUTIONS ATTENDED WITH DATES:

- Cavalla Int'l University of America (March 2023 - October 2024)
- Univ. of Fort Hare, South Africa (Sept 2014 - January 2016)
- University of Nigeria (June 2009 - February 2014)
- University of Nigeria (March 2005 - November, 2008)
- University of Nigeria (March 1998 - August, 2003)

ACADEMIC QUALIFICATIONS:

- Master of Business Administration on Business Management
- Postdoctoral Research Fellowship on Smallholder Development
- Doctor of Philosophy (PhD), Agricultural Economics
- Master of Science (MSc), Agricultural Economics
- Bachelor of Science (BSc), Agricultural Economics

WORK EXPERIENCE(S)

HONORARY/ADJUNCT POSITIONS:

- ***Honorary Adjunct Faculty,*** Faculty of Food and Agriculture, Lovely Professional University, Punjab, India. November 2023 – Present.
- ***Honorary Associate Professor,*** Food Chain Security/Economic Dvelopment, School of Chemical Engineering, University of Birmingham, Edgbaston Campus, England, July 2023 – Present.
- ***Adjunct Graduate Faculty,*** College of Public Service, Tennessee State University,Nasville, Tennessee State, USA, December 2023 – December 2024
- ***Guest Lecturer,*** Innovative Solutions in Food Security, Food Safety Research Lab, School of Chemical Engineering, University of Birmingham, Edgbaston Campus, England, February 2023 – June 2023.
- ***Mentor***, New Faces for Farming, Writtle Univ. College (now Anglia Ruskin University), Chelmsford, Essex, England, March – April, 2023
- ***Senior Lecturer,*** Department of Agricultural & Applied Economics, Rivers State University, March 2016 – Present
- ***Professor & Director,*** *Agribusiness/Policy Economics and Technology, Cavalla Int'l University (American Online University), New Orleans, LA, United States, Louisiana*
- ***Visiting Faculty,*** Rome Business School, March 2019 – Present.
  Link: https://romebusinessschool.ng/ikechi-agbugba-ph-d-agribusiness-management/

- ***Casual Academic***, Business Management (Int'l Project Management), York St John University (YSJ), London, United Kingdom. April 2023 – Present.
- ***Researcher & Development Officer (RDO),*** Reform Corporation Int'l (RFI), London, United Kingdom. April 2019 – June 2023.
- ***Postdoctoral Research Fellow,*** Department of Agricultural Economics & Extension, University of Fort Hare, September 2014 – January 2016

EXPERIENCE (VOLUNTEER WORKS):

- ***Advisory Board Member,*** Saudi Education & Technology Collective Alliance (SETCA), Saudi Arabia. Link: https://www.setca.tech/about.html
- ***Advisory Board Member,*** Agri Technical Affairs at Food Security Consortium (FSC), USA and Kenya. Link: https://foodsecurityconsortium.com/about-us/
- ***International Consultant/ Research & Innovation Director,*** CS Njema Ltd, Rwanda, Organic Fertiliser Production Initiator. Link: https://csnjema.rw/dr-ikechi-agbugba/
- ***Consultant, Agribusiness & Agricultural Economics,*** Nigerian Stored Products Research Institute (NSPRI), Federal Min of Agriculture & Food Security, Nigeria (June, 2024).
- ***Agribusiness Advisor,*** Cater & Merger Consult Ltd,, Peterborough, England, United Kingdom. Link: https://caterandmergerconsult.com/
- ***Pioneer Chair***, Scientific Committee, International Conference on Business Models in Agriculture (IBMA) & University of Rwanda & Ministry of Agriculture & Animal Resources, Rwanda (2023-2024). Link: https://www.ibmaconference.org
- ***Independent Advisor for Agritech and Agribusiness Innovation,*** Evergrocer Sustainable Marketplace, Worldwide. Link: https://www.evegrocer.com
- ***Chief Sustainability Officer/Trainer,*** Mpowa and Heroes Academy Project, London, United Kingdom. Link: https://www.mpowa.io/dr-ikechi-agbugba
- ***Director, Innovation/Research & Development,*** African Diaspora Collective, North & South America (ADC-NSA), May 2023 – till date.
- ***Consulting as Professor*** in the Proposed African Cannabis University (ACU). Link: https://www.africancannabisuniversity.com/teachers/5822/
- ***United Nations Consultant/Research Expert Leader,*** International Organization for Migration (IOM) of The United Nations (UN), The Hague, Netherlands, Jan – March, 2023. **Link**: https://diaspora.iom.int/
- ***United Nations Consultant/Research Expert Leader,*** International Organization for Migration (IOM) of the United Nations, The Hague, Netherlands. Sept. – December 2021. **Link**: https://diaspora.iom.int/
- ***Consultant*****,** Circular Economy Consulting. Link: https://www.ceconomyc.com/global-partnerships
- ***Co-Founder,*** AgriFood Networks (AFN) and Global Agricultural Policies, Politics from an African Perspective (GAPPAP), Rotterdam, The Netherlands. **Link:** https://www.foodlog.nl/afn/
- **Co-Founder & Senior Advisor,** African Organization of Technology in Agriculture (A Rwanda-based IT Company promoting AgriTechs in Africa).
- ***Field Research Officer*** 1, Micro, Small & Medium Scale Enterprises Project (World Bank-Assisted Project), October 2007 – October 2008
- ***Advisory Board Member,*** African Continental Chamber of Commerce and Industry (ACCCI), Johannesburg, South Africa.
- ***Senior Advisor,*** African Youth Diaspora Organisation (AYDO).
- **Advisory Board Member,** AgriEn Network (Agribusiness and Agri Energy), Lusaka, Zambia. **Link:** https://agriennetwork.com/our-team/
- ***Member, Leadership Team & Instructor,*** Osiri University(OU)**,** headquarters @Nebraska, Lincoln, USA. **Link**: https://osiriuniversity.org/user/drikechi/
- ***Senior Advisor & Member of Adminitsrative Board,*** Association of African Future Leaders (AAFL), Johannesburg South Africa. May 2020 – January, 2021. **Link**: https://aafl.info
- ***CEO Adviser/Management Consultant,*** Elimu Enterprises (PTY) Ltd, Silver Hawk Building, No 11 Kruger Street, P.O. Box 3401, Vereeniging, 1930, Johannesburg, Gauteng, South Africa.

- ***Head, Business Development and Human Resources Management,*** Technologies Platform Business Resources Limited, April 2012 – October 2014

SUPERVISION OF STUDENTS AT YORK ST JOHN UNIVERSITY (YSJ)

- Supervision of Master of Science (MSc) Degree Students
- Teaching Modules on Marketing Foundations, among other Market-based courses

SUPERVISION OF STUDENTS AT CAVALLA INT'L UNIVERSITY (CIU)

- Supervision of Doctorate (PhD) Degree students

MODULES TAUGHT AT UNIVERSITY OF BIRMINGHAM, EDGBASTON CAMPUS

- Food Security: A Proxy for Measuring Economic Development
- Brain Re-Engineering Concept and Reimagination: Strategy for Innovative and Entrepreneurship Development and Youth Engagement in Food Security Initiatives

MODULES TAUGHT AT WRITTLE UNIVERSITY COLLEGE, CHELMSFORD CAMPUS, ESSEX

- Brain Re-Engineering Concept and Reimagination: Strategy for Innovative and Entrepreneurship Development and Youth Engagement in Agriculture

Masters in Agribusiness Management Programme @RBS

- Module 3a (Agribusiness Development)
- Module 3b (Sustainable Organic Farming)
- Module 1a (Multilateral Processes and Global Policy in Agriculture)
- Module 1b (Common Agricultural Policy in Nigeria)

COURSE(S) TAUGHT AT UNDERGRADUATE LEVEL (abridged):

- Principles of Agricultural Economics
- Agricultural Market Analysis
- Agricultural Development Planning
- Entrepreneurship Development and Agricultural Finance
- Food and Agricultural Marketing
- Agribusiness and Financial Management
- Project Planning and Appraisal
- Macro-Economic Theory
- Economics of Cooperatives
- Agricultural Finance

IOM OF THE UNITED NATIONS DIASPORA EXPERT C4D2 TRAIN-THE-TRAINERS PROJECT AT NATIONAL HORTICULTUTUREL RESEARCH INSTITUTE (NIHORT), IBADAN, NIGERIA

- Developed a Module on the Use of Survey CTO for Data Collection in Quantitative and Qualitative Analyses

STUDENTS' DISSERTATION (MSc.) SUPERVISED AT YORK ST JOHN UNI. LONDON CAMPUS (abridged)

- Ajjakolu, B. (2024). Impact of Artificial Intelliegnce on Employee Satifsction and Productivity in Retail Industry of UK

- Singh, Gurpreet (2024). Cross-Cultural Communication Challenges in International Project Management

- Nwafor, H. (2024). Examining Cross Cultural Management Strategies: Case of Toyota Automobiles in the UK

- Diyana Syafiqah Binti Abd Razak (2024). A strategic approach to failure mitigation: A study of project and quality management in five projects

STUDENTS' DISSERTATION EXAMINED (AS EXTERNAL MODERATOR/EXAMINER), UNIVERSITY OF LIMPOPO, VENDA, SOUTH AFRICA

- Mphahlele M.M. (MSc.). Dissertation Title: Perceptions And Willingness of Youth to Participate In the Farming of Hemp (*Cannabis sativa* L.) for Biofuel: A Case Study Of Polokwane Municipality, Limpopo Province, South Africa**,** Dept of Agricultural Economics, University of Limpopo, October, 2024.

STUDENTS' THESIS PROPOSAL EXAMINED (AS EXTERNAL MODERATOR), CAPE PENINSULA UNIVERSITY OF TECHNOLOGY, SOUTH AFRICA

- Olabisi, B.O. (PhD). Thesis Title: Effect of Micro- and Macro-Economic Determinants on Food Security amongst Smallholder Vegetable Farmers in Johannesburg, South Africa, Dept of Agricultural Economics, University of Limpopo, October, 2024.

STUDENTS' DISSERTATION EXAMINED (AS EXTERNAL MODERATOR/EXAMINER), PRINCE ABUBAKAR AUDU UNIV. (A.K.A. KOGI STATE UNIVERSITY), ANYIGBA,

- Labran Abdul (MSc.). Dissertation Title: Evaluation of Gender Dimension of Livelihood Adaptation Strategies Among Male and Female Headed Rural Households in Kogi State, Nigeria, Dept of Agric Economics & Extension, Prince Abubakar Audu University, Nigeria, May, 2024.

STUDENTS' THESES EXAMINED (AS EXTERNAL MODERATOR/EXAMINER), UNIV. OF FORT HARE

- Akinwale Olushola (PhD) Thesis Title: Agricultural entrepreneurship development as the key for economic empowerment among the Black South Africans, Department of Development Studies, University of Fort Hare, South Africa, March, 2020.

- Nyathi, V.S. (PhD) Thesis Title: Indigenous Crops and Food Security in Zimbabwe: A Case of Matabeleland, Department of Development Studies, Univ. of Fort Hare, South Africa, March 2019.

- Chikudza, P. (PhD) Thesis Title: *Smallholder Farmers and Food Security in Zimbabwe: The Case of Mashonaland East Province*), Department of Development Studies, Uni of Fort Hare, SA, March 2018.

STUDENTS' DISSERTATION EXAMINED (AS EXTERNAL EXAMINER), UNIV. OF KWAZULU-NATAL

- Ongama Giwu (MSc) Dissertation Title: Perception, Willingness, Opportunities and Effects of Youth Participation in Agriculture, Dpartment of Development Studies, Discipline of Agricultural Economics School of Agricultural, Earth, and Environmental Sciences College of Agriculture, Engineering and Science University of KwaZulu-Natal Pietermaritzburg, January, 2024.

INTERNAL EXAMINER/CONTENT READER (POSTGRADUATE) – over 10 candidates

- **Dr Ikechi Agbugba (2022).** Examined MSc and PhD Students of Department of Economics, Faculty of Social Sciences, Rivers State University, Port Harcourt City, Nigeria

GUEST LECTURER/SPEAKER DUTIES AND ROLES:

- **Guest Lecturer,** Department of Agricultural Sciences – North Campus; Nelson Mandela University, Port Elizabeth, South Africa (Topic: ***"Agricultural Innovation and Entrepreneurship in Africa – How can we make agricultural businesses more sexy,"*** in May 2023.

- **Guest Lecturer,** ''New Faces for Farming Programme'' (Topic**: *Brain Re-Engineering Concept and Reimagination: Strategy for Entrepreneurship Development and Youth Engagement in Agriculture,"*** in March – April, 2023. Link: https://www.aru.ac.uk/news/young-people-hear-from-prominent-agricultural-economist-at-land-based-careers-event

- ***Guest Lecturer,*** Food Chain Security Guest Lectures***,*** at the Food Safety Research Lab, School of Chemical Engineering, The University of Birmingham, Edgbaston Campus, United Kingdom (Topic: ***''Food Chain Security/Sustainable Food Development in UK and on the Global Front***,'' in March 2023.

- ***Guest Speaker,*** *''Potential Business opportunities for potential investors in Africa's agriculture.''* AfBC African Business Chamber (Theme: **''Birmingham Africa Business Forum: Doing Business in Africa**)'' on 23rd February, 2023.

SHORT COURSES/TRAININGS ATTENDED:

- Database Computer Training for Examination Officers organized by the management of Rivers State University, at the PTDF Hall and Senate Building, RSU, May/June, 2018.

- SPSS Course organized by the NUFFIC Interactive Learning Centre in conjunction with Department of Economics, University of Fort Hare, South Africa; June, 2015.

PROFESSIONAL ROLES (abridged):

- ***Key Expert*** *assigned to building the Agriculture Business Mangement Programmes @Cavalla International University (CIU), 2021 – Present.*
- ***Reviewer***, International Food & Agribusiness Management Association (IFAMA), Washington DC USA, 2015 – 2016.
- ***Reviewer***, Kamla-Raj Enterprises (KRE) Publishers, New Delhi, India, 2012 – Present.
- ***Reviewer***, Peak Journal of Physical & Environmental Science Research (PJPESR), 2014 -2015.
- ***Reviewer***, International Journal of Water Resources Development, 2015 – 2016.

HONOURS/CERTIFICATIONS/AWARDS ON CONTRIBUTING TO THE SDGs AGENDA OF THE UNITED NATIONS (abridged):

- **Certificate of Participation** at the Grant Proposal Writing for Early Career Young Academics and Researchers, (Uni of Port Harcourt/Durham University Business School), August 2024

- **Tree Certificates** at EUTECH Certificate Nos: January to March 2024

- **Tree Certificates** at EUTECH Certificate Nos: September to December 2023

- **Special Certificate of Appreciation** in Special Appreciation and Full Recognition of my Participation and Contribution in 2nd UK-Nigeria Trade and Investment Mission Summit 2023, powered by Carter and Merger Consult UK which helf in London and Birmingham from 20th – 28th August, 2023.

- **Certificate of Completion** at Connecting Diaspora for Development (CD4D2) Training, IOM United Nations Migration. 13-09-2021. **Link**: https://www.connectingdiaspora.org/2022/driving-sustainable-change-in-nigeria/

- **Tree Certificate** at EUTECH Certificate No: 2021-11-08-05

- **Tree Certificate** at the European Technology Chamber (EUTECH), Certificate No: 2021-05-19-02

OTHER HONOURS/CERTIFICATIONS/AWARDS (abridged):

- **Accredited Member,** International Trade Council, September 2024 – September 2025.

- **Special Certificate of Appreciation** in Special Appreciation and Full Recognition of my Participation and Contribution in 2nd UK-Nigeria Trade and Investment Mission Summit 2023, powered by Carter and Merger Consult UK which helf in London and Birmingham from 20th – 28th August, 2023.

- **Certiicate of Attendance** at the 2nd International Conference on Inclusive Cities, Durban KwaZulu-Natal, South Africa, August 16th-18th, 2023.

- **Award of Appreciation** as Chief Patron & Keynote Speaker at the 6th International Conference on Advances in Agriculture Technology and Allied Sciences (ICATAS), New Delhi, India, June 19th -21th, 2023

- **Global Mentor of Change Award (GMCA) 2022,** Global Council for the Promotion of International Trade (GCPIT), September 2022. Link: https://gcpit.uk/leader-category/global-mentor-of-change/

- **Global Emerging Leaders' Award (GELA) 2022,** Global Council for the Promotion of International Trade (GCPIT), July 1st, 2022. Link: https://www.gmce-haifa-hub.com/post/dr-iketchi-wins-the-global-emerging-leaders-award-2022 and https://youtu.be/pPYTUMj8his

- **Certificate of Membership,** Ethiopian World Federation (EWF), May, 2022

- **Certificate of Appreciation** for featuring a hardworking Rapporteur of UNESCO committee during Youth International Conclave Model United Nations 2020, Reg No: YIC-2811-C1269

- **Certificate of Participation** at the Workshop on *Pre-Retirement and Investment Opportunity* organized by Academic Staff Union of Universities (ASUU), @Amphitheatre, Rivers State University Branch, Port Harcourt, Nigeria, 25th – 26th February, 2020.

- **Certificate of Recognition** at the International Conference on Agriculture, Food and Aqua' held during November 22-23, 2018 in Cape Town, South Africa for keynote address presented on 'Smallholder fresh marketing enterprise: A veritable livelihood strategy for economic empowerment in sub-Saharan Africa.'

- **Certificate of Participation** at the Feed the Future (The U.S. Government's Global Hunger & Food Security Initiative, Global Food Security Strategy Whole-System in the Room Workshop on October 10th – 11th, 2017 in Sheraton Hotels, Abuja FCT, Nigeria.

- **Certificate of Moderation & Attendance** at the 25th Annual World Congress of the International Food & Agribusiness Management Association (IFAMA) on June 14th-17th, 2015 in Saint Paul-Minneapolis, Minnesota, USA.

- **Certificate of Presentation and Attendance** at the 25th Annual World Congress of the International Food & Agribusiness Management Association (IFAMA) on June 14th-17th, 2015 in Saint Paul-Minneapolis, Minnesota, USA.

COMMUNITY/ RURAL DEVELOPMENT SERVICES

- **Consultant & Brain Re-engineering Advocator** on Understanding and Exploring the Power of AgriTech and Agribusiness Revolutions at the Trade, Investment and Agribusiness Summit Fair 2024.

- **Mentor on Circular Economy** to Community Schools and Institutions to mitigate climate change issues
.
- **Director, Innovation/Research and Development, African Diaspora Collective (ADC).** Pioneer Executive Lead in Establishing African Diaspora Collective (ADC) Centre of Research Excellence and Collaboration on Historical facts and Sensitive Topics of Africa (Collaboration with Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria). Link: https://avalondaily.org/michael-okpara-university-of-agriculture-partners-with-adc-nsa-to-illuminate-africas-history-through-collaborative-research-and-policy-recommendations/

- **Pioneer Advocator, Researcher and Educator,** Brain Re-Engineering Concept and Reimagination: Strategy for Entrepreneurship Development, Conflict Resolution, Disaster Management, Technology Transfer, Youth Engagement in Agriculture and Approach for the attainment of the 17 Sustainable Development Goals Agenda of the United Nations, 2022 - ongoing

- ***Senior Adviser/Member of Administrative Board,*** Assoc. of African Future Leaders (AAFL), May 2020 – Jan. 2021

LIST OF PUBLICATIONS

Referred Journal Articles

1. **Agbugba, I.K.** (2024). Brain Re-engineering Concept and Reimagination: Strategy for Promoting Ethics, Values & Inclusivity in Food Chain Security. ***Journal of Family and Society Research,*** 3 (1), 8 – 24.

2. Apeh, A.C., Apeh, C.C., Ukwuaba, S.I., **Agbugba, I.K.** & Onyeaka, H. (2024). Exploring Data Sources and Farmers' Perceptions regarding Agrochemical Use and Food Safety in Nigeria, *JSFA Reports, 1-12*.

3. Apeh C. C., **Agbugba, I.K.,** Apeh, A.C. & Okere, R.C. (2024). Women's Participation in Climate Smart Agriculture (CSA) in Southeast, Nigeria. ***Rwanda Journal of Agricultural Sciences,*** 3(1), 59-70.

4. Okochukwu, A.U., Aguebor, S., Omini, G. & **Agbugba, I.K.** (2024). Cost-Benefit Analysis of Earthen Ponds against Concrete Tanks Production System in Fish arming in Abuja FCT, Nigeria. ***European Modern Stuidies Journal,*** *8(1), 59-72.*

5. **Agbugba, I.K.** (2023). Brain Re-engineering Concept and Reimagination: Strategy form Rebranding Agriculture and Youth Engagement in Promoting Food Production. ***European Modern Studies Journal,*** 7(5), 213 – 223.

6. Park, H.J., Camara, M.B., & **Agbugba, I.K.** (2023). Solar-Powered Parboiling Rice Machine and its Relevance to Sustainability, ***European Modern Studies Journal,*** 7(6), 1-15.

7. **Agbugba, I.K.,** Agbagwa, K.S., Kau, J.S. & Ugwuegbulem, J.C. (2023). Cost and Returns Analysis of Snail Production in Obio-Akpor Local Government Area, Rivers State, Nigeria. ***South African Journal of Agricultural Extension,*** *51(3), 1-16.*

8. Dimgba, E., Morris, R. & **Agbugba, I.K.** (2023). Formal Agricultural Credit Schemes and Economic Growth in Nigeria, ***International Journal of Agriculture and Earth Science (IJAES),*** 9(5),15-26.

9. Apeh, C.C., **Agbugba, I.K.** & Mdoda L. (2023). Assessing the Determinants of Adopting Urban Tree Planting as Climate Change Mitigation Strategy in Enugu Metropolis, Nigeria, ***Sustainability*** 15, 12224, 1-16.

10. Okudaje, A.O., Binaebi, E. & **Agbugba.I.K.** (2023). Effect of Energy Sector Productivity on Economic Growth in Nigeria, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** *5(3), 1-15.*

11. Mdoda L., Christian M., **Agbugba, I.K.** (2023). Use of Information Systems (Mobile Phone App) for Enhancing Smallholder Farmers' Productivity in Eastern Cape Province, South Africa: Implications on Food Security, ***Journal of the Knowledge Economy, 1-17.***

12. Uzah, C.K. & **Agbugba. I.K.** (2023). Exchange Rate Liberalisation and Asset Pricing of Quoted Firms in Nigeria, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** *5(1), 127-167.*

13. **Agbugba, I.K.**, Agbagwa, S.K., Anumudu, C., Ekwebelem, O.C., Al-Sharify, Z.T, Isaac-Bamgboye, F.J. & Onyeaka, H. (2022). The evolving state of food security in Nigeria amidst the COVID-19 pandemic – A review, ***Open Agriculture,*** 7, 899-909.

14. Boro, F. E. & **Agbugba, I.K.** (2022). Economics of Artisanal Fish Production in Gokana Local Government Area of Rivers State, Nigeria. ***Journal of Business Strategy Finance and Management,*** 4(2), 202-213. Retrieved from: https://jbsfm.org/vol4no2/economics-of-artisanal-fish-production-in-gokana-local-government-area-of-rivers-state--nigeria/

15. Uzah, C.K. & **Agbugba. I.K.** (2022) Models of Financial Stability and the Intermediation Puzzle, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** *4 (3), 68-97.*

16. Enenya, I. G., Agbonghae, O.W., Nwokoro, S.O., Onyeaka H. & **Agbugba, I.K.** (2022). Some phytochemical and functional properties of Pawpaw (*Carica papaya* L.) leaf protein concentrates obtained from three locations in Benin City, Edo State, Nigeria, *Vegetos*, 1-6. Retrieved from: https://doi.org/10.1007/s42535-022-00386-3.

17. **Agbugba, I.K.,** Nmegbu, E. & Binaebi, E. (2021). Determinants of Access to Agricultural Credits by Poultry and Crop Farmers in Obio-Akpor Local Government Area of Rivers State Nigeria, ***International Journal of Applied Research and Technology,*** 10(10), 10 – 16.

18. **Agbugba, I.K.** & Nmegbu, Ezihuo (2021). Demand Analysis for Beef and Pork Consumption among
Households in Port Harcourt City of Rivers State, Nigeria. ***Agricultural Economics & Extension Research Studies (AGEERS),*** 9(1), 9-16.

19. **Agbugba, I.K.** & Nwachukwu, E.U. (2021). Analysis of margins, channels and constraints to snail marketing in Obio-Akpor Local Government Area, Rivers State, Nigeria. ***Agricultural Economics & Extension Research Studies (AGEERS),*** 9(1), 17-24.

20. Oteh, O.U., **Agbugba, I.K.,** Agwu, N.M., Oloveze, A.O. & Ayoola, M.O. (2021). Leading Post-COVID-19 Recovery from the Front: On the Shoulder of Agriculture and Food Policy. ***Agricultural Economics & Extension Research Studies (AGEERS),*** 9(2), 64-76.

21. **Agbugba, I. K.,** Nmegbu, E. & Binaebi, E. (2021). Profitability Analysis of Wood Charcoal Production and Marketing in Selected Communities of Rivers State, Nigeria, ***IIARD International Journal of Economics and Business Management,*** 7(1), 38-49.

22. Uzah, C.K. & **Agbugba. I.K.** (2021).Credit Flows in Businesses and Credit Ratios: Sectorial Distribution and Economic Growth in Nigeria, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** *4 (2), 127-167.*

23. Agbagwa, S.K., **Agbugba, I.K.** & Maponya, P. (2021). Comparative Analysis of Plantain and Banana Marketing in Port Harcourt City Metropolis, Rivers State, Nigeria, ***Journal of Agribusiness and Rural Development,*** *2 (50), 1-7.*

24. Onyeaka, H., **Agbugba, I.,** Ekwebelem. O.C., Anumudu, C., Anyogu, A., Odeyemi, O. & Agbagwa, S. (2021). Strategies to Mitigate the Impact of COVID-19 on Food Security and Malnutrition in Nigeria, ***European Journal of Nutrition & Food Safety,*** *13(2). 103-109.*

25. **Agbugba, I.K.,** Christian, M. & Obi, A. (2020). Economic Analysis of Smallholder Maize Farmers: Implications for Public Extension Services in Eastern Cape**,** ***South African Journal of Agricultural Extension,*** 48(2), 50-63.

26. Egwue, O.L., **Agbugba I.K.** & Mukaila R. (2020). Assessment of Rural Households Food Insecurity during COVID-19 Pandemic in South-East Nigeria. ***International Journal of Research - GRANTHAALAYAH,*** 8(12), 182-194.

27. Onomu, A.R. Aliber, M. & **Agbugba, I.K.** (2020). Tractor Services Challenges And Current Demand Trends By Smallholder Farmers In Nigeria, ***Journal of Agribusiness and Rural Development,*** 4(58) 2020, 379–391.

28. Christian, M. Luvhengo, U., Khobai, H. & **Agbugba, I.K.** (2020). Reviewing Land Access Livelihood Diversification Strategies and Factors influencing wellbeing of rural households in Mnquma Eastern Cape: Implications to Extension Agents, ***South African Journal of Agricultural Extension,*** 48(2), 113-125.

29. **Agbugba, I.K.** (2020). Economic Analysis of Plantain and Banana Marketing In Etche Local Government Area of Rivers State, Nigeria*,* ***Journal of Insights in Nutrition and Metabolism*****,**4 (2), 5.

30. Ezihe, J.A.C., **Agbugba, I. K.,** Eigege, S. & Etowa, E. B. (2020). Effect of Bush Burning on Farming Households in Makurdi Local Government Area of Benue State, Nigeria, ***The International Journal of Agriculture, Management and Technology,*** *4(1), 51-56.*

31. Ezihe, J.A.C., **Agbugba, I. K.** & Ogale, D. (2020). An investigation of Land Tenure System on the Utilization of Land by Small-Scale farmers in Okpokwu Local Government Area of Benue State, Nigeria, ***The International Journal of Agriculture, Management and Technology,*** *4(1), 26-36.*

32. Taiwo, O.P., Nwonuala, A.I., Isaiah, B.F., Olawamide, D.O. & **Agbugba, I.K.** (2020). Correlation and Path Coefficient Analysis Studies on Grain Yield and its Contributing Characters in Maize (*Zea mays* L.), ***International Journal of Plant & Soil Science,*** 32(7), 7-13.

33. **Agbugba, I.K.** & Isukul A. C. (2020). Growing the Nigerian Economy: Embracing a Youth Developmental Approach, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** *3(2), 1-19.*

34. Isukul A. C., **Agbugba, I.K.** & Chizea, J.J. (2020). A Looming Debt Crisis Narrative for Developing Countries: Implication and Consequences, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** *3(2), 1-19.*

35. **Agbugba I.K.,** Agbagwa S.K. & Diabate Y. (2020). Socio-Economic and Profitability Analysis of Honey Marketing in Port Harcourt City Local Government Area of Rivers State, Nigeria, ***Journal of Economics and Sustainable Development*****,** 11 (6), 1-8.

36. Isukul A. C., **Agbugba, I.K.** & Chizea, J.J. (2019). Financial Inclusion in a Developing Country: An Assessment of the Nigerian Journey, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** *2 (2), 1-27.*

37. **Agbugba, I.K.,** Ifeanyi-Amos, E. & Binaebi, E. (2019). Feed Input and Cost Analysis of Catfish and Tilapia Production in Ogba/Egbema/Ndoni Local Government Area of Rivers State Nigeria, ***Delta Agriculturists****,* 11(1/1), 1-9.

38. Christian M., Obi A. & **Agbugba I.K**. (2019). Adoption of Irrigation Technology to Combat Household Food Insecurity in the Resource-Constrained Farming Systems of the Eastern Cape Province, South Africa, ***South African Journal of Agricultural Extension,*** 47(2), 94-104.

39. Isukul A. C., Chizea, J.J. & **Agbugba, I.K.** (2019**).** Economic Diversification in Nigeria: Lessons from Other Countries of Africa, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** 2 (1), 1-26.

40. Onyeaka, K., **Agbugba, I.K.** & Iheonu, C.O. (2019). Ditch the naira and champion the eco? A post-forex crisis assessment, ***Development Bank of Nigeria Journal of Economics and Sustainable Growth,*** 2 (1), 1-31.

41. **Agbugba, I.K.,** Iheonu, C.O. & Onyeaka, K. (2018). Homogeneous and Heterogeneous Effect of Exchange
Rate on Economic Growth in African Countries, ***International Journal of Economics, Commerce and Management,*** 6(9), 1-14.

42. **Agbugba, I.K.** & Binaebi, E. (2018). A Comparative Study of the Agriculture Sector Contribution to the Economic Growth of Nigeria and Malaysia, ***IOSR-Journal of Agriculture and Veterinary Science (IOSR-JAVS),*** 2(3), 18-21.

43. **Agbugba, I.K.** & Shelaby, A. (2018). Marketing Analysis of Selected Vegetables in Port Harcourt Metropolis Rivers State, Nigeria, ***IOSR-Journal of Agriculture and Veterinary Science (IOSR-JAVS),*** 11(2), 26-34.

44. Agbugba, I.K. & Elijah, S.T. (2017). Yam Production practices and Climate Change in Cross State, Nigeria, ***Delta Agriculturists,*** 9 (2/3), 25-41.

45. Ezihe, J.A.C., **Agbugba, I.K.** & Idang, C. (2017). Effect of Climatic Change and Variability on Groundnut (*Arachis hypogea,* L.*),* Production in Nigeria, ***Bulgarian Journal of Agricultural Science, (BJAS),*** 23 (6), 906-914.

46. Ezihe, J.A.C., **Agbugba, I.K.**, Shaibu, G.E. & Bachev, H. (2017). Assessment of Climate Change on Sesame cultivation in Makurdi Local Government Area of Benue State, Nigeria, ***Turkish Economic Review,*** 4 (2), 226-233.

47. Ani, S.O. & **Agbugba, I.K.** (2017).Economics of Marketing of Cassava Derivatives (*Flour, Garri and Chips*) in Uzo-Uwani Local Government Area, Enugu State, ***Delta Agriculturists,***9(1), 46-54. Published by Faculty of Agriculture, Rivers State University, PMB 5080, Port Harcourt, Nigeria.

48. **Agbugba, I.K.** & Thompson, D. (2015). Economic Analysis of Tropical Leafy Vegetables in South-East Nigeria: The Case of Rural Women Farmers, ***American Journal of Agricultural Sciences,*** 2 (2), 34-41.

49. **Agbugba, I.K.,** Ihemezie, E.J. & Ahmed, A.E. (2014). Informal Sources of Financing Climate Change Adaptation amongst Crop Farmers in Nigeria, ***International Journal of Agricultural Science, Research & Technology in Education and Extension Systems,*** 4(1), 7-13.

50. Ezihe, J.A.C., **Agbugba, I.K.** & Ogbeba, J.E. (2014). Marketing Channels and Margin Analysis of Fish in Makurdi Local Government Area of Benue State, Nigeria. ***Pacesetter Journal of Agricultural Science Research*****,** 2 (6), 64-70.

51. Ezihe, J.A.C., **Agbugba, I.K.** & Iornum, W. (2014). Economic Assessment of Rural Women Participation in Processing and Marketing of Soybean in Tarka LGA of Benue State Nigeria, ***Current Agriculture Research Journal, An International Peer-Reviewed Research Journal****,* 2(1), 99-107.

52. **Agbugba, I.K.** (2013). Price Causality and *Bivariate* Autoregressive Analysis of Dry Season *Okra* Marketing in Southeastern Nigeria, ***Current Agriculture Research Journal 2013, An International Peer-Reviewed Research Journal,*** 1(2), 99-107.

53. Ani, S.O., **Agbugba, I.K.** & Baiyegunhi, L. (2013)**.** Processing and Marketing of Selected Cassava Products in South-East Nigeria, ***Journal of Economics,*** 4(2), 105 – 111.

54. **Agbugba, I.K.** & Obi, A. (2013)**.** Market Structure, Price Formation and Price Transmission for Wood Charcoal in Southeastern Nigeria, ***Journal of Agricultural Science,*** 5(7), 77-86.

55. Thompson, D.E. & **Agbugba, I.K.** (2013). Marketing of Tropical Vegetable in Aba Area of Abia State, Nigeria, ***Journal of Agricultural Economics and Development,*** 2(7), 272-279.

56. Okafor OE & **Agbugba IK** (2011). Promoting Agricultural and Rural Development: Towards a New Paradigm of Extension Services, ***Journal of Home Economics Research (JHER),*** (15), 101-111.

57. **Agbugba IK,** Okechukwu FO & Solomon RJ (2011). Challenges and Strategies of Marketing Indigenous Leafy Vegetables in Nigeria, ***Journal of Home Economics Research (JHER),*** (15), 11-20.

58. **Agbugba, I.K.** & Solomon, R.J. (2011)**.** Developing Small Scale Private Irrigation System in Nigeria: An Economic Perspective, ***Technical & Vocational Education Journal,*** 3(1), 191-202.

59. **Agbugba, I.K.** & Solomon, R.J. (2008). Analysis of Wood Charcoal Market in Abia State, Nigeria, ***Nigerian Journal of Home Economics (NigJHEC),*** 1(1), 57-62.

ACADEMIC CONFERENCES ATTENDED (abridged)

- Apeh, C.C., Agbugba, I.K. & Mdoda L. (2023). Determinants of Urban Tree Planting Adoption as a Climate Change Mitigation Strategy in Enugu Metropolis, ***International Conference on Business Models in Agriculture (IBMA),*** IBMA 2023: Collection of Abstracts and Panel Discussions by University of Rwanda, College of Agriculture, Animal Sciences and Veterinary Medicine (UR-CAVM), Rwanda, pp 15.

- Lubinga, M.H., Tempia, N., Agbugba, I.K. & Zondo, B. (2023). Agricultural Climate Financing for sub Saharan Africa after the 2015 Paris Agreement Declaration, ***International Conference on Business Models in Agriculture (IBMA),*** IBMA 2023: Collection of Abstracts and Panel Discussions by University of Rwanda, College of Agriculture, Animal Sciences and Veterinary Medicine (UR-CAVM), Rwanda, pp 22

- Apeh, C.C., Onyekuru, A.N., Agbugba, I.K., Osuagwu, O.C., Okere, R.A. & Christian, M. (2023). Women's Participation in Climate Smart Agriculture in South-East Nigeria, ***International Conference on Business Models in Agriculture (IBMA),*** IBMA 2023: Collection of Abstracts and Panel Discussions by University of Rwanda, College of Agriculture, Animal Sciences and Veterinary Medicine (UR-CAVM), Rwanda, pp 43.

- Obi, A. & **Agbugba, I.K.** (2016). Causality and Integration Analysis of Dry Season Tropical Leafy Vegetable Markets in South-East Nigeria, ***Paper presented at the 10th Africa Farm Management Congress,*** Pointe aux Piments, Mauritius, 20-25 November 2016.

- Obi, A. & **Agbugba, I.K.** (2015). Analysis of Marketing Channels, Margins and Integration of Fruit Vegetable Markets in Selangor State of Malaysia; *Paper presented at the 25th Annual World Congress of the International Food & Agribusiness Management Association (IFAMA)* on June 14th-17th, 2015 in Saint Paul-Minneapolis, Minnesota, USA.

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- *Speaker on ''*Transforming SMEs with Brain Re-Engineering Strategy,'' ***AI, Cyber & Green Tech Symposium*** funded by Black Country Innovation Services, Innovate UK on Thursday, July 18, 2024. Link: https://events.teams.microsoft.com/event/7513bbf3-c04a-4f31-b89f-5227eab874cd@f7846830-a599-4058-8b00-9da84d25869a

- Keynote Speaker on *''Brain Re-Engineering as a Tool for Revamping India's Agriculture Sector through Youth Engagement,'' at the 21 days – 15th May – 5th June Int'l Training-cum-Certificate Programme on Trending Novel Technologies in Agriculture, Animal Husbandry, Fisheries Science & their Allied Systems organised by* ***Society of Agricultural Research and Social Development, New Delhi, India*** on 19th May 2024.

- Keynote Speaker on ''Digital Tech Solutions for increased Agricultural Production in Africa: Focus on Blockchain Technology,'' at the ***Trade, Investment and Agribusiness Summit Fair 2024*** at the Holiday Inn, Peterborough from 21-22 May 2024.

- Keynote Speaker on ''Brain Re-Engineering Concept & Reimagination (BRECR): Strategy for Revamping Pakistani Agribusiness Sector,'' at the 2nd ***International Conference on Business Models in Agriculture (IBMA),*** which held between March 25th – 28th 2024, Organised by Africa Organisation of Technology in Agriculture (AOTA) and the University of Rwanda, College of Agriculture, Animal Sciences and Veterinary Medicine (UR-CAVM), Rwanda.

- Lead Paper Presenter on ''Brain Re-Engineering Concept & Reimagination: Strategy for Promoting Ethics, Values & Inclusivity in Food Chain Security'' at the ***Association for Family and Society Scientists (AFASS) Conference,*** from 21 22 March 2024 at University of Nigeria Nsukka Campus, Nigeria

- Keynote Speaker on ''Pathways to unlocking Transformation in Africa's Agribusiness: Focus on Information Technology using the Brain Re-engineering (BRECR) Model,'' at the ***13th African Farm Management Association Conference***, from 19th to 23rd November 2023; University of Fort Hare, East London Campuds, Eastern Cape Province, South Africa.

- Keynote Speaker on ''Brain Re-engineering Concept and Reimagination (BRECR): Stratey for unlocking Smart and Sustainable Agricultural Systems,'' at the ***''International Conference on Recent Advances in Smart & Sustainable Agriculture for Food & Nutritional Security,''*** from 22 to 23rd November 2023; Venue: Lovely Professional University (LPU), Punjab, India.

- Keynote Speaker on ''Brain Re-engineering Concept and Reimagination (BRECR):Towards Sustainability and Youth Engagement in Agriculture and Food Systems,'' at the ***World Sustainability Conference 4.0,*** at the 22nd November 2023; Venue: University of Birmingham, Edgbaston Campus, United Kingdom (Organised by Green Institute). Link: https://greeninstitute.ng/ikechi-agbugba

- Keynote Speaker on ‘’Brain Re-engineering Strategy and Sustainable Millet Production: Focus on Entrepreneurship and Business Opportunities,’ at the ***International Seminar on Sensitizing the Millets Farming, Consumption and Nutritional Security - Challenges and Opportunities***, 9th-10th November 2023 (Organized by Pandit Jawaharlal Nehru College of Agriculture & Research Institute PAJANCOA & RI, Karaikal, Union Territory of Puducherry, India.

- Keynote Speaker on ‘’Brain Re-Engineering Strategy: Towards Entrepreneurship Development & Youth Engagement in Agriculture and Food Systems Study,’’ at the ***6th International Conference advances in Agriculture Technology and Allied Sciences (ICATAS),*** June 19th-23rd, 2023 (Organised by Society of Agriculture Research and Social Development (New Delhi) and Loyala Academy, Secunderabad, Telangana, India

- Lead/Keynote Speaker on ‘’Brain Re-engineering Concept and Reimagination: Strategy for Entrepreneurship Development and Youth Engagement,’’ at the ***New Faces for Farming*** at the Writtle University College/Anglia Ruskin University, Chelmsfor Essex, United Kingdom***,*** which held between March 31st – April 1st 2023. Link: https://www.aru.ac.uk/news/young-people-hear-from-prominent-agricultural-economist-at-land-based-careers-event

- Keynote Speaker on ‘’Brain Re-engineering Concept and Reimagination: Strategy for Entrepreneurship Development and Youth Engagement,’’ at the ***1st International Conference on Business Models in Agriculture (IBMA),*** which held between March 27th – 29th 2023, Organised by Africa Organisation of Technology in Agriculture (AOTA) and the University of Rwanda, College of Agriculture, Animal Sciences and Veterinary Medicine (UR-CAVM), Rwanda.

- Guest Speaker on: “Trade Liberalisation and the African Continental Free Trade Area Agreements: Implications for Food Supply,” ***Future of Trade in Africa (FOTA) Conference organized by University of Sunderland in London, United Kingdom*** (June 30th, 2022); **Link**: https://bit.ly/3OvGZTf

- Facilitator/Moderator on: “COVID-19 and Agri-Food SME’s in Nigeria: Evidence from Fish and Poultry Value Chains,” ***One-Day Workshop organized*** *by College of Agriculture & Natural Resources, Michigan State University; Feed the Future US Government; USAID; IFPRI; WorldFish & Federal Ministry of Agriculture and Rural Development Nigeria* (December 6th, 2021);
Link: https://espacesafro.hypotheses.org/346

- Guest Moderator on: “Adding Value in Africa with Modern Commodity & Natural Resources Management,” ***Organized by European Technology Chamber (EUTECH), Africa Chapter*** (November 8th, 2021). Link: https://eutec.org/africa-chapter-dir-oct/?id=510

- Guest Panelist on: “Framework for the 4th Industrial Revolution in Africa (Africa Insights),” organized by ***TAFFD***. Link: https://omny.fm/shows/africa-insights/framework-for-the-4th-industrial-revolution-in-afr (October 14th, 2021).

- Guest Panelist on: ‘’The State of Higher Education amidst COVID-19’’ organized by Cavalla International University (CIU). Link: https://www.youtube.com/watch?v=nzZbwwKuSzc (Saturday, August 14th, 2021).

- Guest Panelist on: ‘’How to Unlock Africa’s Agriculture Potential.’’ Link: https://youtu.be/d3BR8ggeZnM (Tuesday, March 21st, 2021).

- Guest Panelist on ‘’African Continental Free Trade Area (AfCFTA): Updates & Journey So far.’’ Link: https://youtu.be/wnTZO7CGk8I (Tuesday, March 7th, 2021).

- Guest Speaker on Creating Employment through Agriculture during and after COVID-19; Conversation on the Potential of Agriculture in Solving Unemployment.

Link: https://www.youtube.com/watch?v=aMCGP9gfWMs (Saturday, December 12th, 2020).

- Guest Keynote Speaker, on Fourth Industrial Revolution and its Impact on Agricultural Technology at the Agriculture & Technology in the ***4th Industrial Revolution Virtual Conference,*** organized by Alliance Training & Conferencing on the 3rd-4th Sept., 2020.Link: https://www.youtube.com/embed/nW5JbmFmo14

- Speaker/Resource Person, ***Machine Learning Conference*** organized by Elimu Enterprises (Pty) Ltd., Sandton, Johannesburg, South Africa, March, 2020.

- Keynote Speaker at the Africa Agriculture Agenda (AAA) organized by the ***AAA and Surveillance Media Limited*** held on March 23rd 2019 in Lekki-Epe Express Way, Ajah, Lagos State.
.
- Keynote Speaker at the '***International Conference on Agriculture, Food and Aqua'*** held during November 22nd-23rd, 2018 in Cape Town, South Africa.

HOBBIES/EXTRA-CURRICULAR ACTIVITIES:

- Reading, writing, singing, traveling, cooking

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Available at request