

Assessment of Business Performance in Pre and Post Era Subsidy Removal among Bakeries in South-East Nigeria: A Comparative Analysis

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Abstract

This study assesses the business performance of bakeries in Southeast Nigeria before and after the recent removal of government fuel subsidies, grounded in Barney's (1991) Resource-Based View (RBV) Theory. Using a comparative analysis across Abia, Anambra, Ebonyi, Enugu, and Imo states, the research evaluates six performance indicators: financial performance, operational efficiency, market share, employment, sustainability, and external environmental factors. Descriptive statistics reveal significant improvements post-subsidy removal, with mean scores indicating enhanced business resilience and growth. Independent t-tests show statistically significant differences in all performance metrics across the states, with the most notable improvements observed in Abia, Enugu, and Anambra ($p < 0.01$). For instance, Abia exhibited significant gains in profitability, operational efficiency, market share, employment, and sustainability, suggesting that infrastructural support like constant electricity and policy environment positively influence business resilience. Conversely, Ebonyi displayed weaker effects, with some indicators approaching the significance threshold ($p > 0.05$), indicating lingering external and infrastructural challenges. The findings highlight that while subsidy removal has posed some challenge it has generally improved bakery performance, the magnitude varies across states, emphasizing the need for targeted infrastructural and external environment enhancements. The study recommends policymakers focus on strengthening infrastructural support and external factors, particularly in lagging states like Ebonyi, to sustain and amplify positive outcomes. The results suggest that strategic resource allocation and supportive policies are crucial for optimizing bakery business performance amidst economic reforms.

Keywords: Bakery, Business Performance, Subsidy Removal, Financial Performance, Operational Efficiency, Market Share, Employment, Sustainability, External Environment.

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INTRODUCTION

The bakery industry in Nigeria, particularly in southeastern states like Abia, Anambra, Ebonyi, Enugu, and Imo, has historically been a vital part of the local economy, providing livelihoods and contributing to food security. Traditionally, these bakeries operated within a protected environment, benefiting from government subsidies such as financial grants, tax reliefs, and input subsidies aimed at fostering growth and employment (Akinwumi & Oladipo, 2018). The sector's characteristics are shaped by local cultural preferences, the availability of raw materials, and the entrepreneurial spirit of the Igbo community (Oguejiofor & Eze, 2020). Many bakeries are micro-enterprises with informal structures, which hinder their ability to innovate and adapt to external shocks. However, recent policy shifts have led to the removal of government subsidies on fuel, driven by efforts to liberalize the economy, reduce fiscal deficits, and promote market-driven pricing (Nwosu & Chukwu, 2021). This change exposes vulnerabilities, especially among micro and small bakeries that lack financial resilience and strategic resources. The sector faces additional external challenges such as fluctuating raw material prices, inflation, and inconsistent power supply, further threatening stability and growth (Eze & Okafor, 2019).

This study aims to compare bakery performance before and after fuel subsidy removal, focusing on key indicators: financial performance, operational efficiency, market share, employment, sustainability, and external environment factors like inflation and policy stability (Adebayo & Oladipo, 2020; Okorie & Nwankwo, 2022). Despite efforts by government agencies, industry associations, and financial institutions to support affected bakeries, many interventions have been hampered by bureaucratic inefficiencies and lack of targeted support for small enterprises (Ikechukwu & Uche, 2021). Consequently, bakeries continue to grapple with high operational costs, limited access to finance, and low productivity. Understanding how internal resources and external conditions influence performance is crucial for designing effective policies that support resilience and growth. The study's comparative analysis across states will identify regional vulnerabilities and strengths, informing tailored interventions to enhance operational resilience, competitiveness, and sustainability. Given broader economic uncertainties like inflation and currency fluctuations (Nwachukwu & Eze, 2023), this research is vital for policymakers, industry stakeholders, and academia to develop context-specific strategies that foster innovation and ensure the long-term viability of bakeries in Southeast Nigeria.

Statement of the Problem

The immediate problem informing this study is the recent removal of fuel subsidies in Nigeria's that supports businesses including the bakery industry, which previously provided relief and stability for small and medium enterprises in Southeast Nigeria. This policy shift, aimed at liberalizing the economy and reducing fiscal pressure, has led to increased input costs particularly for raw materials like flour and sugar and disrupted established supply chains (Nwosu & Chukwu, 2021). As a result, bakeries across Abia, Anambra, Ebonyi, Enugu, and Imo states face heightened operational challenges, including declining profitability, shrinking market share, and threats to employment sustainability. These issues threaten not only individual businesses but also the socio-economic stability of the region, where bakeries are key sources of livelihood. The problem is compounded by a lack of empirical data on how subsidy withdrawal affects critical performance indicators such as financial health, operational efficiency, market share, employment, and sustainability. This knowledge gap limits understanding of the differential impacts across states and hampers efforts to develop targeted strategies. Recent reports indicate many bakeries are closing, laying off workers, and struggling to remain competitive, especially amid the ongoing challenges posed by the post COVID-19 pandemic (Nwachukwu & Eze, 2023). Previous

research has mainly focused on macroeconomic factors, access to credit, and technology adoption (Ikechukwu & Uche, 2021). However, these studies did not examine the specific performance effects of subsidy removal at the microenterprise level or across different states. Without such targeted analysis, policymakers risk implementing broad, ineffective policies that fail to address local challenges, potentially leading to increased business failures, unemployment, and reduced food security. This research is therefore vital to provide evidence-based insights, fill existing gaps, and inform tailored interventions that can help bakery businesses adapt and thrive in the post-subsidy environment.

Objectives of the Study

The main objective of the Study is to assess business performance in pre and post era subsidy removal among bakeries in South-East Nigeria: A comparative analysis. The specific objectives are to:

1. Ascertain the extent of financial performance in pre and post era subsidy removal among bakeries in South-East Nigeria
2. Determine the extent of operational efficiency in pre and post era subsidy removal among bakeries in South-East Nigeria
3. Examine the extent of market share in pre and post era subsidy removal among bakeries in South-East Nigeria
4. Evaluate the extent of level of employment in pre and post era subsidy removal among bakeries in South-East Nigeria
5. Assess the extent of sustainability in pre and post era subsidy removal among bakeries in South-East Nigeria
6. Determine the influence external environment in pre and post era subsidy removal among bakeries in South-East Nigeria

Hypotheses of the study

1. Financial performance has not significantly improved in pre and post era subsidy removal among bakeries in South-East Nigeria
2. Operational efficiency has not significantly improved in pre and post era subsidy removal among bakeries in South-East Nigeria
3. Market share has not significantly improved in pre and post era subsidy removal among bakeries in South-East Nigeria
4. Level of employment has not significantly improved in pre and post era subsidy removal among bakeries in South-East Nigeria
5. Sustainability in has not significantly improved pre and post era subsidy removal among bakeries in South-East Nigeria
6. External environment has not significantly improved in pre and post era subsidy removal among bakeries in South-East Nigeria

2. REVIEW OF RELATED LITERATURE

Business Performance

Business performance is a multidimensional concept reflecting how effectively a company achieves its objectives, including financial health, operational efficiency, market competitiveness, and sustainability (Kaplan & Norton, 2001). In the context of SMEs, performance is closely tied to their ability to adapt to changing economic conditions, technological innovations, and policy environments (Agyapong & Agyapong, 2018), with external shocks like policy shifts significantly influencing their growth and viability. Recent literature highlights the importance of contextual factors, such as government policies,

in shaping SME outcomes, emphasizing the critical roles of operational improvements, access to finance, and market expansion strategies especially in developing economies like Nigeria. However, there remains a research gap regarding the specific impacts of external shocks like subsidy removal on SMEs, particularly in the bakery sector across different Nigerian states, necessitating further investigation into how various performance aspects are individually and collectively affected to inform more effective, targeted policy interventions.

Subsidy Removal

Subsidy removal is a policy intended to promote market efficiency by eliminating government financial support, but its immediate effects often include increased costs for producers, reduced consumer affordability, and supply chain disruptions, which can destabilize sectors, especially small businesses reliant on affordable inputs (Sachs, 2019; Ojo & Akinboade, 2020). While it can catalyze economic liberalization, many small firms face challenges like declining profitability and layoffs during the transition, particularly in sectors with limited access to credit and technology (Aregbeshin & Akin, 2020; Eze & Agbo, 2021). Empirical evidence from Nigeria shows mixed sectoral outcomes, yet there is a notable research gap at the microenterprise level, especially across different states and industries such as bakery, emphasizing the need for localized studies to understand how subsidy withdrawal impacts business sustainability, operational practices, and employment.

Pre and Post Era of Subsidy Removal

In Nigeria, the pre-subsidy removal period was marked by government support that kept input costs low and provided stability for small businesses like bakeries, fostering growth and employment, but also creating market distortions that hinder efficiency and innovation (Ojo & Akinboade, 2020). Following subsidy removal, businesses face higher input costs, squeezed profit margins, and increased competition, leading many to downsize or exit the market, necessitating rapid adaptation through cost-cutting, diversification, or technological adoption (Nwachukwu & Eze, 2023). The impact of these changes varies across regions and business sizes, with some firms managing to innovate and thrive while others struggle, yet there is a lack of detailed, comparative regional data to inform targeted policy interventions—highlighting the need to examine the differential effects across states like Abia, Anambra, Ebonyi, Enugu, and Imo.

Financial Performance

Financial performance, measured by profitability, liquidity, and ROI (Kaplan & Norton, 2001), is vital for assessing business success, particularly in the bakery industry where input costs and pricing strategies are sensitive to policy changes like subsidy removal. Empirical evidence indicates that rising raw material prices post-subsidy withdrawal reduce profit margins and cash flow, leading to financial distress, especially among SMEs reliant on government support (Oguejiofor & Eze, 2020; Nwankwo & Nwachukwu, 2020). While some businesses demonstrate resilience through cost efficiencies or diversification, the impact varies across regions, and there is a notable gap in detailed, micro-level financial data across different states, limiting policymakers' ability to craft targeted financial support mechanisms. This underscores the importance of analyzing regional differences in financial performance changes to foster recovery and growth among affected bakery SMEs.

Operational Efficiency

Operational efficiency, which involves maximizing output with minimal input through effective resource use and process management (Chong et al., 2018), is crucial for bakery businesses, especially when external shocks like subsidy removal increase input costs and disrupt production processes (Olawale & Garwe, 2018). Firms that adopt innovative practices such as automation and improved inventory management tend to better withstand economic shocks, while those with outdated equipment often face declines in productivity and higher costs. Managerial capacity and technological adoption are key factors in maintaining efficiency during such transitions, yet there is limited empirical data on how subsidy

removal specifically impacts operational efficiency across different Nigerian regions. Most existing studies focus on stable environments, highlighting a significant gap in understanding the dynamic effects of policy shifts, and emphasizing the need for comparative research to inform targeted capacity-building and technological support for bakery entrepreneurs to sustain productivity and competitiveness post-policy change.

Market Share

Market share, reflecting a business's portion of sales within an industry, is influenced by factors like product quality, pricing, and brand loyalty, and is affected by policy changes such as subsidy removal which alter input costs and consumer purchasing power (Porter, 1980; Nwachukwu & Eze, 2023). Post-subsidy removal, firms with strong innovation and diversification can maintain or increase their market share, while less adaptable businesses may decline or exit, with regional disparities in these effects remaining underexplored in Nigeria's diverse context. Existing studies lack comparative analysis across different states, limiting policymakers' understanding of regional vulnerabilities and opportunities, thus underscoring the importance of targeted, localized strategies in the bakery industry.

Employment

Employment in small businesses, including bakeries, is a vital socio-economic indicator affected by input costs and market demand; subsidy removal often leads to job losses or reduced hours, especially among micro and small enterprises with limited buffers (World Bank, 2022; Nwankwo & Nwachukwu, 2020). While some firms adapt through innovation or diversification, regional disparities and the lack of localized data hinder targeted policy responses. Most studies focus on broad trends, leaving a gap in understanding how employment varies across Nigeria's southeastern states, which this research aims to address to inform more effective employment retention strategies.

Sustainability

Business sustainability in the bakery sector depends on resource efficiency, innovation, and regulatory compliance, but subsidy removal increases operational costs and threatens long-term viability (Dyllick & Hockerts, 2002; Oguejiofor & Eze, 2020). While sustainable practices like energy efficiency and waste reduction enhance resilience (Chong et al., 2018), many SMEs lack the resources to adopt them, and there is limited data on how subsidy removal affects sustainability across Nigeria's regions. Addressing this gap can inform policies that support not only economic resilience but also social and environmental sustainability in the sector.

External Environment

External factors like inflation, government policies, and market conditions significantly impact bakery businesses, especially following subsidy removal, which increases costs and alters competition (Porter, 1980; Nwachukwu & Eze, 2023). While macroeconomic shocks typically lead to higher operational costs and reduced demand (Ojo & Akinboade, 2020), there is limited understanding of how regional differences within Nigeria influence these impacts. Addressing this gap can help develop tailored resilience strategies and policies to support bakery performance across different regions.

Empirical Review

Akinwumi & Oladipo (2018) examined how economic policies affect small enterprises in Nigeria, finding that subsidy removal increased costs and reduced profitability, emphasizing the need for strategic adaptation. Ojo & Akinboade (2020) showed that subsidy withdrawal raised input costs, decreasing sales and employment among bakery SMEs. Nwachukwu & Eze (2023) concluded that subsidy removal caused short-term declines in SME output and employment, with some sectors recovering over time. Chong et al. (2018) found that firms adopting modern technology and supply chain practices achieved higher efficiency and better performance post-policy reforms. Olaleye & Garwe (2018) identified limited access to finance and technology as major barriers to SME growth, worsened by subsidy removal. Agyapong & Agyapong (2018) demonstrated that inflation and raw material price hikes after subsidy

removal negatively impacted profitability and market share. Eze & Agbo (2021) showed that access to credit and cost management improved financial resilience among bakeries after subsidy withdrawal. Nwankwo & Nwachukwu (2020) found that while sales and employment declined post-subsidy removal, diversification helped mitigate impacts. Oguejiofor & Eze (2020) revealed that investment in automation led to higher operational efficiency in the post-subsidy era. Sachs (2019) concluded that subsidy removal initially reduced survival but eventually fostered innovation and resilience. Aregbeshin & Akin (2020) noted that increased input costs reduced profitability and employment, especially among micro-enterprises. The World Bank (2022) reported that initial declines in output and employment due to subsidy removal were followed by sectoral improvements over time.

Despite extensive research on subsidy impacts in Nigeria and developing countries, there is limited comparative analysis of bakery business performance before and after subsidy removal at the microenterprise level, especially within Nigeria's South-Eastern States. Most studies focus on macroeconomic or sector-wide effects, lacking detailed, localized data on profitability, operational efficiency, and adaptive strategies. There is also a scarcity of longitudinal research exploring how different bakeries respond over time, which is vital for designing targeted policies to support resilience and growth in this specific industry.

3. THEORETICAL FRAMEWORK

The theoretical framework for this study is grounded in the **Resource-Based View (RBV) Theory**, proposed by Barney (1991). The RBV emphasizes that a firm's competitive advantage and overall performance are largely determined by its internal resources and capabilities that are valuable, rare, inimitable, and non-substitutable. This theory suggests that bakeries that possess unique resources such as skilled labor, efficient technology, or strong supplier relationships are better positioned to withstand external shocks, such as subsidy removal, and sustain their performance over time. The RBV has been widely applied in small business and manufacturing contexts to analyze how internal capabilities influence business resilience and performance, especially during economic policy shifts (Barney, 1991; Teece, 2014).

The assumptions of the Resource-Based View include that firms are heterogeneous in their resource endowments, resources are the primary sources of competitive advantage, and the environment is dynamic, requiring firms to adapt their internal capabilities accordingly (Barney, 1991). In the context of the bakery sector in Southeast Nigeria, these assumptions imply that differences in resources—such as capital, technology, or managerial expertise—will significantly influence how bakeries perform before and after subsidy removal. The theory also presumes that firms can develop or acquire resources to adapt to environmental changes, which aligns with the need for bakeries to innovate or reorganize operations in response to policy shifts.

Applying the RBV to this study enables a comparative analysis of business performance among bakeries in the pre- and post-subsidy removal eras. It posits that the internal resources and strategic capabilities of bakeries determine their resilience and performance outcomes in an environment undergoing policy transformation. By analyzing how resource endowments influence performance during these periods, the study can identify internal strengths and weaknesses that affect sustainability. This approach helps to understand whether resource-rich bakeries are better equipped to navigate subsidy removal, thereby providing insights into strategic resource management in the face of policy changes (Barney, 1991; Teece, 2014).

4. METHODOLOGY

Research Design

This study adopts a descriptive survey research design, which is appropriate for gathering detailed information about the internal and external factors affecting bakery businesses in Southeast Nigeria. The

descriptive survey approach enables the researcher to collect quantifiable data from management staff, analyze prevailing conditions, and establish relationships among variables.

Area of Study

The research is conducted in Southeast Nigeria, encompassing the states of Abia, Anambra, Ebonyi, Enugu, and Imo. Each of these states exhibits unique characteristics in terms of population, economic activities, geography, culture, and environmental conditions, which collectively influence local business environments. Southeast Nigeria is densely populated, with diverse ethnic groups such as the Igbo, who form the majority. The region's population density impacts market size, labor availability, and consumer demand within the bakery sector. The economy is predominantly driven by agriculture, trade, manufacturing, and small-scale industries. The region's entrepreneurial spirit fosters a vibrant small business environment, including numerous bakeries that cater to local demand. The terrain varies from lowland plains to upland areas, influencing transportation, accessibility, and distribution networks for bakery products. Rich in Igbo cultural heritage, the region's dietary habits and traditional festivals influence bakery product offerings and demand cycles. The climate is generally tropical, with seasonal variations that affect raw material availability and storage conditions. Environmental factors such as flooding or drought can impact business operations.

Population of the Study

The population comprises management staff of 60 selected bakery businesses operating within the five states. This includes owners, managers, and supervisors directly involved in decision-making, operational management, and strategic planning. Focusing on management staff ensures the collection of informed perspectives regarding resilience strategies, challenges, and external influences affecting the bakery sector.

Sample Size

Purposive sampling was used to select 245 management personnel from the selected bakeries across the five states. Purposive sampling was used to ensure representation across different regions and bakery sizes, enhancing the generalizability and robustness of the findings. The respondents are evenly distributed among the five states, with each state contributing exactly 49 respondents, representing 20% each of the total sample. This balanced distribution ensures that comparative insights across states are not biased by unequal sample sizes, thus allowing for a more equitable analysis of the impact of subsidy removal within the region.

Data Collection

The study relies on primary data collected directly from respondents through structured questionnaires. Primary data collection ensures that the information is current, specific, and relevant to the research objectives, allowing for detailed analysis of management perspectives on resilience factors.

Data Collection Instrument

The primary instrument used is a structured questionnaire, designed to capture quantitative data on various aspects such as internal operational factors, external environmental influences, business resilience strategies, and challenges faced by bakery management. The questionnaire comprises closed-ended questions, Likert-scale items, and categorical responses to facilitate ease of analysis and consistency in responses.

Method of Data Analysis

Data collected were analyzed using a combination of descriptive and inferential statistical techniques: Frequencies and simple percentages were used to summarize demographic data and categorical variables. The mean and standard deviation were employed to describe the central tendency and dispersion of continuous variables, such as resilience scores and external influence ratings. T-test will be used to test the hypotheses.

5. DATA PRESENTATION AND ANALYSIS

Table 1: Demographic Profile of Respondents

Demographic Variable	Categories	Number of Respondents	Percentage (%)
Gender	Male	122	50.0
	Female	123	50.0
Age Group	20-29 years	73	29.8
	30-39 years	82	33.5
	40-49 years	56	22.9
	50 years and above	34	13.9
Years of Business Experience	1-3 years	61	25.0
	4-6 years	92	37.6
	7-10 years	55	22.4
	Over 10 years	37	15.1
Type of Business	Sole Proprietor	147	60.0
	Partnership	98	40.0
Educational Qualification	Primary Education	0	0.0
	Secondary Education	97	39.6
	Tertiary Education	148	60.4
		245	100

Sources: Field Survey, 2025

The gender distribution is nearly balanced, with 122 males (50%) and 123 females (50%). This parity suggests that bakery business ownership and management are equally accessible to both genders in South-East Nigeria. Such gender balance allows for a comprehensive understanding of how subsidy policies impact both male and female entrepreneurs, and it indicates gender inclusivity in the bakery sector within this region. The respondents predominantly fall within the 30-39 years age bracket, accounting for 33.5% of the sample, followed by the 20-29 years group at 29.8%. Older age groups, 40-49 years and 50 years and above, constitute 22.9% and 13.9%, respectively. This distribution indicates a youthful entrepreneurial demographic, with most respondents in their prime working age, which is advantageous for adaptability and resilience in the face of policy changes such as subsidy removal.

Most respondents (37.6%) have 4-6 years of bakery business experience, indicating a moderate level of familiarity with the industry. About 25% have 1-3 years, suggesting some respondents are relatively new entrants, while 22.4% have 7-10 years, and 15.1% have over 10 years of experience, reflecting a mix of seasoned and relatively novice entrepreneurs. This diversity in experience levels provides a broad perspective on how subsidy removal influences both emerging and established bakery businesses.

A majority of respondents (60%) operate as sole proprietors, with the remaining 40% engaged in partnerships. This indicates a prevalence of individual entrepreneurship, which might influence how subsidy policies impact operational capacity and access to resources. Sole proprietorships may face more direct financial challenges post-subsidy removal compared to partnerships, which could benefit from shared resources and risk distribution. All respondents possess formal education, with 60.4% having tertiary education and 39.6% with secondary education. The absence of primary education respondents reflects that bakery entrepreneurs in the region predominantly have at least secondary-level education, which could enhance their capacity to adopt new business practices, understand policies, and utilize financial services effectively.

Table 2: Descriptive Statistics of Business Performance Indicators (Pre- and Post-Subsidy Removal)

State	Indicator	Pre-Subsidy Mean	Pre-Subsidy SD	Post-Subsidy Mean	Post-Subsidy SD
Abia	Financial Performance	3.5	0.6	4.2	0.5
	Operational Efficiency	3.4	0.7	4.0	0.6
	Market Share	3.2	0.8	3.8	0.7
	Employment	3.0	0.9	3.6	0.8
	Sustainability	3.3	0.7	4.0	0.6
	External Environment	3.1	0.8	3.7	0.7
Enugu	Financial Performance	3.2	0.8	3.8	0.7
	Operational Efficiency	3.1	0.9	3.6	0.8
	Market Share	3.0	0.9	3.4	0.8
	Employment	2.9	1.0	3.2	0.9
	Sustainability	3.0	0.8	3.5	0.7
	External Environment	2.8	0.9	3.2	0.8
Anambra	Financial Performance	3.1	0.7	3.6	0.6
	Operational Efficiency	3.0	0.8	3.4	0.7
	Market Share	2.9	0.8	3.2	0.8
	Employment	2.8	0.9	3.0	0.9
	Sustainability	3.0	0.8	3.4	0.7
	External Environment	2.7	0.9	3.0	0.8
Imo	Financial Performance	3.0	0.8	3.4	0.7
	Operational Efficiency	2.9	0.9	3.2	0.8
	Market Share	2.8	0.9	3.0	0.8
	Employment	2.7	1.0	3.0	0.9
	Sustainability	2.9	0.8	3.2	0.7
	External Environment	2.6	0.9	2.8	0.8
Ebonyi	Financial Performance	2.8	0.9	3.0	0.8
	Operational Efficiency	2.7	1.0	2.8	0.9
	Market Share	2.6	1.0	2.7	0.9
	Employment	2.5	1.1	2.6	1.0
	Sustainability	2.7	0.9	2.8	0.9
	External Environment	2.4	1.0	2.5	1.0

Sources: Field Survey, 2025**1. Abia**

Pre-Subsidy Performance: The average scores ranged from about 3.0 to 3.5 across indicators, indicating that bakeries in Abia were performing moderately well before subsidy removal. They demonstrated reasonable financial health, operational efficiency, and market presence. **Post-Subsidy Performance:** There was a marked improvement, with mean scores rising to approximately 4.0 and above, especially in financial performance and sustainability. The reduction in standard deviations suggests increased consistency and stability in business operations. The infrastructural improvements in Abia such as better power supply and transportation have significantly enhanced internal efficiencies and market competitiveness. As a result, bakeries have become more resilient, able to absorb external shocks and adapt to new market conditions post-subsidy removal.

2. Enugu

Pre-Subsidy Performance: Scores hovered around 2.8 to 3.0, indicating moderate performance with room for growth. **Post-Subsidy Performance:** The increase of about 0.4 to 0.6 points across indicators suggests that businesses have benefited from infrastructural and policy support, leading to improved operational efficiency and market share. While not as prominently performing as Abia, bakeries in Enugu are demonstrating resilience, likely due to ongoing infrastructural developments and supportive policies. Their improvement, although less dramatic, points to a positive trajectory toward stability.

3. Anambra

Pre-Subsidy Performance: Mean scores between approximately 2.9 and 3.1 suggest a solid, moderate baseline performance. **Post-Subsidy Performance:** Slight increases (~0.3 to 0.5) across indicators indicate that businesses have gained marginally in efficiency and market share. Anambra's bakeries are relatively resilient but could further benefit from targeted external support and infrastructural investments to elevate their performance to higher levels.

4. Imo

Pre-Subsidy Performance: Scores around 2.7 to 3.0 denote moderate internal capacity. **Post-Subsidy Performance:** Slight improvements (~0.3 to 0.4) indicate some positive developments but also highlight ongoing internal and external challenges. The performance suggests that while some progress has been made, Imo's bakeries are still relatively vulnerable. Focused strategies on strengthening internal efficiencies and external market linkages are necessary for substantial growth.

5. Ebonyi

Pre-Subsidy Performance: The lowest baseline scores (~2.4 to 2.8) among the states, indicating significant internal and external challenges. **Post-Subsidy Performance:** Minimal improvements (~0.1 to 0.3), which point to limited impact of policy changes on business outcomes. Ebonyi's bakeries seem hindered by infrastructural deficits, unstable external environments, and possibly limited access to financial or technical support. These low and stagnant scores underscore the urgent need for targeted interventions to bolster resilience.

Abia's leading performance post-subsidy removal underscores the positive impact of infrastructural improvements, especially in power supply, transportation, and utilities, which have directly enhanced operational efficiency and market competitiveness. **Enugu and Anambra** show moderate but promising improvements, indicating that ongoing infrastructural and policy support is gradually strengthening bakery resilience. **Imo and Ebonyi** lag behind, with Ebonyi showing the least progress, emphasizing the critical need for focused development programs and external support. The data highlights that infrastructural development plays a pivotal role in enabling businesses to adapt and thrive amid policy shifts. States like Abia serve as models for how infrastructural investments can significantly boost business resilience. For lagging states like Ebonyi and Imo, strategic focus should be on improving internal efficiencies, external market access, and infrastructure to foster sustainable growth. The analysis confirms that post-subsidy removal, bakeries in Abia have experienced the most substantial improvements, primarily due to infrastructural gains. Other states exhibit varying degrees of resilience, with some showing positive trends and others needing targeted support.

Test of Hypotheses

Using Independent t-Test

The independent t-test compares the means of two independent groups. Here, the pre- and post-subsidy removal periods to determine whether there are statistically significant differences in business performance indicators across the states. A significant t-test ($p < 0.05$) indicates that the subsidy removal has had a meaningful impact on that particular indicator.

Table 3: Abia

Indicator	t-value	p-value	Remarks
Financial Performance	3.69	0.001	Significant improvement post-subsidy removal.
Operational Efficiency	3.52	0.002	Significant increase, indicating better operations.
Market Share	3.27	0.004	Marked growth in market presence.
Employment	3.41	0.003	Significant increase in employment levels.
Sustainability	4.26	0.000	Strong evidence of improved sustainability.
External Environment	3.75	0.001	External factors have favorably impacted performance.

Sources: Field Survey, 2025

All six indicators show statistically significant increases ($p < 0.005$), with t-values ranging from approximately 3.27 to 4.26. The consistent significance across all performance metrics implies a robust positive effect of subsidy removal in Abia. The large t-values and low p-values suggest that improvements in financial performance, operational efficiency, market share, employment, sustainability, and external environment are likely attributable to the policy change, possibly amplified by infrastructural improvements or other external factors.

Table 4: Enugu

Indicator	t-value	p-value	Interpretation
Financial Performance	3.22	0.003	Statistically significant improvement.
Operational Efficiency	2.97	0.006	Significant increase, reflecting better operations.
Market Share	2.63	0.011	Significant growth in market share post-policy change.
Employment	2.78	0.009	Employment levels have significantly risen.
Sustainability	3.05	0.004	Significant enhancement in sustainability.
External Environment	3.17	0.002	External factors have improved business environment.

Sources: Field Survey, 2025

All indicators also demonstrate significant improvements ($p < 0.05$), with t-values from about 2.63 to 3.17. The significant increases across indicators imply that subsidy removal has positively influenced bakery operations in Enugu. The impact appears consistent but slightly less pronounced than in Abia, which could relate to differences in infrastructural development, market conditions, or external support.

Table 5: Anambra

Indicator	t-value	p-value	Interpretation
Financial Performance	3.11	0.005	Significant improvement.
Operational Efficiency	2.86	0.009	Statistically significant increase.
Market Share	2.45	0.015	Significant growth in market share.
Employment	2.66	0.012	Significant rise in employment numbers.
Sustainability	3.02	0.006	Improved sustainability post-policy change.
External Environment	2.98	0.007	External factors have positively influenced performance.

Sources: Field Survey, 2025

All six indicators are significantly improved ($p < 0.05$), with t-values between approximately 2.45 and

3.11. The positive and significant differences suggest that subsidy removal has enhanced business performance, although the magnitude of change is somewhat moderate compared to Abia and Enugu. These results reinforce the idea that policy impacts are evident but may be influenced by local infrastructural or economic factors.

Table 6: Imo

Indicator	t-value	p-value	Interpretation
Financial Performance	2.97	0.006	Significant improvement post-subsidy removal.
Operational Efficiency	2.85	0.009	Significant increase.
Market Share	2.52	0.014	Significant growth.
Employment	2.66	0.012	Significant rise in employment.
Sustainability	2.94	0.007	Improved sustainability.
External Environment	2.57	0.013	External environment has positively impacted performance.

Sources: Field Survey, 2025

All indicators show significant improvements ($p < 0.05$), with t-values roughly from 2.52 to 2.97. The consistent significance indicates that the policy has benefited bakeries in Imo, improving various performance aspects. The effect is similar in magnitude to Anambra, implying a positive but moderate impact

Table 7: Ebonyi

Indicator	t-value	p-value	Interpretation
Financial Performance	2.21	0.030	Statistically significant but with a smaller effect size.
Operational Efficiency	2.15	0.037	Significant increase, but less pronounced.
Market Share	2.11	0.041	Slightly significant.
Employment	1.98	0.051	Marginal significance, p-value just above 0.05.
Sustainability	2.09	0.043	Slightly significant.
External Environment	2.05	0.045	Marginal significance.

Sources: Field Survey, 2025

The indicators show mixed significance: **Financial Performance, Operational Efficiency, Market Share, Sustainability:** p-values just below 0.05, indicating statistically significant improvements. **Employment and External Environment:** p-values just above 0.05, indicating marginal or no significant difference. The weaker significance suggests that while some performance aspects have improved post-subsidy removal, the effect is less consistent or less pronounced in Ebonyi. This could be due to infrastructural deficits, external challenges, or other systemic issues limiting the impact of policy reforms.

Discussion of Findings

1. Abia State

The significant improvements across all indicators in Abia suggest that subsidy removal, coupled with infrastructural support and policy reforms, can enhance enterprise resilience and growth. This aligns with the findings of Akinwale and Akinwale (2017), who argued that removing distortive subsidies can create a more competitive environment, fostering innovation and efficiency among SMEs in Nigeria. Abia's relatively better infrastructural development may have amplified these benefits, as infrastructure is a critical determinant of enterprise performance (Oyelaran-Oyeyinka & Adegbite, 2012).

2. Enugu State

Similar positive impacts are observed in Enugu, where subsidy removal correlates with improved business metrics. This supports the assertions by Olawale and Amole (2010), who noted that policy reforms encouraging market liberalization often lead to increased productivity and competitiveness among SMEs. Enugu's improved external environment, as indicated by the t-test results, may have facilitated easier market access and operational adjustments, consistent with findings by Nwankwo and Ibe (2015).

3. Anambra State

Anambra also experienced significant gains, though slightly less pronounced than Abia and Enugu. This may reflect that while subsidy removal creates opportunities, local infrastructural constraints or external factors can moderate its impact (Ojo & Oladipo, 2019). Anambra's results echo the work of Adebayo et al. (2018), who emphasized that institutional support and infrastructural quality influence the extent to which policy reforms translate into performance improvements.

4. Imo State

The positive outcomes in Imo reinforce the notion that subsidy reforms can stimulate business growth, especially when complemented by infrastructural development and external support systems. This aligns with the findings of Olawale and Amole (2010), who documented that policy reforms improve operational efficiency and competitiveness. The moderate effect size suggests that additional measures, such as capacity building and access to finance, may be necessary to maximize benefits (Akinwale & Akinwale, 2017).

5. Ebonyi State

Ebonyi's mixed results, with some indicators showing marginal or no significant improvement, highlight that subsidy removal alone may not be sufficient in regions facing infrastructural deficits or external challenges. This observation is consistent with the literature by Nwankwo and Ibe (2015), who argue that institutional and infrastructural deficiencies can limit the positive effects of policy reforms. The findings suggest a need for targeted interventions to address systemic bottlenecks, echoing the recommendations of Ojo and Oladipo (2019).

6. CONCLUSIONS AND RECOMMENDATIONS

The study shows that the removal of subsidies in Nigeria's South-East states has generally positively impacted the performance of small and medium enterprises, particularly bakeries. The significant improvements observed in financial performance, operational efficiency, market share, employment, and sustainability across most states suggest that subsidy reforms, when complemented by supportive infrastructural and policy measures, can foster a more competitive and resilient business environment. These findings align with existing literature indicating that liberalization and policy reforms can stimulate enterprise growth, innovation, and efficiency in developing economies. However, the variation in outcomes among the states also highlights the importance of contextual factors such as infrastructural development, institutional support, and external environment. In regions like Ebonyi, where the benefits were less pronounced, systemic challenges appear to limit the effectiveness of subsidy removal alone. Therefore, for policymakers to maximize the positive impacts of subsidy reforms, a holistic approach that addresses infrastructural deficits, strengthens institutional frameworks, and creates enabling external conditions is imperative. Such tailored strategies will enhance the capacity of SMEs to thrive and contribute meaningfully to Nigeria's economic development. Findings revealed that:

1. In **Abia**, all performance metrics showed strong, statistically significant enhancements, suggesting that subsidy removal, when supported by infrastructural and policy reforms, can substantially boost enterprise performance. Similarly,

2. **Enugu** and **Anambra** experienced notable gains across financial performance, operational efficiency, market share, employment, and sustainability, though the magnitude of improvements was slightly less pronounced than in Abia.
3. **Imo** demonstrated positive effects consistent with the other states, reinforcing the notion that subsidy reform can stimulate growth and efficiency in SMEs. Conversely,
4. **Ebonyi** exhibited mixed results, with some indicators showing marginal or no significant improvement, highlighting that infrastructural deficits and external challenges may limit the impact of subsidy removal in certain contexts.

Based on the findings, the following recommendations were made:

1. Given the significant positive impact of subsidy removal on business performance in Abia, policymakers should focus on maintaining and enhancing the regulatory environment that supports SME growth. Investing in infrastructure, access to finance, and business development services will further sustain and amplify these gains. Additionally, fostering partnerships between government and private sector actors can help create a more conducive environment for innovation and expansion.
2. In Enugu, where improvements were notable but slightly less pronounced, efforts should be directed toward reducing infrastructural bottlenecks and improving access to affordable credit. Establishing targeted support programs, such as training and mentorship for small business owners, can help maximize the benefits of subsidy reforms. Strengthening institutional capacity to enforce business-friendly policies will also be crucial for sustained growth.
3. To build on the positive outcomes in Anambra, strategies should include enhancing infrastructural facilities, especially transportation and energy, which are critical for operational efficiency. Encouraging local entrepreneurship through skill development programs and facilitating market linkages can enable businesses to expand their market share and employment levels further. Implementing measures to improve access to finance will also support business scaling.
4. In Imo, where positive effects were observed, efforts should be made to address remaining systemic challenges such as infrastructural deficits and bureaucratic hurdles. Promoting public-private partnerships can help deliver infrastructural projects more efficiently. Additionally, capacity-building initiatives aimed at entrepreneurs can help leverage the benefits of subsidy removal for sustainable growth.
5. Given the mixed results in Ebonyi, a comprehensive approach is necessary. Prioritizing infrastructural development, particularly in transportation and energy, will be essential to unlock the full potential of SMEs. Strengthening institutional support, including access to finance and business advisory services, can help mitigate external challenges. Tailored interventions that consider local contextual factors will be vital to realizing the benefits of subsidy reforms in Ebonyi.

Implications for the broader economy

The findings of this study have important implications for the broader economy, particularly in terms of fostering sustainable economic growth and improving employment opportunities. By demonstrating that subsidy removal can positively influence SME performance, the study suggests that such policy reforms can lead to increased productivity, expanded market reach, and greater competitiveness among small and medium enterprises. As SMEs are crucial drivers of economic diversification and job creation, improved performance in this sector can contribute to reducing unemployment rates, enhancing income levels, and stimulating local economic activities, thereby promoting overall economic stability and resilience.

Additionally, the study underscores the need for complementary policies and infrastructural investments to maximize the benefits of subsidy reforms. For the economy to fully capitalize on the potential of SMEs, government and private sector collaboration must focus on enhancing access to finance, infrastructure, and capacity-building initiatives. Such integrated efforts can lead to a more vibrant

entrepreneurial ecosystem, attract foreign investment, and foster innovation. Consequently, these developments can boost economic diversification, reduce dependence on commodity exports, and promote sustainable development pathways, ultimately contributing to the economic resilience and long-term growth of the region and the nation as a whole.

Contribution to knowledge

This study significantly contributes to the existing body of knowledge by providing empirical evidence on the impact of subsidy removal on the performance of small and medium enterprises within Nigeria's South-East region. It highlights the nuanced effects of policy reforms, demonstrating that while subsidy withdrawal can enhance operational efficiency, market share, and sustainability, the outcomes are also heavily influenced by local infrastructural, institutional, and economic contexts. Consequently, the research underscores the importance of a holistic approach to policy implementation, emphasizing that subsidy reforms alone are insufficient without complementary support systems tailored to regional needs.

Furthermore, the study enriches the understanding of how government interventions, such as subsidy policies, interact with regional characteristics to influence SME growth and development. By dissecting state-specific responses, it offers valuable insights for policymakers and development practitioners aiming to design more effective, context-sensitive strategies for economic transformation. Ultimately, this research advances the discourse on subsidy policies and SME development in emerging economies, contributing to both academic scholarship and practical policymaking aimed at fostering sustainable enterprise growth.

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