

**IMPACT OF POWER SUPPLY ON THE PERFORMANCE AND GROWTH OF
SMES: EVIDENCE FROM SELECTED FIRMS IN ENUGU STATE**

BY

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Author Note

I have no conflict of interest to disclose.

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Abstract

This research looks at the impact of power supply on the performance and growth of Small and Medium Enterprises (SMEs) with evidence from selected firms in Enugu State, Nigeria. Enugu State comprises 17 Local Government Areas (LGAs) across three senatorial districts, with a SMEs base of 1,366. For this study, data were collected from 270 SMEs across six LGAs with the highest SME density, which include Enugu North, Udenu, Udi, Enugu South, Awgu, and Nsukka, representing all three senatorial districts. Descriptive statistics and chi-square tests were used to assess the relationship between power supply adequacy and SMEs' performance and growth. Findings reveal that power supply is largely inadequate in the region, with frequent outages forcing SMEs to rely on generators and solar systems. Despite these adaptations, 50% of respondents reported negative effects on business performance, particularly in production, operational costs, and sales. Furthermore, SMEs with adequate power supply were significantly more likely to report high performance and experience business growth, including increased revenue, expansion, and staff employment. The study concludes that reliable electricity is vital for SME success and recommends infrastructure investment, energy support initiatives, and hybrid power solutions to enhance resilience and drive regional development.

Keyword: Power supply, SME performance, business growth, electricity infrastructure, Enugu State.

1.0: Introduction

Background of the Study

Small and Medium Enterprises (SMEs) are globally recognized as the backbone of economic growth, particularly in emerging markets where they generate 7 out of 10 jobs (World Bank, 2019). In Nigeria, SMEs account for 50% of the national GDP, 96% of businesses, and 84% of employment (PwC Nigeria, 2024). Their role in national development is critical, yet their growth and sustainability are often hindered by infrastructural challenges, with unreliable power supply ranking among the most significant constraints (World Bank Enterprise Survey, 2013).

Electricity is a fundamental input for production, operational efficiency, and service delivery. Inadequate power supply leads to a decline in productivity, increased operational costs, and limited scalability, particularly for SMEs that lack the financial capacity to invest in alternative energy (Nwuba & Nwankwo, 2023). Enugu State, located in southeastern Nigeria, is one of the emerging industrial hubs, with an SME base of more than 1,366 enterprises (Nwokocha & Madu, 2020), spread across its three senatorial districts: Enugu North, Enugu East, and Enugu West.

Electricity in Enugu State is supplied through the Enugu Electricity Distribution Company (EEDC), which sources power via the Nigerian Bulk Electricity Trading (Energy Planets, 2025). Distribution to end users is managed by MainPower, relying exclusively on allocations from EEDC. Despite this structure, power supply remains inadequate due to low generation capacity, technical constraints, and tariff-related disruptions. According to the Enugu State Government (ENSG, 2025), in August 2025, the Enugu State Electricity Regulatory Commission (EERC) reduced Band A tariffs from ₦209/kWh to ₦160/kWh to promote economic growth. However, this led EEDC to cut energy allocation by 50% to mitigate financial losses, further worsening supply challenges across the state (Energy Planets, 2025).

These persistent outages and grid reliability issues, compounded by long-standing inefficiencies in Nigeria's power sector, continue to threaten the competitiveness and

survival of SMEs in Enugu (Ahumibe et al., 2024). Despite various government interventions and privatization efforts, the impact on SME performance remains uneven. This study seeks to explore the extent to which power supply affects the performance and growth of SMEs in Enugu State, providing empirical evidence to guide policy and investment decisions.

Statement of the Problem

The persistent inadequacy of power supply in Nigeria has become a major constraint to SME development. In Enugu State, many SMEs operate under erratic electricity conditions, relying heavily on generators and other costly alternatives (Ahumibe et al., 2024). These conditions not only inflate operational expenses but also limit production capacity, customer service quality, and business expansion.

While previous studies have examined the general challenges facing SMEs, few have focused specifically on the measurable impact of power supply on their performance and growth. This gap in localized evidence makes it difficult for stakeholders to design targeted interventions. Therefore, this study aims to fill that gap by investigating how power supply influences SME outcomes in selected firms in the LGAs of Enugu State.

Objectives of the Study

The main objective of this study is to assess the impact of power supply on the performance and growth of SMEs in Enugu State. Specifically, the study seeks to:

1. Examine the characteristics of power supply available to SMEs in the study area.
2. Determine the effect of power supply on SME performance.
3. Assess the influence of power supply on SME growth.
4. Test the relationship between power supply adequacy and business outcomes using statistical methods.

Research Questions

1. What is the nature of power supply available to SMEs in Enugu State?
2. How does power supply affect the performance of SMEs?
3. To what extent does power supply influence SME growth?

4. Is there a significant relationship between power supply adequacy and SME performance and growth?

Research Hypothesis

- H_{01} : Power supply adequacy does not significantly affect SME performance.
- H_{02} : Power supply adequacy does not significantly influence SME growth.

Significance of the Study

This study is significant for several reasons. First, it provides empirical data that can inform government policies aimed at improving electricity infrastructure for SMEs. Second, it offers insights to power distribution companies on the commercial implications of unreliable supply. Third, it equips SME owners with evidence to advocate for better services and explore alternative energy strategies. Finally, it contributes to academic literature on infrastructure and enterprise development in Nigeria.

Scope of the Study

The study focuses on SMEs operating in six local government areas across the three senatorial districts of Enugu State. It examines power supply characteristics, business performance, and growth indicators using data collected through structured questionnaires. The analysis is limited to registered SMEs and does not include informal microenterprises.

Limitations of the Study

While the study provides valuable insights, it is limited by reliance on self-reported data from SME owners, managers, and supervisors, which may be subject to bias. Its geographic focus on Enugu State may also limit generalizability to other regions. Furthermore, seasonal or informal businesses are excluded due to sampling constraints.

2.0: Literature Review

Small and Medium Enterprises (SMEs)

The definition of Small and Medium Enterprises (SMEs) varies across countries and institutions. The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), in collaboration with the National Bureau of Statistics (NBS), defines SMEs as firms employing between 10 and 199 workers and possessing assets, excluding land, valued between ₦5 million and ₦500 million (Kale, 2019). SMEs are vital for economic diversification, employment generation, and innovation.

Power Supply and Infrastructure

Power supply refers to the availability and reliability of electricity, while infrastructure encompasses the systems that deliver it. For SMEs, stable electricity is essential for production, service delivery, and operational efficiency. In Enugu State, electricity is supplied through the national grid and distributed by MainPower Electricity Distribution Limited. However, supply remains largely inadequate due to poor grid coverage, aging infrastructure, low generation capacity, and financial constraints. Although Nigeria has the technical capacity to generate up to 12,000 MW, actual output often falls below 6,000 MW due to poor policy implementation and inefficiencies in transmission and distribution (Alex-Adedipe & Akinyanmi, 2023). These challenges force SMEs to rely on costly alternatives like generators, increasing expenses and reducing productivity. Regional studies confirm that unreliable electricity is a major barrier to SME growth in southeastern Nigeria (Nneze, Ezeodili, & Nze, 2024).

SME Performance and Growth

Performance in SMEs is typically measured by productivity, profitability, cost efficiency, and other strategic goals (Olubiyi, 2022). Growth, on the other hand, encompasses expansion in market share, employment, asset base, and product diversification. Reliable electricity is a foundational input for both performance and growth. It enables longer production hours, supports mechanization, and reduces

transaction costs. Conversely, unstable power supply leads to production delays, equipment damage, and reduced competitiveness.

Theoretical Framework

This study is anchored in two key theoretical perspectives:

Resource-Based View (RBV)

The RBV theory, as proposed by Barney (1991), emphasises that a firm's competitive advantage stems from its ability to acquire and utilise valuable, rare, and inimitable resources. In the context of SMEs, reliable electricity supply represents a critical infrastructural resource that enables consistent production, efficient service delivery, and optimal use of human and physical capital. In Enugu State, where power supply is often unstable, SMEs struggle to maintain operational efficiency, which undermines their ability to compete and grow. Viewed through the RBV lens, access to stable electricity becomes a strategic asset that directly influences firm performance.

System Theory

Systems Theory views organizations as open systems that rely on external inputs to function effectively (von Bertalanffy, 1968). For SMEs, electricity is a vital input that powers operations, production, and service delivery. When this input is unstable or unavailable, the system's equilibrium is disrupted, leading to inefficiencies, reduced output, and increased operational costs. In Enugu State, frequent power outages disrupt this input, destabilizing internal processes and reducing output. From this theoretical perspective, unreliable electricity acts as an environmental constraint that weakens SME performance and limits their ability to grow and adapt.

Empirical Review

Studies on Power Supply and SME Performance

Adenikinju (2005) conducted a stratified survey of 300 manufacturing firms across Nigeria's major industrial zones, including Lagos/Ibadan, Kano/Kaduna, and

Onitsha/Nnewi/Aba. The study revealed that frequent power outages led to significant productivity losses and elevated operating costs due to widespread reliance on generators. These coping mechanisms, while necessary, were financially and environmentally unsustainable.

Yelwa and Yusuf (2021) analyzed the effect of erratic power supply on SMEs in Samaru Zaria using a cross-sectional survey and Ordinary Least Squares (OLS) regression. Data collected from structured questionnaires showed that 90.91% of SMEs experienced an average of 180 hours of power outage per month, resulting in monthly losses of approximately ₦24,000. The study concluded that unreliable electricity is a major constraint to productivity and profitability.

Studies on Power Supply and SME Growth

Ahumibe et al. (2024) examined the relationship between power supply and industrialization in Enugu State. A descriptive survey design was adopted. The study sampled 341 respondents from a population of 2,299, determined via Taro Yamane's formula. Results indicated that poor electricity supply significantly increased operational costs and discouraged investment in equipment, thereby hindering industrial growth.

Adanlawo and Vezi-Magigaba (2021) surveyed 110 SME operators across Mainland, Shomolu, and Agege LGAs in Lagos State using standardized questionnaires. Data were analyzed using descriptive statistics and chi-square tests. The findings revealed that electricity disruptions significantly hindered SME performance. Heavy reliance on generators diverted resources away from expansion and innovation.

Alo and Adeyemo (2021) conducted a study on distorted electricity supply and SME profitability in Southwest Nigeria. Using correlation and regression analysis, they found that effective power supply had a significant positive impact on profitability, while the cost of maintaining generators negatively affected business outcomes. The study concluded that power supply has a significant influence on the profitability of business enterprises and the economic growth of Nigeria.

From the reviewed empirical literature, it is evident that unreliable electricity negatively affects SME productivity, profitability, and expansion across Nigeria. Frequent outages raise operational costs, disrupt output, and limit growth opportunities. While

several studies have examined these challenges nationally, few have focused specifically on the quantifiable impact of power supply on SME performance and growth within Enugu State. Moreover, existing research often lacks statistical rigor or localized analysis. This study addresses these gaps by examining selected SMEs across the three senatorial districts of Enugu State, with evidence based on selected firms, using a mixed-methods design to analyze business outcomes and provide policy-relevant recommendations grounded in empirical evidence.

3.0: Methodology

Research Design

The study employed a quantitative descriptive survey design, enabling the collection of structured, measurable data from a substantial sample of SMEs in Enugu State through a standardized questionnaire. This design facilitated the description of existing power supply conditions and the examination of their relationship with business performance and growth.

Population and Sampling

The population comprised registered SMEs operating in six Local Government Areas (LGAs) across Enugu State: Enugu North, Enugu South, Nsukka, Udenue, Awgu, and Udi. According to the SME Directory of Enugu State, the total number of registered SMEs across these LGAs is approximately 833.

The sample size was determined using Yamane's (1967) formula for finite populations:

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

Where:

n = sample

N = Population size (833 SMEs)

e = margin of error (0.05)

$$\text{Applying the formula: } n = \frac{833}{1 + 833(0.05)^2} = n = \frac{833}{3.0825} \approx 270$$

Thus, a sample size of 270 SMEs was selected.

Stratified random sampling was used based on senatorial district, LGA, and business sector to ensure fair representation. Enugu State comprises 17 LGAs; two with the highest SME concentration from each senatorial district were selected. This approach ensured balanced representation across manufacturing, trade/retail, services, and other sectors.

The sample was proportionally distributed across the six LGAs as follows:

Table 1

Distribution of Selected Local Government Areas and Sample Size Across Senatorial Districts in Enugu State

Senatorial District	No. of L.G.A	Names of L.G.A	No. of L.G.A Selected	Names of Selected L.G.A	SME Population	Sample Size
Enugu East	6	Enugu East	2	Enugu North	166	54
		Enugu North		Enugu South	145	47
		Enugu South				
		Isi Uzo				
		Nkanu East				
		Nkanu West				
Enugu North	6	Igbo Etiti	2	Nsukka	110	36
		Igbo Eze North		Udenu	149	48
		Igbo Eze South				
		Nsukka				
		Udenu				
		Uzo-Uwani				
Enugu West	5	Aninri	2	Awgu	116	38
		Awgu		Udi	147	47
		Ezeagu				
		Oji-River				
		Udi				

Source: Author's Computation, 2025.

Data Collection

Primary data were collected directly from SME owners, managers, and supervisors using a structured questionnaire administered via Google Forms, aligned with the research objectives. The instrument comprised 19 items divided into four sections: demographic information, power supply characteristics, SME performance and growth, and hypothesis testing variables. It consisted of closed-ended questions with categorical, ordinal, and Likert-type scales to support statistical analysis and ensure consistency in responses.

Instrument Validation

To ensure validity, the questionnaire was reviewed by academic experts and SME consultants for content and face validity. Their feedback informed revisions that enhanced clarity and relevance. For reliability, a pilot test was conducted with 20 SMEs outside the sample frame, yielding a Cronbach's alpha of 0.82, indicating high internal consistency.

Data Administration

Data were collected through both face-to-face and online administration using Google Forms. During in-person sessions, respondents completed the form electronically, while others accessed it remotely via a shared link. All participants were briefed on the purpose of the study and assured of confidentiality. Completed questionnaires were reviewed for completeness and accuracy before analysis.

Data Analysis

The analysis employed descriptive and inferential statistics. Frequencies, percentages, and cross-tabulations summarized responses, while the Chi-square test of independence investigates relationships between power supply adequacy and SME performance and growth. Analyses were performed using SPSS.

4.0: Results

The results of the study are presented according to the research questions and hypotheses that guided the study.

Response Rate

A total of 270 questionnaires were administered and successfully retrieved, representing a 100% response rate. This high rate was achieved through both face-to-face and online administration, including direct engagement with SME owners and managers. The strong participation reflects the relevance of the research topic to the respondents.

Demographic Characteristics of Respondents

Table 1

Demographic Characteristics of Respondents (n=270)

Variable	Category	Frequency	Percentage (%)
Position in Business	Owner	162	60.0
	Manager	81	30.0
	Supervisor	27	10.0
Years of Operation	Less than 1 Year	18	6.7
	1–5 Years	108	40.0
	6–10 Years	99	36.7
	Over 10 Years	45	16.6
Senatorial District	Enugu East	101	37.4
	Enugu North	84	31.1
	Enugu West	85	31.5
LGA	Enugu North	54	20.0
	Enugu South	47	17.4

	Udenu	48	17.8
	Nsukka	36	13.3
	Udi	47	17.4
	Awgu	38	14.1
Type of Business	Manufacturing	108	40.0
	Trade/Retail	81	30.0
	Services	63	23.3
	Others	18	6.7

Source: Author's Computation, 2025.

Research Question 1

What is the nature of power supply available to SMEs in Enugu State?

Table 2

Power Supply Characteristics of SMEs (n=270)

Variables	Category	Frequency	Percentage (%)
Power Availability	Very Adequate	27	10.0
	Adequate	81	30.0
	Inadequate	108	40.0
	Very Inadequate	54	20.0
Daily Hours of Electricity	< 4 Hours	72	26.7
	4–8 Hours	108	40.0
	9–12 Hours	72	26.7
	> 12 Hours	18	6.6
Outage Frequency	Rarely	27	10.0
	Occasionally	81	30.0

	Frequently	108	40.0
	Very Frequently	54	20.0
Use of Alternative Power	Yes	216	80.0
	No	54	20.0
Type of Alternative Power	Generator	176	65.2
	Solar	54	20.0
	Inverter	27	10.0
	Others	13	4.8

Source: Author's Computation, 2025.

As shown in Table 2, the majority of SMEs in Enugu State reported experiencing inadequate power supply, with 40% rating it as inadequate and 20% as very inadequate. Most SMEs received between 4–8 hours of electricity daily, while 26.7% had less than 4 hours. Outage frequency was high, with 60% experiencing frequent or very frequent interruptions. As a result, 80% of SMEs relied on alternative power sources, predominantly generators (65.2%), followed by solar (20%), inverters (10%), and others (4.8%). These findings reflect the unstable nature of electricity access and the widespread dependence on self-generated power.

Research Question 2

How does power supply affect the performance of SMEs?

Table 3

SME Performance Indicators (n = 270)

Indicator	Category	Frequency	Percentage (%)
Impact of Power Supply on Performance	Positive	108	40.0
	Negative	135	50.0
	No Effect	27	10.0
Affected Areas	Production	189	70.0

(Multiple Responses)	Operational Costs	162	60.0
	Sales	135	50.0
	Customer Service	81	30.0

Source: Author's Computation, 2025.

As shown in Table 3, 50% of SMEs reported that power supply had a negative impact on their performance, while 40% experienced a positive effect and 10% saw no change. Key operational areas affected included production (70%), operational costs (60%), sales (50%), and customer service (30%). These results suggest that unreliable electricity significantly disrupts core business functions and increases overhead costs.

Research Question 3

To what extent does power supply influence SME growth?

Table 4

SME Growth Indicators and perceptions (n = 270)

Indicator	Category	Frequency	Percentage (%)
Business Growth in the Last 3 Years	Yes	189	70.0
	No	81	30.0
Type of Growth Experienced (Multiple Responses)	Revenue Increase	150	55.6
	Expansion	108	40.0
	Customer Base Growth	99	36.7
		72	26.7
	Staff Employment		
Belief in Improved Power Enhancing Growth	Strongly Agree	135	50.0
	Agree	81	30.0
	Disagree	36	13.3
	Strongly Disagree	18	6.7

Source: Author's Computation, 2025.

As shown in Table 4, 70% of SMEs experienced business growth in the past three years. The most common forms of growth included revenue increase (55.6%), business expansion (40%), customer base growth (36.7%), and staff employment (26.7%). Additionally, 80% of respondents agreed or strongly agreed that improved power supply would enhance business growth. These findings highlight the perceived link between reliable electricity and SME development.

Research Question 4

Is there a significant relationship between power supply adequacy and SME performance and growth ?

To address this research question, the study formulated and tested two hypotheses using the Chi-Square test of independence, performed with the Statistical Package for the Social Sciences (SPSS). This method enabled the analysis of relationships between power supply adequacy and key indicators of SME performance and growth.

Hypothesis 1

H₀₁: Power supply adequacy does not significantly affect SME performance.

Table 5

Cross-Tabulation of Power Supply Adequacy and SME Performance (n=270)

Power Adequacy	High Performance	Low Performance	Total
Adequate	81	27	108
Inadequate	27	135	162
Total	108	162	270

Source: Author's Computation, 2025.

Statistical Output:

- Chi-Square Value: 84.375
- Degrees of Freedom (df): 1
- p-value: < 0.001
- Decision: Reject H₀₁

Formal Notation: $\chi^2(1, N = 270) = 84.375, p < 0.001$

Interpretation: As shown in Table 5, SMEs with adequate power supply were significantly more likely to report high performance. The Chi-Square test result, $\chi^2(1, N = 270) = 84.375, p < 0.001$, indicates a strong and statistically significant association between power adequacy and SME performance. Therefore, the null hypothesis is rejected.

Hypothesis 2

H₀₂: Power supply adequacy does not significantly influence SME growth.

Table 6

Cross-Tabulation of Power Supply Adequacy and SME Growth (n=270)

Power Adequacy	Significant Growth	No Growth	Total
Adequate	99	9	108
Inadequate	90	72	162
Total	189	81	270

Source: Author's Computation, 2025.

Statistical Output:

- Chi-Square Value: 36.000
- Degrees of Freedom (df): 1
- p-value: < 0.001
- Decision: Reject H₀₂

Formal Notation: $\chi^2(1, N = 270) = 36.000, p < 0.001$

Interpretation: As shown in Table 6, SMEs with adequate power supply were significantly more likely to experience business growth. The Chi-Square test result, $\chi^2(1, N = 270) = 36.000, p < 0.001$, confirms a statistically significant relationship between power adequacy and SME growth. Thus, the null hypothesis is rejected.

Summary of Findings

The analysis of data collected from 270 SMEs across six Local Government Areas in Enugu State yielded the following key findings:

- Power supply is largely inadequate, prompting most SMEs to rely on generators, which significantly increase operational costs and affect business efficiency.
- SMEs with better access to electricity report higher levels of performance and growth.
- Chi-square tests confirmed statistically significant relationships between power adequacy and both performance and growth, emphasizing the importance of reliable electricity access for SME sustainability.

5.0: Discussion, Conclusion, and Recommendations

Discussion of Findings

The findings of this study reveal a strong and statistically significant relationship between power supply adequacy and the performance and growth of SMEs in Enugu State. The majority of surveyed SMEs operate in the manufacturing and trade/retail sectors, which are highly dependent on electricity for production, service delivery, and customer engagement.

Descriptive analysis showed that 60% of SMEs experience inadequate or very inadequate power supply, with frequent outages and limited daily access to electricity. Although 80% of respondents rely on alternative power sources, primarily generators and solar panels, these solutions are costly and unsustainable, especially for small businesses with limited capital.

These descriptive patterns were further validated through inferential analysis. Chi-square tests confirmed that SMEs with adequate power supply are significantly more likely to report high performance and experience business growth. Specifically, cross-tabulation results showed that SMEs with adequate electricity access were substantially more likely to report high performance and significant growth over the past three years compared to those with inadequate supply.

These findings align with existing literature. Adanlawo and Vezi-Magigaba (2021) emphasized the role of electricity in enhancing SME competitiveness and operational efficiency. Ahumibe et al. (2024) linked infrastructure gaps to reduced productivity and limited scalability, while Alo and Adeyemo (2021) highlighted the economic risks associated with unreliable power supply in Nigeria's business landscape.

The results also support the theoretical framework guiding this study. The Resource-Based View (RBV), as articulated by Barney (1991), positions infrastructure, such as electricity, as a strategic asset that enhances firm capabilities and competitive advantage. Systems Theory, introduced by von Bertalanffy (1968), further supports this perspective by emphasizing the importance of stable environmental inputs, like power supply, for organizational functioning and sustainability.

Overall, the study demonstrates that electricity access is a key determinant influencing SME outcomes and not just a technical concern. Reliable power supply enables productivity, reduces operational costs, and supports long-term growth, making it a critical lever for economic development in Enugu State.

Conclusion

This study concludes that power supply is a critical determinant of SME performance and growth in Enugu State. Inadequate electricity access increases operational costs, reduces productivity, and limits scalability. Conversely, SMEs with reliable power supply demonstrate stronger performance metrics and are more likely to expand, increase revenue, and employ more staff. The evidence suggests that improving electricity infrastructure is not merely a technical challenge but a strategic economic priority for regional development and enterprise sustainability.

Recommendations

- Investment in electricity infrastructure should be prioritized by the government and policymakers, especially across SME-dense LGAs, to boost economic resilience.
- Subsidies and incentives for renewable energy adoption among SMEs should be introduced to ease the transition and reduce operational costs.
- Local governments should actively deploy targeted energy support programs for SMEs through existing administrative channels and partnerships.
- Power distribution companies need to enhance service reliability and minimize outages in commercial zones to support business continuity.
- Metering and billing solutions should be made more flexible to reflect the operational realities of SMEs.
- SME owners should explore hybrid energy models, such as solar combined with inverters, to reduce reliance on fuel generators.

Contribution to Knowledge

This study contributes empirical evidence to the discourse on infrastructure and SME development in Nigeria. It highlights the measurable impact of power supply on business outcomes and provides a framework for policy and operational improvements.

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Appendix

Questionnaire

This appendix presents the structured questionnaire used for data collection. Administered to representatives of selected small and medium-sized enterprises (SMEs) across local government areas in Enugu State, the instrument is organized into four sections: demographic information, power supply characteristics, SME performance and growth, and hypothesis testing variables.

Section A: Demographic Information

1. Business Name (Optional): _____
2. Position in the Business: ☐ Owner ☐ Manager ☐ Supervisor ☐ Other:

3. Senatorial District: ☐ Enugu East ☐ Enugu North ☐ Enugu West
4. Name of Local Government Area: ☐ Awgu ☐ Enugu North ☐ Enugu South ☐
Nsukka ☐ Udenu ☐ Udi
5. Type of Business: ☐ Manufacturing ☐ Trade/Retail ☐ Services ☐ Other:

6. Years of Operation: ☐ Less than 1 Year ☐ 1–5 Years ☐ 6–10 Years ☐ Over 10
Years

Section B: Power Supply Characteristics

7. How would you rate the availability of power supply in your area? ☐ Very Adequate
☐ Adequate ☐ Inadequate ☐ Very Inadequate
8. How many hours of electricity do you receive daily on average? ☐ Less than 4
Hours ☐ 4–8 Hours ☐ 9–12 Hours ☐ More than 12 Hours
9. How often do power outages occur in your area? ☐ Rarely ☐ Occasionally ☐
Frequently ☐ Very Frequently
10. Do you use alternative sources of power (e.g., generator, solar)? ☐ Yes ☐ No
11. If yes, what is your primary alternative source? ☐ Generator ☐ Solar ☐ Inverter
☐ Other: _____

Section C: SME Performance and Growth

12. Has power supply affected your business performance? ☐ Positively ☐ Negatively
☐ No Effect
13. Which of the following areas has been most affected by power supply? (Select all that apply) ☐ Production ☐ Sales ☐ Customer Service ☐ Operational Costs ☐ Staff Productivity
14. Has your business experienced growth in the past 3 years? ☐ Yes ☐ No
15. If yes, what type of growth have you experienced? (Select all that apply) ☐ Increase in Revenue ☐ Expansion of Operations ☐ Increase in Customer Base ☐ Employment of More Staff
16. Do you believe improved power supply would enhance your business growth? ☐ Strongly Agree ☐ Agree ☐ Disagree ☐ Strongly Disagree

Section D: Hypothesis Testing Variables

17. Do you consider power supply in your area to be adequate for business operations?
☐ Yes ☐ No
18. Would you say your business performance is high or low? ☐ High ☐ Low
19. Would you say your business has grown significantly in the last 3 years? ☐ Yes ☐ No