PRIVATISATION OF POWER HOLDING COMPANY OF NIGERIA (PHCN) AND ITS IMPLICATIONS ON SMES PERFORMANCE: EVIDENCE ON PROFITABILITY, EMPLOYMENT GENERATION AND EXPANSION IN NASARAWA STATE

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Abstract
This study examines the Privatisation of Power Holding Company of Nigeria (PHCN) and its implications for SMEs performance: evidence on profitability, employment generation and expansion in Nasarawa state. The study adopted mixed research method and used both quantitative and qualitative approaches. Questionnaire forms and interview guides were used as data collection instruments employed for the study. The questionnaire forms were administered to 315 SMEs registered with the Nasarawa State Government in the 13 local government areas of the state. However, only 300 were analysed. Descriptive statistics and multiple regression analysis were employed to assess the relationship between changes in electricity supply following privatization and indicators of firm performance, including profitability, employment generation, and business expansion. The findings indicated that PHCN electricity supply remains low and has negative impact on the productivity, profitability, expansion and job creation capacity of SMEs in Nasarawa State. With this, SMEs in Nasarawa State have resorted in the use of alternative power source such as generators and solar panels. The study therefore concluded that electricity supply has not improved significantly, and this has negatively impacted the performance of SMEs in Nasarawa State. The study therefore recommended that government should introduce a workable subsidy policy or grants that will mitigate the effect of power outages.
Keywords*: Power Outage, Performance, Productivity and Profitability, Employment, Expansion.*

Introduction

Small and Medium Enterprises (SMEs) are widely regarded as the driving force of economic growth. They significantly contribute to the Gross Domestic Product (GDP) of many countries, they play crucial role in both economic and social development, it is totally impossible to ignore this influence role in the society and in the economy. SMEs are therefore acknowledged as the key catalysis for economic sustainable growth of both development and developing nations (Prasanna, Jayasundara, Naradda, Gamage, Ekanayake, Rajapakshe, & Abeyrathne, 2019). SMEs are essential to every country's economy development (Heilmann, Forsten-Astikainen, & Kultalahti, 2018) since the create jobs and contribute significantly to the GDP. Small and medium enterprises play a crucial role in local economic development by generating jobs, reducing poverty, and fostering economic expansion.

Electricity synchronises economic activity from basic, secondary, and tertiary sources of production. It creates direct links or bearing on the economy. The direct or indirect impact enhances the performance of every sector of the economy that uses electricity. The Nigerian government established the National Electricity Power Authority (NEPA) to generate, transmit, and distribute electricity in 1972 through decree N0 24 after realising the significant of electricity supply which is generally seen as essential to the operations of SMEs (Sa'Aondo, 2026). This notwithstanding, the Nigerian electricity underwent series of reform in order to reposition and restructure the power sector. It was reformed through

privatisation policy in 2013 and was called Power Holding Company of Nigeria (PHCN) saddled with the responsibilities of overseeing effective generation, transmission and distribution of electricity throughout the country, and to maintain an effective system of energy supply to every region of Nigeria. It was later unbundled into 18 successor companies, six generation companies, one transmission company, and eleven distribution companies. This was after renaming NEPA to PHCN through electricity reform Act of 2005 (Cloudius, 2014).

However, after privatisation of the power sector, the reform yield fruitless results since the biggest challenge facing SMEs in Nigeria is still lack of energy. According to Iweama, Iweka, and Alfa (2018), a typical Nigerian business operator encounters power outages and voltage fluctuations roughly seven times a week, each lasting two hours without warning. This led to staff idleness, spoilt materials, lost output, broken equipment, and restart charges, they incurred operational costs. Nigeria's ability to grow and lured in investors has been severely hampered by the overall effects of higher uncertainty costs and lower returns on investment for the economy (Adenikinju, 2015).

The sector is plagued by a wide range of problems including; inadequate power generation, inefficient distribution systems, poor metering and billing system, widespread corruption and mismanagement, vandalism of electricity infrastructure, unreliable power supply, obsolete transmission infrastructure, poor policy implementation, high tariff and rampant electricity theft, poor policy implementation, poor regulatory framework, and inadequate rural electrification which continue to undermine progress. These issues persist across the entire electricity value chain the Generation Company (GenCos), the Transmission Company of Nigeria (TCN), and Distribution Companies (DisCos). Despite the intended benefits of privatisation as anticipated during the reform of the power sector (Trotter, 2017; Eberhard, Gratwick, Morella, & Antmann, 2016; & Nigerian Electricity Regulatory Commission, 2024) there is persistent challenge facing the electricity power sector.

The persistent irregularity in Nigeria's power supply has compelled many households to adopt alternative energy sources (Yakaka, Murtala, & Babagana, 2017). The erratic electricity supply often caused by recurring technical faults within the power generation, transmission, and distribution network has resulted in inefficiency that hinder both input and output processes, ultimately compromising the quality of goods and services rendered by small and medium enterprises (SMEs) in the country (Gbenga, 2014).

In Nasarawa State, there is every need for SMEs to access dependable and reasonable electricity which is important for their survival and growth. It became necessary to evaluate the intended objectives of the privatised power sector to see if it has translated into tangible benefits that lead to profitability, employment capacity and business expansion of SMEs in Nasarawa State during the specified period.

Research Question:

How does electricity supply affect SMEs profits, job creation and business expansion in Nasarawa State.

Hypothesis

The study was guided with this hypothesis:

H1: Electricity supply has no significant influence on job creation, profitability, and business expansion in Nasarawa state by SMEs.

Literature Review

Definitions of Term

Electricity Power: This is the flow of energy current that is used for powering electronic mechanic electronics engines. According to Adeyemo (2009), electricity is part of the infrastructure that form the physical facility upon which electronic system activities productively utilised. It factored as input in the production process of small and medium enterprises and the manufacturing sector in general.

Power Outage: This is the reoccurring of the unexpected loss of electrical power supply to an end user through power cut, power blackout, power failure and blackout from the public supplier (DisCos).

Performance: Performance is the evaluation of set objectives or a process of measuring the achievements of a firm in a particular domain of activity Yucesoy and Barabasi (2016). The term "performance" is often used to evaluate finished work by an enterprise to enhanced measuring competitiveness and effectiveness.

Small and Medium Scale (SMEs): It is a significant measurement that indicate increased in growth of unit, the capacity of production in operation structure outcome and the development tent that shows that a firm has grown beyond survival (Sa'Aondo, 2026).

Productivity: This could be referred to as the ratio of output produced per unit to resources consumed. It can also be "the rate at which a worker, a company produces goods, and the amount produced, compared with how much time, work and money are needed to produce them" Hornby (2006). Productivity is the efficiency and effectiveness with which inputs (Land, capital, labour, materials, time, energy etc.) are combined and utilized in an environmentally and socially sustainable manner to produce quality goods and services to satisfy human needs Gbenga, (2014).

Small Medium Scale employment: This refers to various jobs opportunities created by SMEs not just a s an economic activities but as a measurable means of effective performance and positive development by SMEs it an employment that refers the contributions done by SMEs to the growth of the economy.

Profitability: Profitability is the surplus generated from any investment after the total cost of investment, production, generation and net pay of wages. It is a measurement proven for the success and progress and efficient management of the financial capacity of such firm. Harward and Uptom (1961) noted that profitability is the "ability of a given investment to earn a maximum return of the investment." However, the term ' Profitability is not synonymous with the term efficiency' Profitability is an index of efficiency and is regarded as a measure of efficiency and management guide to greater efficiency.

Electricity and Nigerian Economy

Electricity is the type of energy that consists of movement of electrons between two points when there is a potential difference between them, making it possible to generate what is known as an electric current. This makes electricity one of the most important inputs for industrial production and commercial sectors of any economic system. Effective electricity has changed the world for a better place to live socio-economically (Ateba, Prinsloo, & Gawlik, 2019). Access to a reliable electricity supply is widely considered to be vital to the

operations of small and medium businesses where they generate employment and generate profits (World Bank Enterprise Surveys, 2019).

Nigeria's electricity supply is currently generated from natural gas, hydro, wind, diesel, solar and heavy fuel (IEA, 2019). Natural gas became the major primary source of electricity in 2018 (IEA, 2019). Since then, gas accounts for 80% of Nigeria's power generation. There are thermal power plants that are located in the southern part of Nigeria. The hydroelectric power plants is located at Jebba, Kainji, and Shiroro in the northern part of Nigeria which account for 20.4% of power generation.

In a quest to boost the power sector, the Nigerian government has invested in hydroelectricity power stations which cut across the country to boost power generation through hydrostatic plants with a total capacity of 7,024MW; Mambilla -3,050 MW; Zungeru-700MW; Gurara -11,360MW; Makurdi – 1000MW, Small hydropower – 84MW; Itisi – 40MW and Kashimbila -30MW (IEA, 2019).

The power challenge confronting Nigeria power sector has negatively affected the growth of SMEs' which can resulted in premature liquidation Nuredeen, Nafiu, and Jibo (2018). SMEs' profits are negatively impacted by power disruptions. Electricity interruptions reduce industrial efficiency in most developing countries. According to Scott, Darko, Lemma, & Rud (2014), as reported by Abotsi (2016) electricity commercial activities operating in different parts of Nigeria have been hampered by power outages over the years (Adewuyi & Emmanuel, 2018).

It is evident that power disruptions have hindered the growth of SMEs and deterred numerous domestic and international investors. To Olatunji (2019), power outage posse numerous challenges to small and medium-sized enterprises (SMEs) to relocate from Nigeria to other countries. Electricity outages have an impact on business productivity in the Nigeria's manufacturing sector, as demonstrated by Moyo (2012).

The Nigerian electricity reforms was carried out to improve on electricity distribution in Nigeria. Thus, this did not yield positive result in some quarters, the Nigerian electricity still plague into frequent government interference with deregulation procedures, poor maintenance culture of outdated infrastructure and deteriorating infrastructures, vandalism of power installations equipment, total negligible increase in generating capacity, high technical and commercial losses, faulty metering systems, high customer debt to the companies, high estimated electricity tariffs, and obsolete equipment (Sa'Aondo, 2026) even though the reforms were aimed to improve electricity supply, but the frequent power outages led SMEs to relied on alternative power sources, this continue to affect SMEs performance as result of poor electricity supply which led to increase in operational costs, reduce production capacity, and financial losses for SMEs (Bankole et al., 2023).

Impact of SMEs on the Nigerian Economy and Development

Due to their ability to improve industrial productivity and human welfare, SMEs' contributions to the economy are acknowledged as an important part of development. SMEs are instruments in tackling unemployment. They serve as a gateway for job creation, absorbing a considerable portion of the labour force. Consequently, SMEs have provided jobs to unemployed individuals as a means of self-

reliance, rather than depending solely on government-white collar jobs. The Nigerian youths, both graduates and non-graduates have successfully ventured into businesses like poultry farming, animal husbandry, tailoring, soap production, baking, hairdressing, welding/fabrications, laundry services, computer business services, transportation, estate agency, and industrial cleaning. These enterprises spread across both in rural and urban areas, not only fostered economic independence but also contribute meaningfully to state and national development (Akinadewo, 2020).

The importance of SMEs in the Nigeria economy is encompassing, since SMEs promote entrepreneurship skills development through developing skills and cultivating financial skills which are explored in every environment, the environment which contributes greatly in setting such SMEs and the products (Sa'Aondo, 2026). Such SMEs offer different services to the people, by promoting the economy and securing the community by reducing criminal activities in the community, since those who could have engaged in crime activities are offered job opportunities that kept them busy. SMEs explore various opportunities by turning raw materials into finished goods and services that are suitable to the environment. Through economic input, income redistribution, the development of indigenous technology and entrepreneurship, and the manufacturing of intermediate goods to increase inter- and intra-industrial leakages, they help achieve numerous development objectives. SMEs are the foundation of businesses, accounting for more than 55% of Nigeria's GDP and 65% of all jobs in Nigeria (Kehinde, Bankole, Busola & Kejinde, 2024).

Small Medium Enterprises' Performance

Performance is conceptualised through measurement and evaluation which occur in different ways, thus necessitating cross-comparison of SMEs performance which is projected at measuring of organisational achievements in terms of customer satisfaction, customer relationship, organisation's profits and the level of expansion of the organisation. However, contemporary literature sees performance as the outcome of business investment efforts over a specific time. SMEs performance is however measured in the respective accomplishment of goals of establishment, competitiveness and efficiently than their rivals in order to achieve higher relative performance (World Bank, 2019).

The effectiveness and efficiency of accomplished task is measured using a set of measures called the Performance Measurement System. By gathering, organising, sorting, analysing, and interpreting pertinent data, using well-structure judgements and actions that quantify the efficacy and efficiency of previous acts. In additionally, the performance measurement system looks at SMEs from three perspectives: the individual performance measurement, the performance measurement system, and the interaction between the SMEs and their operating environment (Zeljko & Igor, 2019).

The performance of SMEs can be effectively measured using combined metrics such as financial metrics, operational metrics, and growth metrics. The profitability of the business is the main emphasis of financial measures, which include cash flow, return on investment (ROI), profit margins, and revenue growth. These measures serve as a tool for evaluating how well a company manages its finances and overall revenue.

A company's performance typically functions as a report card, which can be

obtained in a variety of ways. Different institutions and organisations use different approaches that best fit the type of evaluation that the organisation needs. The most popular approaches in the literature are financial and non-financial metrics. Both approaches are used as criteria to evaluate performance in order to achieve organisational objectives in order to make effective and strategic decisions for businesses and guarantee long-term success. One instrument that gives the business the data it needs to plan and manage its operations is the performance measurement system (Leyla & Judit, 2018).

Empirical Review

Adewuyi and Emmanuel (2018) analysed the influence of self-generated electricity on firm performance across Nigeria's six geopolitical zones. Their work further explored whether businesses find it more cost-effective to cope with power interruptions by offering informal payments to electricity officials or by investing in private power generation. Drawing on data from the World Bank Enterprise Survey and applying both cross-sectional Ordinary Least Squares (OLS) and Two-Stage Least Squares (2SLS) estimations, the authors reported that bribery does not generally mitigate the negative effects of electricity disruptions, with the exception of slight impacts observed in the North-East and South-East regions. Their findings are consistent with broader empirical evidence suggesting that although backup generators support business continuity, they incur additional operational costs that undermine profitability and weaken the financial resilience of small and medium enterprises (SMEs). Consequently, reliance on self-generation as a coping mechanism places significant financial pressure on SMEs, ultimately reducing their competitiveness.

Aremu (2019) investigated the root causes, consequences, and possible solutions to Nigeria's persistent electricity supply challenges. The study revealed that most households and businesses incur substantial financial burdens while enduring prolonged daily outages—averaging roughly 20 hours without power while still facing rising estimated electricity bills. These conditions have had severe implications for national socioeconomic development. Using qualitative methods that included oral interviews with electricity consumers in Ekiti, Osun, and Oyo States, discussions with officials of the Ibadan and Benin Electricity Distribution Companies, group discussions, document reviews, and personal observation, the study identified multiple structural and institutional factors contributing to the electricity crisis. Aremu argued that Nigeria cannot fully harness its abundant natural resources unless the government prioritises reliable electricity supply.

Several studies, including Aremu (2019), Alo and Adeyemo (2021), and Bassey and Ikpe (2021), have demonstrated that unreliable electricity supply imposes substantial costs on firms, ranging from raw material wastage and equipment damage to lost man-hours, reduced sales, production disruptions, and lower profits. To cushion the effects of erratic power supply, many businesses invest heavily in alternative energy solutions such as generators and solar systems. However, self-generation typically remains more expensive than grid electricity, further constraining business performance.

Using primary data obtained directly from company operations, Umar (2020) assessed the effects of privatisation on the performance of the Abuja Electricity Distribution Company. The study employed

OLS techniques to evaluate variables such as hours of supply, infrastructure adequacy, response to complaints, metering, billing accuracy, and load management. The results indicated that electricity supply did not improve following privatisation. Similarly, Idowu et al. (2019) argued that the power sector reforms have not achieved their intended goals due to market and technological bottlenecks that limit the efficiency gains expected from privatisation. Persistent distribution inefficiencies suggest that structural reforms alone cannot deliver improved service without strong regulatory oversight, political commitment, and institutional accountability.

Sa'Aondo (2026) investigate the impact of privatisation of power holding company of Nigeria (PHCN) and performance of small and medium enterprises (SMES) in Nasarawa state, with major focus on selected small medium scale in Nasarawa (Barber shop/salon, computer business centres, hotels/restaurant, welder/fabrication and tailoring/fashion and designing). Data were generated from the 13 local government of the state. The study employed descriptive statistical analysis in testing the research hypothesis. The study finding indicated that, even after privatization of the power sector, the sector is confronted with challenges ranging from power outage, high electricity tariff, poor management of resource, this has negatively impacted on the production capacity of SMEs Nasarawa state hindering profits generated by SMEs, limiting employment capacity of SMEs as well as limiting SMEs expansion. The study recommended that, government should invest more in a workable electricity subsidy policies or grants that will aid SMEs cushion the effects of power outages in the state.

Alen (2019) examined the relationship between industrial development, investment, and electricity infrastructure in Guangzhou, China. Using input–output analysis, industry surveys, and a Computable General Equilibrium (CGE) model, the study found that investments in power infrastructure—particularly in generation capacity, grid expansion, and transmission upgrades—serve as critical drivers of industrial expansion and supply chain performance. Such investments generate multiplier effects across sectors by increasing demand for labour, capital, and intermediate goods. The study concluded that electricity infrastructure plays a central role in economic and industrial growth and recommended scaling up energy investments and integrating energy access priorities into industrial planning to promote equitable and sustainable development.

Methodology

The study's adopt survey research design which is justified by the fact that it is most appropriate. It provides a thorough overview of the study. The study used a mixed research methodology, combining qualitative and quantitative approaches within a single study. Data was drawn from both primary and secondary source. The study adopts statistical methods which lead the study to examine and test the link between the independent and dependent variables. This made it possible for the researcher to examine and assess the relationships between the variables. The study uses Statistical Package for Social Sciences (SPSS) as the software to analysis the generated data and testing of the hypothesis.

Presentation and Discussion of the Findings

Table 1: Sex of the Respondents

Variables	Frequency	Percentage
Male	190	63
Female	110	37
Total	**300**	**100**

Source: Field survey, 2024

The study sought to determine the ratio between male and female in the study areas in relation to ownership of SMEs within the scope of the study. It was assumed that the sex of respondents being males or females could contribute to knowledge on the gender ownership of SMEs. The analysis showed that 63% were males and 37% were females as shown in table 1. This indicates that there were more males who participated in SMEs than females.

Table 2: Demographic Representation of SMEs

Variables	Frequency	Percentage
Welders' shops	95	32
Barber shops	78	26
Computer centres	47	15
Hotels/restaurants	35	12
Tailoring shops (fashion and design)	45	15
Total	**300**	**100**

Source: Field Survey, 2024

Table 2 shows the demographic representation of the targeted SMEs across Nasarawa State. 32% were Welders' shops, 26% were barber shops, 15% were computer business centres, while 12% were hotels/ restaurants and 15% were tailoring shops (fashion and design). This implies that different SMEs were represented in the data collection. This is important because each of the SMEs represented in the research used electricity and should be able to assess its impact on their performance.

Table 3: How frequent does your organisation experience power outage after the privatisation of PHCN?

Variables	Frequency	Percentage
Few hours a day	140	47
5 hours a day	80	27
1 day in a week	50	17
2 days in a week	20	6
Whole week	10	3
Total	**300**	**100**

Source: Field Survey, 2024.

Table 3 shows how frequently SMEs experienced power outage across Nasarawa State after the privatisation of the power sector. From the table, 47% of the respondents agreed that they experienced power outage just few hours in the day. This

indicates that such SMEs experienced delay in the production or delivery of their services as expected by their customers. 27% stated that they experienced power outage for about five hours a in a day, five hours of production time each day of the week, pointing to loss of confidence and weak production by such SMEs. 17% of the SMEs experienced at least one day of the productive week without power supply from PHCN. This has a negative impact on the performance of SMEs, since they may resort to alternative sources of electricity or may not engage in any business activity. 6% of the SMEs experienced power outage for a period of two days from PHCN. The remaining 3% of SMEs experienced total blackout for as long as a week, especially in the rural areas.

The longer the duration of power outage, the more they lost production as equipment became idle or unutilised but still incurred maintenance cost and depreciation in value. Power outage occurs frequently in Nasarawa State. The exact frequency cannot be definitely determined because it occurs at different levels and different times, depending on the sub-station or local government that it occurs. However, most areas experience power outage multiple times a week or even per day as a result of the poor infrastructure of PHCN.

Table 4: Profit made by SMEs in Nasarawa State after the privatisation of PHCN

Variables	Profits	Frequency	Percentage
Barber shops	N2000-N8000	100	33
Welders' shops	N40000-N100000	85	28
Computer centres	N50000-N70000	80	27
Hotels/restaurants	N70000-N120000	20	7
Tailoring shops (fashion and design)	N2000-N50000	15	5
Total		**300**	**100**

Source: Field Survey, 2024

Table 4 explains the level of profit generated by SMEs in Nasarawa State after the privatisation of PHCN. 33% of the SMEs operators indicated that they generated between N2000-N8000 monthly. This category of SMEs were mostly barber shops and hair dressing salons which shows decrease in profits generated compared to the pre-privatisation period that was higher. 28% affirmed that, they earned N40000-N100000 as profits after privatisation of the power sector. This also indicates a decrease in profit generation from this category of SMEs. 27% of the SMEs generated between N50000 and N70000 after the privatisation of the power sector. This indicates an increase in profit as compared to the pre privatisation period while 7% of the SMEs earned between N70000-N120000 after the privatisation of the power sector. Lastly, 5% of the SMEs were tailoring shops (fashion and designing). They generated between N20,000 and N50,000 which also indicates decrease in the profit generated.

Table 5: Employment rate by SMEs in Nasarawa State after the privatisation of PHCN

Variables	Employment	Frequency	Percentage
Barber shops	2-4	90	30
Welders' shops	4-10	20	7
Computer centres	3-9	80	27

Hotels/restaurants	6-12	85	28
Tailoring shops (fashion and design)	5-10	25	8
Total		**300**	**100**

Source: Field Survey, 2024

Table 5 shows the statistics of employment by SMEs in Nasarawa State after the privatisation of the power sector. From the table, there is drastic decrease in employment status by SMEs in Nasarawa State after the privatisation of the power sector. 30% of the respondents of SMEs which were barber shops indicates that they dropped employment from 3-5 personnel to 2 -4 employees. Welder's shops with previous employment capacity of 5-15 also dropped to 4-10. Consequently, computer centres with 27% of the SMEs employment capacity also dropped to 3- 9 in their respective capacities. However, 28% of the SMEs employed between 10 -15 restaurant staff who were directly affected by poor power supply. Most of them were cleaners, waiters, etc. Most cases, they also dropped to 6-12 employees. Lastly, 8% of the SMEs respondents only employed 5–10 staff in their establishments, since inadequate electricity supply has created additional cost on production.

Table 6: SMEs business expansion in Nasarawa State after the privatisation of PHCN

Variables	Frequency	Percentage
Expansion of business through units.	40	13
Expansion of business through equipment.	130	43
Through market penetration.	50	17
Through innovation and increase in patronage.	80	27
Total	**300**	**100**

Source: Field Survey, 2024.

Table 6 shows different dimensions of SMEs' expansion in Nasarawa State after the privatisation of the power sector. From the table, 13% of the respondents agreed that they expanded their businesses through establishing new units in different locations. 43%, with the highest percentage indicated that they expanded their businesses through acquiring new equipment to boost their production line. 17%, however, indicated that they expanded through market penetration; they were able to penetrate the market using different strategies, while 27% of the respondents indicated that they expanded by introducing new products through innovations which enhanced patronage from the customers.

Table 7: What strategy do you use in coping with electricity power outage in Nasarawa State?

Variables	Frequency	Percentage
Use of diesel generators	100	33
Use of fuel generators	180	60
Use of solar panels	20	7
Total	**300**	**100**

Source: Field Survey, 2024.

Table 7 shows different strategies adopted by SMEs in Nasarawa State as alternative power sources. From the table, 33% of the respondents used diesel generators as alternative power source, while 60% of them used fuel generators, and 7% used solar energy as alternative source against power outage. In this category, barber shops largely used solar energy mostly as a result of its lower units. The table demonstrates that there is no reliable or constant supply of electricity in Nasarawa State, since most SMEs resort to alternative power sources.

Table 8: What is the relationship between electricity supply and profit generation, business expansion and job creation by SMEs in Nasarawa State?

Variables	Frequency	Percentage
Reliable power supply enables SMEs to operate efficiently, reduce downtime, increases patronage by customers leading to increase in profit, expansion and job employment.	68	23
Power outages lead to low investment which lead to decrease in business activity that affect job creation.	150	50
High electricity costs reduce profit and limit the ability of SMEs to expand and hire new staff.	82	27
Total	**300**	**100**

Source: Field Survey, 2024.

Table 8 examines the relationship between electricity supply and profit generation, business expansion and job creation by SMEs in Nasarawa State. 23% of the respondents agreed that reliable power supply would enable SMEs to efficiently deliver their services which would lead to profit generation, business expansion and job creation. 50% of them believed power outages lead to low investment which leads to decrease in business activity that could raise profit, business expansion and job creation. However, 27% of the respondents indicated that high cost of electricity supply reduces profit and limits the ability of SMEs to expand and hire new staff.

The result from the table shows that SMEs fail due to issues related to poor infrastructure and lack of reliable electricity which is one of the major problems that hinder the efficiency of the SMEs. The propensity of SMEs to hire new workers is directly dependent on their ability to raise profit and expand the business. Without expansion, which is tied to rising profit, SMEs can hardly hire more workers. With frequent power outages, expansion is limited and hiring workers is slow as well.

Testing of Hypothesis:

Hypothesis 1: There is no significant relationship between electricity supply and SME expansion, job creation and profit in Nasarawa State.

Chi-square Table 1: Chi-square analysis for the relationship between electricity supply and SMEs Expansion, job creation and profit in Nasarawa State.

Variables	N	DF	LS	Critical x^2 Value	Calc X^2 Value	Decision
Electricity supply and SMEs expansion in Nasarawa State	300	2	0.05	5.991	46.500	Accepted

The table above shows that the computed X2 value of 46.500 is higher than the table X2 value of 5.991 for the df of 2 and alpha level of 0.05. This demonstrates that the growth of SMEs, the creation of jobs, and profit in Nasarawa State were all significantly correlated with the supply of power. As a result, the null hypothesis was rejected, and the alternative hypothesis was accepted.

Discuss of the Result

The research findings indicate in different dimensions of relationship that exists between electricity supply and performance of SMEs in Nasarawa State. There is a symbiotic relationship between electricity supply and SMEs expansion, job creation and profit. In table 8, where the relationship by the respondents is indicated. 23% believed in a positive relationship that reliable electricity would increase patronage which would generate profits. Another 50% also believed that power outages lead to low investment which leads to decrease in business expansion which would lead to unemployment. 27% believed that high cost of electricity is an obstacle to the performance of SMEs, since the cost of paying for such hinders SMEs ability to expand.

The negative relationship between power supply and the SMEs in Nasarawa State also affects the employment rate generated by SMEs in Nasarawa State after privatisation of the power sector. Many SMEs resorted to retrenching their staff to save costs, table 5 clearly demonstrate this. The study aligned with Fisher- Vanden et al. (2015) and Cole et., al (2018) that power outages have an adversely effect on the production of goods and services which in turn affects the rate of employment capacity of such organisation (SMEs). In addition, the finding indicates a negative impact on expansion as seen in table 6 where the respondents indicated that SMEs in Nasarawa State expand their businesses through equipment by upgrading the obsolete equipment that worn out, since there is insufficient funds to expand through outlets unit. The study findings align with Adewugyi and Emmanuel (2018) that power outage forces many SMEs to fold up, while others relocate to different states and countries as a result of prolonged power outage. In Nasarawa State, irregular power supply has historically posed a challenge to SMEs, often resulting in reduced output and reliance on costly generators that limit production time.

Conclusion

The research's conclusion has caught the complex effects of PHCN privatisation on the performance of SMEs in Nasarawa State and Nigeria at large. SMEs' expenditures on electricity greatly increased by power outages since they are forced to use alternative power sources, including generators and inverters, which increase operational costs. This puts a financial burden on Nasarawa State's SMEs, impeding their ability to compete. Inadequate electricity supply limits SMEs growth and lowers profit margins. The poor performance

and growth of SMEs in Nasarawa State have been linked to the irregular and expensive supply of electricity.

Recommendations

1. The federal and state governments should prioritise upgrading electricity transmission and distribution networks in Nasarawa State to reduce frequent and lasting of power outages by encouraging public – private partnerships (PPPs) to finance energy projects that will specifically benefit SMEs clusters.
2. There should be strengthen of infrastructure that will enhance nation grid reliability to ensure consistent power supply to industrial and commercial areas.
3. There should be an electricity subsidy or incentives policies for SMEs in the state enable then to access affordable electricity and reduce the cost effect of self-generation.
4. There should be private sector investment in off-grid and renewable energy as solutions to supplement the national grid.
5. The relevant agencies in the power sector should establish a electricity supportive scheme in Nasarawa State that will provides technical and financial assistance for energy-efficient technologies.

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