



Research Paper

# Assessment of the Impact of Infrastructural Facilities on the Performances of Small and Medium Scale Enterprises in South Western Nigeria

Johnson I. Okoh, PhD, *Department of Financial Studies National Open University of Nigeria, Abuja, (Principal Investigator)*

Lawrence Okoye, PhD *Department of Banking and Finance, Chukwuemeka Odumegwu Ojukwu University, Igbariam Abambra State (Co-Researcher)*

Faith Onyebuanyi, Msc *Department of Financial Studies, National Open University of Nigeria, Abuja (Co-Researcher)*

Afrogha O. Olufolakemi, PhD *Department of Financial Studies, National Open University of Nigeria, Abuja (Co-Researcher)*

## ABSTRACT

This study investigated how infrastructure in Southwestern Nigeria affects the performance of Small and Medium Scale Enterprises. The broad objective of the study was to unbiasedly investigate the impact that specific infrastructural features have on small and medium-sized businesses' success. In order to do this, key factors affecting key infrastructures, including road network (RD), ICT-Internet accessibility (IA), and power/electricity supply (EL), were investigated to determine their impact on the performance of SMEs as determined by yearly turnover (EP). With 8,826 registered SMEs in Southwestern Nigeria, this study used a quantitative research approach. According to SMEDAN, the important cities in this region include Ekiti State, Lagos State, Ogun State, Ondo State, Osun State, and Oyo State. The Taro Yamane method was used to determine the study's sample size (383). There were 383 questionnaires sent to the target sample in all. Stratified and simple random sample techniques were applied for the duration of the investigation. Three hypotheses were developed and put to the test using the framework of the research questions in order to achieve the study's objectives. Additionally, ANOVA and SPSS were used to investigate these hypotheses. The findings showed a substantial positive correlation between the performance of SMEs and the availability of infrastructure (road network, internet connectivity, and electrical supply), suggesting that infrastructures are essential to SMEs' ability to operate successfully. Because most infrastructures are beyond the means of SMEs, it is proposed that the government provide these essential infrastructures for SMEs in a suitable manner. SMEs should also take greater initiative to attract the interest and attention of the government.

**Keywords:** *Infrastructural Facilities, SMEs Performance, Electricity Supply, Internet Accessibility (ICT), Road Network*

*Received 10 May, 2024; Revised 20 May, 2024; Accepted 22 May, 2024 © The author(s) 2024.*

*Published with open access at [www.questjournals.org](http://www.questjournals.org)*

## I. Introduction

### 1.1 Background to the Study

Small and Medium-sized Enterprises (SMEs) constitute the backbone of Nigeria's economy, and their performance is vital for economic growth and development (Aderemi *et al.* 2022). Infrastructural facilities, such as transportation networks, electrical supplies, and communication systems, play a key part in the development of SMEs. This project intends to analyze the impact of infrastructure facilities on the performance of SMEs in Southwestern Nigeria (Adenipekun, 2017; Akinyele *et al.*, 2016). In the post COVID-19 period, there has been a persistent worry about the performances of small and medium firms across the globe, especially developing

economies (Okoh *et al.* 2022; Adeosun & Shittu, 2020). This is because SMEs have been considered to be the drivers of economic growth, employment creation and poverty alleviation (Aderemi *et al.* 2022). This indicates that any aberrant performances of SMEs in developing countries constitute a severe danger to the attainment of the Sustainable Development Goals in 2030. Meanwhile, over the period, SMEs have consistently acquired prominence and dominating every area of the Nigerian economy. Through these firms in Nigeria, poverty has been alleviated, employment possibilities have extended, creativity and innovation among entrepreneurs have been promoted, research and development (R&D) have been enhanced, and eventually economic prosperity of the country has been sustained.

On the other side, however, infrastructure amenities are essential to both economic development and the survival of businesses (Adenipekun, 2017; Akinyele *et al.*, 2016). Because of their interaction with the economy through the production function, infrastructures are necessary in the nation. As a result, any changes in the quality of the infrastructural facilities that are available for production will have a significant impact on an organization's productivity and performance in terms of output levels, income generation, profits, and the creation of jobs in the economy. This supports the existence of a relationship between organizational performance and infrastructure in an economy where it is critically necessary to conduct empirical research to determine the nature, direction, and significance of the relationship between infrastructure and the performance of SMEs in a few key Southwest Nigerian cities.

Road networks, electricity, and the internet, to name a few, are examples of infrastructure that is crucial to the business climate and is needed to accelerate social and economic activity in developing nations. Regretfully, across most of Nigeria, there is still a shortage in the infrastructure needed to support corporate activities. Infrastructure deficit remains one of the biggest hurdles to the expansion of SMEs in Nigeria, even if a number of Nigerian policymakers have expressed interest in aiding them by developing specialized banks, credit agencies, and financing programmes (Ajibola *et al.* 2021). SMEs have not had easy access to or availability of these facilities. Consequently, influencing the SMEs' flawless operations. The two main challenges limiting SMEs in Nigeria from functioning to their full capacity are infrastructural shortcomings, such as a limited road network and an inadequate electricity supply. These weaknesses are found in most developing economies. For example, it has been stated that a typical Nigerian firm faces a prolonged power outage roughly seven times each week (Adenikinju, 2015). These poor infrastructures have the consequence of placing a high financial burden on SMEs due to lost output, malfunctioning equipment, and the expense of sourcing alternate energy sources. These ultimately began to mount, leading to an increase in business uncertainty, a rise in overhead expenses, a decline in competitiveness, and a diminishing return on investment.

An empirical assessment of how infrastructure affects SMEs' success in the Nigerian economy is required. Given the poor state of Nigeria's infrastructure and the ambiguity surrounding its impact on SMEs' performance, this study is highly pertinent to the country at the time. This study is motivated by the following research topics concerning the relationship between infrastructure facilities and the performance of SMEs in Nigeria. This evaluation focuses specifically on these research questions.

The broad objective of this study is to assess the impact of infrastructural facilities on the performance of SMEs in Nigeria. While the specific objectives include to examine:

1. the effect of electricity supply on the productivity of SMEs in the Southwestern Nigeria.
2. the influence of ICT on productivity of SMEs in the Southwestern Nigeria.
3. the effect of road network on the supply chain of SMEs in the Southwestern Nigeria.

### **Research Questions**

The following research questions are formulated to guide the study

1. What is the effect of electricity supply on the productivity of SMEs in the Southwestern Nigeria?
2. How does ICT influence the productivity of SMEs in the Southwestern Nigeria?
3. Does road network affect the supply chain of SMEs in the Southwestern Nigeria?

### **Research Hypotheses**

The following null hypotheses were developed by the researchers.

- H<sub>01</sub>: there is no significant relationship between electricity supply and the productivity of SMEs in the Southwestern Nigeria.
- H<sub>02</sub>: there is no significant relationship between ICT and productivity of SMEs in the Southwestern Nigeria.
- H<sub>03</sub>: there is no significant relationship between road network and productivity of SMEs in the Southwestern Nigeria

## **II. Literature Review**

### **2.1 Conceptual Review**

#### **2.1.1 Infrastructural Facilities**

Infrastructure includes the physical and organizational structures necessary for a community or business to function, as well as the basic services and amenities needed for an economy to function well. It is generally accepted to be the grouping of connected structural elements that serve as the foundation for the overall structure of a development. It is a basic idea for assessing a country's or location's degree of development. This term is used to describe a variety of technical structures that support society, such as roads, bridges, water supplies, sewers, electrical grids, telecommunications, and other systems. The definition of this term is "the physical components of interrelated systems providing commodities and services essential to enable, sustain, or enhance societal living conditions." Hospitals, electricity grids, education, transportation, water supply, and telecommunications are just a few of the topics that infrastructure research works on (Adelakan, 2005; Abosedra et al., 2009; Mandel, 2008; Achimugu et al., 2010). Most academics concur that infrastructures affect a society's ability to develop (Abosedra et al., 2009; Mandel, 2008; Frischmann, 2007). The term "infrastructure" refers to the basic tools and structures—like roads and bridges—that are necessary for a country, region, or organization to function properly. Services that increase overall productivity will be produced by a suitable infrastructural foundation. Agricultural output can be boosted by numerous means, such as improved roads, seaport development, rail connections, energy generation, transmission, and distribution, water and irrigation projects, improved living conditions, and urbanization of different areas (Akinyosoye, 2010).

#### **2.1.2 Small and Medium Enterprises (SMEs)**

Small and medium-sized enterprises are referred to by the acronym SMEs. SMEs don't have a common definition. Various nations have defined SME due to different criteria. These include working capital, personnel count, turnover, and comparable indicators.

As mentioned in the 2007 study by Abereijo, Taiwo, Ilori, and Adegbite. Some characteristics that can be used to characterize SMEs are personnel count, capital invested, and employee turnover. The way that SMEs work in the economy and the policies and initiatives that specific organizations or authorities have put in place that have the ability to support SMEs all have an impact on how SMEs are defined. A small business can be referred to as a medium-sized or large-scale enterprise in developed countries like Nigeria, Germany, Japan, and the United States of America. Moreover, the definitions of SME by agencies and developing institutions also change over time based on their policy focus (Etuk, Etuk, & Baghebo, 2014).

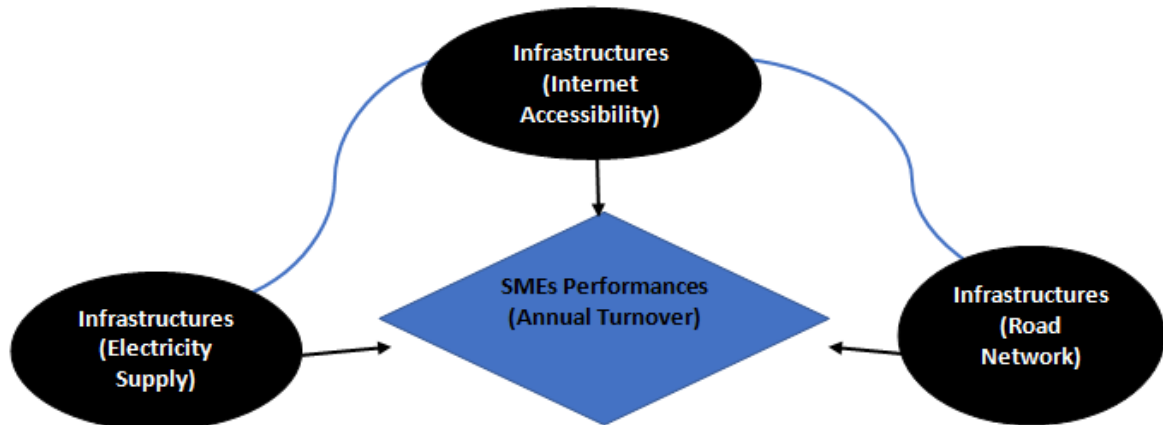
The lack of a clear definition and strong establishment of small-scale industry in Nigerian society is believed to be caused by the imprecise definition of small-scale enterprise. Within Nigerian institutions, the term "small-scale industry" has several meanings, with the amount of investment being prioritized over the number of employees. For example, the Central Bank of Nigeria (CBN, 2005) defines a small-scale firm as one that has operating capital and investment of no more than N750,000. The 1979 Central Bank of Nigeria (CBN) credit guidelines, which classified Small Scale Enterprises as companies with yearly sales of no more than N500,000, may no longer be relevant in light of inflationary pressures and the high operating costs resulting from the deregulation of foreign exchange. On the other hand, an industry classified as small-scale by the Central Bank of Nigeria (CBN, 2005) is defined as having an annual turnover of N12.5 million and a total investment of no more than 2.5 million naira (including the cost of land). It seems that this concept took the effects of inflation and emergencies into consideration.

#### **2.1.3 Performance of SMEs**

Performance, in the words of Roadster (2008), is the state, function, and quality that commercial enterprises carry out. Additionally, he claimed that an activity's or program's efficacy, economy, and efficiency are all equivalent to its performance. According to Barney (2007), an organization's performance is determined by how well it develops and executes a value-creating strategy that allows customers to purchase goods or services that are worth more than they are willing to pay. Performance, in the words of Mulyadi (2007), is the ability of an individual, group, or organizational unit to successfully carry out the predetermined strategic objectives while exhibiting the required behaviour.

Performance can be defined as an organization's growth in profit, market share, product quality, and competitiveness relative to other organizations in the same industry (Akyuz & Opusunju, 2019). Additionally, Akyuz and Opusunju (2019) found that there are two types of performance: non-financial performance and financial performance. The latter emphasizes elements that are closely related to financial reporting. Various organizations evaluate performance based on different criteria. Some organizations evaluate it based on worker count, cash used, expansion, and sustainability.

**Fig. 2.1: Conceptual Framework of the study on Impact of Infrastructural Facilities on the Performances of SMEs in Some Strategic Cities in Southwestern Nigeria**



Author’s Construct, 2024

**2.2 Theoretical Review**

This study concentrated on the Pro- SMEs Theory

**2.2.1 The Pro- SMEs theory**

As a strategy for the Organization for Economic Co-operation and Development, Colin Mason put up the Pro-SME concept (OECD, 2014). The idea centers on the examination of the entrepreneurial landscape and the ways in which barriers to SMEs' expansion might be addressed by government policy. According to the OECD (2014), the Pro-SMEs model is a SME intervention that advances the idea that a society's economic growth depends on government support and promotion of SMEs policies. In order to ensure an increase in the total number of businesses through venture capital financing to SMEs, investments, or technological transfers, as well as capacity building activities for business start-ups, the strategy concentrated on how government ministries may encourage the growth and innovation of SMEs. Furthermore, because it has the means to collaborate with the business sector and civil society organizations to develop and implement these policies, government support is essential for policy establishment, according to the OECD (2014). The Pro SME thesis is based on three fundamental assumptions (World Bank, 1994, 2002, 2004).

**III. Research Methodology**

The strategic cities of Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo states were all included in this study. The vast majority of SMEs that are registered in these six states was a major factor in the selection of these states (NBS, 2020). In the same vein, these cities are most strategic business centres of the Southwest region of Nigeria with some reasonable level of basic infrastructures. The research design was survey-based. Survey research design is used because the study's data are point in time, and pertinent questionnaires were given to participants to gather information and ensure that the results were clearly analyzed. Primary and secondary sources of the data were used. The structured questionnaires given to chosen SMEs served as the major source of data, and SMEDAN reports would serve as the secondary source. According to SMEDAN the population of registered SMEs in the selected states is eight thousand eight hundred and twenty-six (8826). The primary data in this study were analyzed using multiple regression, tables, frequency distribution, and inferential statistics with the assistance of the statistical package for social sciences (SPSS 22.0). All of these will be used to determine how the performance of SMEs in a few key cities in southwest Nigeria is affected by the infrastructure.

**3.3 Sampling and Determination of Sample Size**

**Table 3.1: A table showing the distribution of the proposed respondents from each state.**

S/N	Name of State	Selected Strategic Cities	Number of Registered SMEs
1	Ekiti	Ado Ekiti	793
2	Lagos	Ikeja	2,123
3	Ogun	Ota	1263
4	Ondo	Akure	826
5	Osun	Osogbo	721

6	Oyo	Ibadan	3100
---	-----	--------	------

**Source:** Authors` Computation from SMEDAN, 2024                      **N= 8826**

The sample size for this investigation was determined using the Taro Yamane formula. The following is the Taro Yamane formula.

$$N/1+N(e)^2=n$$

N: Population Size

e: margin error (assume 5%)

l= constant= e=0.05

$$n = 8826/1+8826(0.05)^2 \quad n=8826/1+8826(0.0025)$$

$$n = 8826/1+22.065$$

$$n = 8826/23.065$$

**n= 383**

### 3.8 Model Specification

$$EP = f(EL, IA, RD) \quad (1)$$

If the model (1) is presented in a linearized form, model two is emerged as follows.

$$EP = \beta_1 EL + \beta_2 IA + \beta_3 RD + u \quad (2)$$

Whereas

EP is used to proxy SMEs performances,

EL represents electricity supply, IA is used to denote internet accessibility, RD represents road network and u is error term. Consequently, the a priori expectations follow this pattern  $\beta_1, \beta_2$  and  $\beta_3 > 0$ .

## IV. Analysis and Discussion

The researchers delivered a total of 383 copies of the questionnaire to responders. 333 copies were filled in and returned. The details of the questionnaires issued are listed below:

### 4.1 Analysis of rate of questionnaire response

**Table 4.1: Analysis of rate of questionnaire response**

Questionnaire	Respondents	% Respondents
Responses	333	<b>86.9</b>
Non-Responses	50	13.1
Total	383	100

**Source:** Author (s) Computation, 2024

Of the 383 questionnaires that were distributed, 333 (86.9%) were returned, and 41 (17.15%) were not. The 333 completed surveys are thought to be sufficiently extensive and sophisticated to allow for the drawing of reliable inferences and conclusions.

### 4.2 Reliability Test

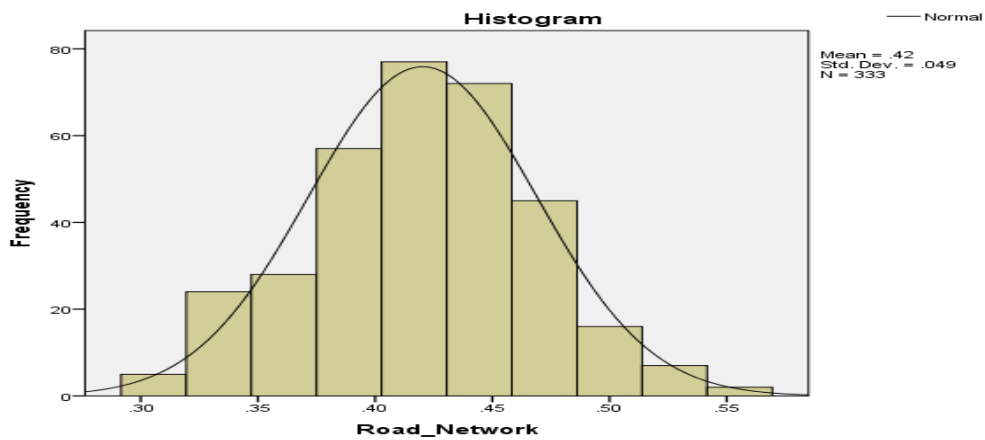
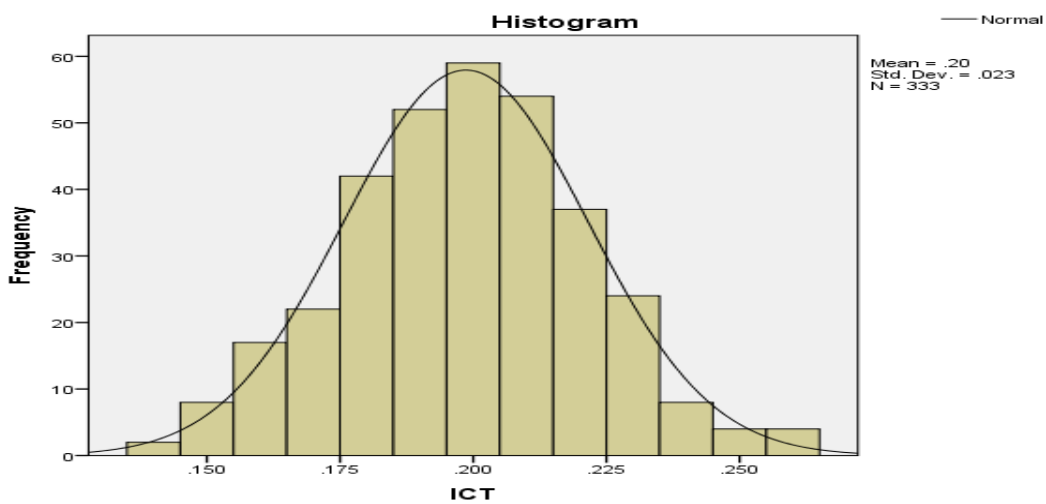
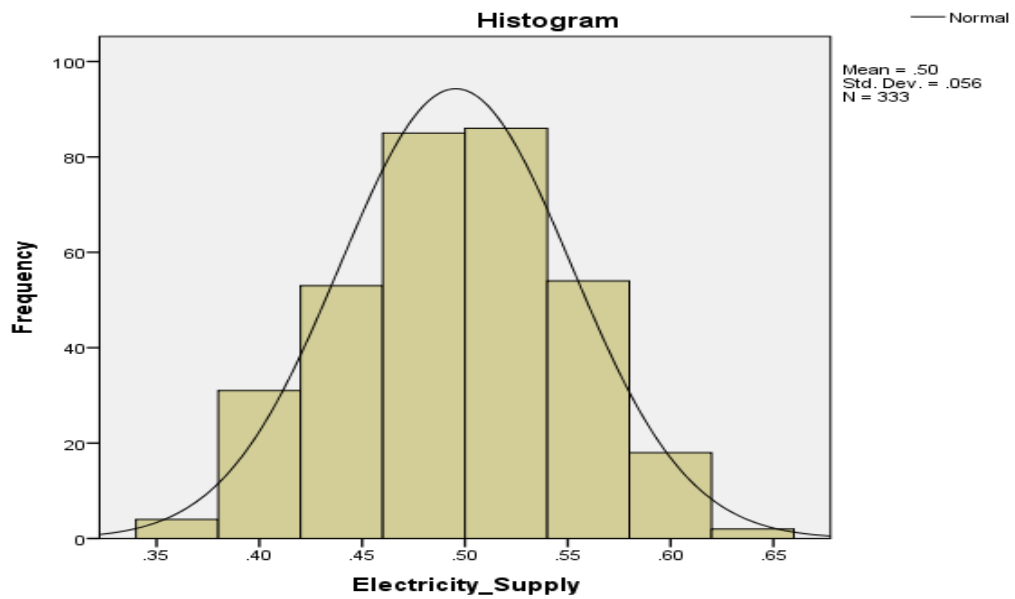
**Table 4.2: Scale Reliability of Variables**

Variables	Cronbach's alpha	N of Items
Electricity Supply	0.81	5
Internet Accessibility (ICT)	0.75	10
Road Network	0.83	6

**Source:** Author (s) Computation: (SPSS), 2024

The table above shows the Cronbach's coefficient alpha for the three variables (Electricity Supply, ICT and Road Network). The Cronbach's coefficient alpha of 0.81, 0.75 and 0.83 respectively indicates that, all the items used for the variables are Good and Acceptable. In conclusion, all variables in the questionnaire are reliable as indicated in the tables above.

### 4.3 Normality Test Curves



The above curves show that the questionnaires were normally distributed.



**4.4 Analysis of All the Responses for Research Data (Frequency/Percentage Analysis)**

The aggregate of the replies for all the research questions for the three variables (Electricity Supply, Internet Accessibility and Road Network) are collated and analyzed using percentage analysis. These analyses have served to provide answers to the research issue and help in fulfilling the objectives for this study.

**4.5 Descriptive Statistics**

**Table 4.3: Descriptive Statistics**

	N	Mean	Std. Dev	Skewness		Kurtosis	
	Stats	Stats	Stats	Stats	Std. Er	Stats	Stats Er
<b>EP</b>	333	3.1411	1.31759	-.056	.134	-1.161	.266
<b>EL</b>	333	.4955	.05636	-.067	.134	-.468	.266
<b>IA</b>	333	.1986	.02293	.024	.134	-.074	.266
<b>RD</b>	333	.4203	.04863	-.046	.134	-.154	.266
<b>Valid N(listwise)</b>	333						

**Source: Author (s) Computation SPSS**

The descriptive statistics presented in Table 4 provide valuable insights into the variables related to SME performance, electricity supply, internet accessibility, and road network in the study. Here is a summary interpretation of the results:

**SMEs Performance (EP):** The mean annual turnover for SMEs is 3.1411 million units, with a standard deviation of 1.31759. This indicates that, on average, SMEs in the study area generate around 3.14 million units of turnover annually, with a considerable variation of approximately 1.32 million units around this average. A higher standard deviation suggests that there is significant variability in SME performance within the sample. The skewness value of -0.056 indicates a slight negative skew, suggesting a slightly left-tailed distribution. The kurtosis value of -1.161 indicates that the data distribution is platykurtic, meaning it has thinner tails and a flatter peak compared to a normal distribution.

**Electricity Supply (EL):** The mean score for electricity supply is 0.4955, with a standard deviation of 0.05636. This implies that, on average, the electricity supply situation in the study area is relatively low and need to be paid more attention. The low standard deviation indicates that there is less variability in electricity supply across the sample. The skewness value of -0.067 indicates a slight negative skew, similar to SME performance. The kurtosis value of -0.468 suggests a distribution that is slightly flatter than a normal distribution but within an acceptable range.

**Internet Accessibility (IA):** The mean score for internet accessibility is 0.1986, with a standard deviation of 0.02293. This suggests that, on average, internet accessibility in the study area is relatively low, with limited access to online resources for SMEs. The small standard deviation indicates that there is little variability in internet accessibility among SMEs in the sample. The skewness value of 0.024 indicates a nearly symmetrical distribution. The kurtosis value of -0.074 suggests a distribution that is close to normality.

**Road Network (RD):** The mean score for road network quality is 0.4203, with a standard deviation of 0.04863. This indicates that, on average, the quality of the road network in the study area is poor and needs attention. The standard deviation suggests that there is some variability in road network quality across SMEs in the sample. The skewness value of -0.046 indicates a slightly negative skew, similar to electricity supply. The kurtosis value of -0.154 suggests a distribution that is slightly flatter than a normal distribution but still within an acceptable range.

Overall, the mean values provide a picture of the average levels of SME performance, electricity supply, internet accessibility, and road network quality in the study area, while the standard deviations highlight the degree of variability or dispersion around these averages. These figures help researchers and policymakers understand the distribution and range of these variables within the sample, which can inform strategic interventions and policy decisions to support SME growth and development. Overall, based on the skewness and kurtosis values falling within the range of (-1 to 1) and (-3 to 3) respectively, it can be concluded that the data for all variables (EP, EL, IA, RD) are normally distributed. This indicates that the data follows a bell-shaped curve typical of a normal distribution, which is essential for making valid statistical inferences and interpretations in the study.

4.6 Correlation Analysis

Table 4.4: Correlation Analysis

		EP	EL	IA	RD
EP	Pearson Cor	1	0.067	0.046	0.000
	Sig. (2-tailed)		.024	0.0399	0.052
	N	333	333	333	333
EL	Pearson Cor	0.067	1	0.075	0.069
	Sig. (2-tailed)	.024		0.0048	0.0210
	N	333	333	333	333
IA	Pearson Cor	0.046	0.075	1	0.073
	Sig. (2-tailed)	0.039	.0048		0.052
	N	333	333	333	333
RD	Pearson Cor	0.097	0.069	0.073	1
	Sig. (2-tailed)	0.052	.0210	0.052	
	N	333	333	333	333

Source: author’s Compilation SPSS (2024)

The table above shows the outcome of a Pearson correlation test between the datasets (independent and dependent). There was a statistically significant (Sig = 0.024) and positive correlation (0.067) between SMEs Performance (EP) and Electricity Supply (EL). The positive and significant correlation between SMEs Performance and Electricity Supply indicates that an increase in electricity supply can lead to a 6.7% improvement in SMEs performance. This suggests that ensuring a reliable and sufficient electricity supply can positively impact the productivity and efficiency of SMEs, potentially leading to increased profits and growth.

The results also revealed that there was a statistically significant (Sig = 0.039) and positive correlation (0.046) between SMEs Performance (EP) and Internet Accessibility (IA). The positive and significant correlation between SMEs Performance and Internet Accessibility suggests that improving internet accessibility can result in a 4.6% increase in SMEs performance. This implies that leveraging digital technologies and online platforms can enhance the competitiveness and reach of SMEs, enabling them to better connect with customers, suppliers, and markets.

Finally, the results also revealed that there was a statistically significant (Sig = 0.052) and positive correlation (0.097) between SMEs Performance (EP) and Road Network (RD). The positive and significant correlation between SMEs Performance and Road Network indicates that a better road network can lead to a 9.7% improvement in SMEs performance. This highlights the importance of efficient transportation infrastructure for SMEs to effectively deliver their products to customers and access various markets. Investing in road infrastructure can help reduce transportation costs and delays, thereby boosting the overall performance of SMEs.

In conclusion, addressing factors such as electricity supply, internet accessibility, and road network can have tangible benefits for SMEs by enhancing their operational efficiency, market reach, and overall performance. By recognizing and improving these key variables, policymakers and stakeholders can support the growth and sustainability of SMEs, ultimately contributing to economic development and job creation.

4.7 Regression Analysis (Test of Hypotheses)

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.079 <sup>a</sup>	0.690	0.670	1.31948

(a) Predictors (Constants): EL, IA and RD

The  $R^2 = 0.69$  shows that only 69% of the variation in the road network, electricity supply, and internet accessibility can be used to explain the performance of small and medium-sized businesses in Southwest Nigeria. The remaining 31% can be explained by other factors known as the error term that are not included in the regression model.

4.8 ANOVA

Table 4.6: ANOVA<sup>a</sup>

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.569	3	1.190	.683	0.005 <sup>b</sup>
	Residual	572.798	329	1.741		
	Total	576.366	332			

(a) Dependent Variable: EP

(b) Predictors: (Constant): EL, IA and RD

The regression result demonstrates that the model is fit for the investigation since the f-statistics is significant at 5% level of significance. This shows that all the variables employed in the study fit in the model and may be utilized to characterize their effect on each other.



**Table 4.7: Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	0.393	0.0073		13.161	.0028
	EL	0.093	0.0292	.064	11.155	.0037
	IA	0.0384	0.0177	.041	12.750	.0054
	RD	0.035	0.0497	.001	10.023	.0061

**a. Dependent Variable: EP**

**Decision (5% level of significance)**

The findings show that infrastructural facilities including electricity supply, internet access, and road network, as used in this study, have a positive impact on the performance of small and medium-sized firms in Southwestern Nigeria. This effect is statistically significant, as the P-value is less than 5%. Thus, we may reject the null hypothesis and conclude that infrastructural amenities measured by electricity supply, internet connectivity, and road network have a positive and significant impact on the performance of small and medium-sized businesses in Southwestern Nigeria. The study supports the findings of Olaseyiet *al.* (2013), who found a statistically favourable and substantial influence of the parameters. However, Diwa's (2014) study disagreed with the findings of this investigation.

**V. Conclusion and Recommendations**

This investigation has shed light on how Southwestern Nigerian SMEs' performance is affected by infrastructure amenities. The results underlined that in order to support the expansion and development of SMEs, investments in infrastructure facilities are essential. The project's ideas will direct governmental policies and measures aiming to improve the performance of SMEs in the area. Based on the correlation analysis results for electricity supply, internet accessibility, and road network, it is evident that there is a significant positive relationship between these variables and the performance of SMEs. The findings highlight the importance of reliable electricity supply, accessible internet connectivity, and well-developed road infrastructure in supporting the growth and sustainability of small and medium-sized enterprises. The study came to the conclusion that the performance of SMEs in Southwestern Nigeria is positively and considerably impacted by the infrastructure, as measured by the following criteria: electricity supply, internet connectivity, and road network. Thus, the article recommends the following:

**Enhance Electricity Supply**

1. Prioritize investments in upgrading and expanding electricity infrastructure to ensure a reliable and stable power supply for SMEs.
2. Implement policies to promote energy efficiency and incentivize SMEs to adopt sustainable practices to reduce operational costs.
3. Collaborate with utility companies and regulatory bodies to address issues related to power outages, voltage fluctuations, and high tariffs that may impact SME operations.

**Improve Internet Accessibility**

1. Expand broadband coverage and improve internet infrastructure in underserved areas to enhance connectivity for SMEs.
2. Provide training programs and capacity-building initiatives to help SMEs leverage digital tools and online platforms for business growth.
3. Facilitate access to affordable and reliable internet services through partnerships with telecommunication providers and government initiatives.

**Strengthen Road Network**

1. Invest in the maintenance, rehabilitation, and expansion of road infrastructure to improve connectivity and accessibility for SMEs.
2. Collaborate with transportation authorities to address traffic congestion, road safety issues, and logistical challenges that may hinder SME operations.
3. Implement policies to streamline permit processes, reduce toll fees, and enhance road signage to facilitate smoother transportation of goods and services for SMEs.

By implementing these recommendations, policymakers, government agencies, and stakeholders can create an enabling environment for SMEs to thrive, innovate, and contribute significantly to economic development. The findings underscore the importance of addressing infrastructure challenges to support the growth and competitiveness of small and medium-sized enterprises in the region.

**Acknowledgement:** The authors appreciate TETFUND for the Institution Based Research (IBR), 2023 Grant which was utilized to carry out this research work.

## References

- [1]. Abdullahi, M. S., Ghazali, P. L., Awang, Z., & Salim, N. A. M. A. (2015, November 1). The effect of finance, infrastructure and training on the performance of Small and Medium Scale Enterprises (SMEs) in Nigeria. *International Journal of Business and Technopreneurship*, 5 (3), 421 - 452.
- [2]. Abdullahi, M. S., Jakada, B. A., & Kabir, S. (2016, December 30). Challenges affecting the performance of small and medium scale enterprises (SMEs) in Nigeria. *Journal of Human Capital Development (JHCD)*, 9(2), 21-46.
- [3]. Abereijo, I.O, Adegbite, S. A., Ilori, M. O., Adeniyi, A. A., & Aderemi, H. A. (2009). Technological innovation sources and institutional supports for manufacturing small and medium enterprises in nigeria. *Journal of Technology Management & Innovation*, 4(2). <https://doi.org/10.4067/s0718-27242009000200007>.
- [4]. Abereijo, Isaac Oluwajoba, Oluwagbemiga, M., & Akinade, S. (2007, December 1). Assessment of the capabilities for innovation by small and medium industry in Nigeria.
- [5]. Abosedra, S., Dah, A., & Ghosh, S. (2009). Electricity consumption and economic growth, the case of Lebanon. *Applied Energy*, 86(4), 429–432. <https://doi.org/10.1016/j.apenergy.2008.06.011>.
- [6]. Achimugu, P., Oluwatolani, A., & Oluwaranti, A. (2010, June 14). “An Evaluation of the Impact of ICT diffusion in Nigeria’s Higher Educational Institutions”, in *Journal of Information Technology Impact*, 10(1):25-34.
- [7]. Adelckan, I. O. (2005). Gender, economic policy, and domestic energy use in Nigeria. *Ibadan Journal of the Social Sciences*, 3(1), 1–15. <https://doi.org/10.36108/ijss/5002.30.0110>.
- [8]. Adelekan, I. O., & Gbadegesin, A. S. (2005). Analysis of the public perception of climate change issues in an indigenous African city. *International Journal of Environmental Studies*, 62(1), 115–124. <https://doi.org/10.1080/0020723042000243281>.
- [9]. Adenikinju, A. (2005, January 1). Analysis of the cost of infrastructure failures in a developing economy: The case of the electricity sector in Nigeria.
- [10]. Adenipekun, M. T. (2013). Sustainable rural infrastructural development in Nigeria within the context of Vision 20:2020. *International Journal of Development and Sustainability*, 2(1), 254–269.
- [11]. Adeosun, O. T., & Shittu, A. I. (2021). Small–medium enterprise formation and Nigerian economic growth. *Review of Economics and Political Science*, 7(4), 286–301. <https://doi.org/10.1108/rep-07-2020-0089>.
- [12]. Aderemi, T. A., Lucas, B. O., Okoh, J. I. & Efunbajo, S. A. (2020). View of Impact of Corona Virus (COVID-19) Pandemic on Small and Medium Scale Enterprises (SMEs) in Nigeria: A Critical Case Study. *ACTA Universitatis Danubius*, 16(4), 251-261.
- [13]. Aderemi, T. A., Opele, A. M., Okoh, J. I., & Al-Faryan, M. A. S. (2022). An econometric analysis of small- and medium-scale enterprises and employment creation in Nigeria. *Managerial and Decision Economics*, 44(3), 1624–1633. <https://doi.org/10.1002/mde.3770>.
- [14]. Adeusi, S. O., & Aluko, O. A. (2014). Assessing the role of government in promoting small scale businesses in Kogi State: The Kabba/Bunu experience. *IOSR Journal of Business and Management*, 16(11), 86–92. <https://doi.org/10.9790/487x-161168692>.
- [15]. Agba, A. M. O., Ikoh, M., Ushie, E. M., & Bassey, A. O. (2010). Telecommunications revolution: Implications on criminality and family crisis in the south-south states of Nigeria. *Computer and Information Science*, 3(1). <https://doi.org/10.5539/cis.v3n1p42>.
- [16]. Ajibola, A. A., Sodeinde, G. M., Aderemi, T. A., & Yusuf, M. O. (2021). Impact of electricity supply on the performance of small and medium-scale enterprises (smes) in Nigeria: A case study. *Economic Insights – Trends and Challenges*, 2021(4), 11–21. <https://doi.org/10.51865/eitc.2021.04.02>.
- [17]. Ajide, F. M. (2020). Infrastructure and Entrepreneurship: Evidence from Africa. *Journal of Developmental Entrepreneurship*, 25(03), 2050015. <https://doi.org/10.1142/s1084946720500156>.
- [18]. Akinson, A. O. (2018). Effect of infrastructural facilities on smes growth in Nigeria. *International Journal of Innovative Research and Development*, 7(6). <https://doi.org/10.24940/ijird/2018/v7/i6/jun181117>.
- [19]. Akinwale, A. A. (2021, October 16). The menace of inadequate infrastructure in Nigeria. *African Journal of Science, Technology, Innovation and Development Vol.2, No.3 pp. 207-228*.
- [20]. Akinyele, S. T., Akinyele, F. E., & Ajagunna, O. D. (2016). Infrastructural development as predictor to small and medium enterprises performance in Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 6(3), 40–53. <https://doi.org/10.12816/0033237>.
- [21]. Akyuz, M. (2020). Infrastructural and Performance of Small and Medium Scale Enterprises in Federal Capital Territory (FCT) Abuja, Nigeria. *Journal of Global Economics and Business*, 1(3), 93–108.
- [22]. Akyuz, M., Isaac, O. M., & Ismael, Z. (2020, August 8). Effect of power supply on the performance of Abuja Electricity Company of Nigeria. *International Journal of Business Marketing and Management*, 5(8) 09-16.
- [23]. Akyuz, M., & Opusunju, M. I. (2019). Effect of globalization on the performance of small and medium scale enterprises in Nigeria. *American Journal of Environmental and Resource Economics*, 4(4), 125. <https://doi.org/10.11648/j.ajere.20190404.12>.
- [24]. Bamidele, R. (2012, January 1). Small and Medium Enterprises (SMEs): A Panacea for Economic Growth in Nigeria. *Journal of Management and Corporate Governance*.
- [25]. Bassey, C. E., & Ikpe, I. K. (2021). The effect of electricity supply on the performance of small and medium-scale enterprises in Nigeria: A case study of Calabar South and Calabar municipality of Cross River State. *International Journal of Engineering and Management Research*, 11(4). <https://doi.org/10.31033/ijemr.11.4.9>.
- [26]. Carpenter, C. (2006). Small and Medium Scale Enterprises (SMEs) finance in Nigeria: on “Making Small Business Finance Profitable in Nigeria” A paper presented on SMEs, held at Institute of Bankers, Lagos.
- [27]. CBN. (2005). Microfinance policy regulatory & supervisory framework for Nigeria.
- [28]. Central Bank of Nigeria (CBN). (2005). “Highway Maintenance in Nigeria: Lessons from Other Countries”, Research Department Occasional Paper, 27 Cesar Queiroz and Surh’d Gautam, Road Infrastructure and Economic Development: Some Diagnostic Indicators, (World Bank, D.C., June 1992, WPS 921).
- [29]. Dobbs, M., & Hamilton, R. T. (2007). Small business growth: Recent evidence and new directions. *International Journal of Entrepreneurial Behavior & Research*, 13(5), 296–322. <https://doi.org/10.1108/13552550710780885>.
- [30]. Doe, F., & Asamoah, E. S. (2014). The effect of electric power fluctuations on the profitability and competitiveness of smes: A study of smes within the Accra business district of Ghana. *Journal of Competitiveness*, 6(3), 32–48. <https://doi.org/10.7441/joc.2014.03.03>.
- [31]. Eboh, E. C. (2005). “A Review of roads and Rail Transport Infrastructure in Nigeria”, In *Promoting Non-Oil Private Sector Evidence and Recommendations*. Enugu African Institute for Applied Economics for the Better Business Initiative, 2005.
- [32]. Essien, B. S. (2014). The Nigerian Business Environment and Growth Constraints of Micro and Small-Scale Manufacturing Industries. *American International Journal of Social Sciences*, 3, 67-76. - References.
- [33]. Eusebius, A. C., Olufunmilayo T., A., Ayomitunde, A. T., & Camilia, O. N. (2020). Effects of corona virus (covid-19) pandemic on small and medium scale enterprises in Nigeria: A case study of sango-ota industrial estate. *European Journal of Economics, Law*

- and Politics, 07(04). <https://doi.org/10.19044/elp.v7no4a1>.
- [34]. Frischmann, B. M. (2007). Infrastructure commons in economic perspective. *First Monday*. <https://doi.org/10.5210/fm.v12i6.1901>.
- [35]. Ikharehon, J. L., & Briggs, J. I. A. (2016). The Impact of Strategic Factors on the Performance of Small and Medium Scale Enterprises in Nigeria: A Study of Some Selected Small and Medium Scale Enterprises in Abuja. *International Journal of Humanities and Social Science*, 6(2), 67–78.
- [36]. Mandel, G. N. (2007, December 2). When to open infrastructure access.
- [37]. Nwangugu, A.V. (2012). The Role of Infrastructure Development on National Economic Growth: A Case study of the Telecommunication Sector in Nigeria, Unpublished- Caritas University, Amorji-Nike Enugu Nigeria.
- [38]. Nworji, I. D., & Oluwalaiye, O. B. (2012). Government Spending on Road Infrastructure and its Impact on the Growth of Nigerian Economy. *International Journal of Management and Business Studies (IJMBS)*, 2, 24-30.
- [39]. OECD. (2014). “Labanon”, in SME policy index: The Mediterranean Middle East and North Africa 2014: Implementation of the Small Act for Europe, Available online on <https://doi.org/10.1787/9789264218413-en>.
- [40]. Okoh, J., Mac-Ozigbo, A., Oparaduru, J., & Aderemi, T. A. (2022, September 20). Assessment of the Impact of CBN Post COVID-19 Stimulus Packages on the Economic Sustainability of SMEs in the COVID-19 Epic Centres of Nigeria. *The Journal of Accounting and Management*, 12(2), 29-44 7.
- [41]. Okoh, S., & Ebi, B. O. (2013, January 1). Infrastructure investment, institutional quality, and economic growth in Nigeria: An interactive approach.
- [42]. Opusunju, M. I., Akyuz, M., & Ibrahim Ahmed, A. (2019). Effect of structure and strategy on organizational performance: Case study of Remou Oil Nig. Ltd. *American Journal of Environmental and Resource Economics*, 4(4), 139. <https://doi.org/10.11648/j.ajere.20190404.14>.
- [43]. Opusunju, M. I., Akyuz, M., & Jiya, N. S. (2017). Application of simplex method to evaluate advertising and performance of quoted multinational corporation in Nigeria. *Nile Journal of Business and Economics*, 3(7), 3. <https://doi.org/10.20321/nilejbe.v3i7.117>.
- [44]. Opusunju, M. I., Jiya, N. S., & Akyuz, M. (2017). Intellectual capital as a competitive advantage in Pan African Nigeria Limited, Abuja. *Nile Journal of Business and Economics*, 3(7), 52. <https://doi.org/10.20321/nilejbe.v3i7.120>.
- [45]. World Bank. (1994). Can interventions work? The role of government in SME success. Retrieved on <https://openknowledge.worldbank.org/bitstream/handle/10986/5977/WDR%201994%20-%20English.pdf>.