

INFRASTRUCTURAL DEVELOPMENT AND PERFORMANCE OF SMALL AND MEDIUM SCALE ENTERPRISES (SMEs) IN OSUN STATE, NIGERIA

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Abstract

Infrastructural development is one of the essential problems facing small and medium-scale enterprises in Nigeria. This study examines effect of infrastructural development on the performance of SMEs in Osun State. *The study used a descriptive research design based on a cross-sectional survey. The study collected data using a questionnaire. Krejcie & Morgan's (1970) statistical table was used to obtain a sample size of 357 from the population of 3,007 SMEs owners and managers in the selected senatorial districts of Osun State. 343 copies of questionnaire were retrieved and used for the analysis. The data were analyzed using Structural Equation Modeling (SEM). Findings revealed that all had a positive and significant impact on the performance of SMEs. It was found that electricity infrastructural ($\beta = 0.034$, $C. R = 0.049$, $p < 0.005$), transportation infrastructural ($\beta = 0.015$, $C. R = 1.224$, $p < 0.005$), and telecommunications infrastructural ($\beta = 0.137$, $C. R = 2.939$, $p < 0.005$). The study concluded that infrastructural development has significant and positive effects on the performance of SMEs. Therefore, the study recommended that government should ensure that the right policies are implemented to guarantee a steady and sufficient supply of power, upgrade the road networks, as these will enhance the performance of SMEs in Nigeria and subsequently promote economic growth in the country. Small and medium-scale enterprises (SMEs) should be trained in ICT usage, since doing so will enhance their performance and ultimately increase the profitability of conducting business on a small to medium-scale enterprises.*

Keywords: Infrastructural Development, Infrastructure, Performance, SEM, SMEs, Transportation, Telecommunication, Electricity

Introduction

Performance and expansion of enterprises depend on a sufficient supply of infrastructural development. Since infrastructure is one of the main objectives of the Sustainable Development Goals (SDGs), its significance has been recognized on a worldwide scale. The United Nations (UN) has set seventeen universal goals that developing countries must accomplish in a set amount of time. They include the elimination of poverty, gender equality, access to inexpensive and clean energy, effective health care and wellness, high-quality education, safe drinking water and sanitation, industry, innovation, and infrastructure, as well as the reduction of inequality. It might be difficult and unsustainable to achieve all these goals without vigorous and sustained infrastructural development in all the countries in the world, especially in developing countries where the attempt to achieve national development has been a mirage (Asaju, 2023).

Small businesses are defined as those that have between ten and fifty employees and generate 100 million naira or less as annual turnover and total fixed assets below 250 million. (Nigeria Tax Act 2025. Medium businesses are those enterprises with a labor size between fifty and one hundred and ninety-nine, with a total of fifty million but not exceeding two hundred million naira, excluding land but including working capital (SMEDAN, 2011) also a key element in the successful transformation of most economies that have sustained rises in their per-capita income and contribute 96% of businesses (SMEDAN, 2021). Therefore, for these small and medium-scale enterprises (SMEs) to thrive, certain infrastructures must be in place to promote and encourage the activities of such businesses (Kyunga, 2017). The establishment of infrastructure is necessary to allow for the advancement of development. The presence of facilities can speed up and facilitate social and economic activity (Adenipekun, 2020).

Most firms struggle to meet expectations since they cannot deliver the ordered goods and services when they're needed because of poor transportation infrastructure. To thrive in the highly competitive business environment, small and medium-scale enterprises (SMEs) must gradually innovate in order to meet unmet customer needs with their products and services. SMEs that adopt radical innovation are more likely to grow because of higher returns from adoption as a result of gaining a larger market share (Omoankhanlen & Ohiria, 2017). Furthermore, the role of information technology cannot be overemphasized and serves as the bedrock of SMEs because it raises overall productivity, which boosts economic activity and leads to improvements in small and medium-scale enterprises. Power failures and voltage fluctuations have the potential to interrupt manufacturing, harm machinery, and degrade the quality of finished goods. Reinikka & Svensson (2002) found that unreliable and inadequate electric power supply greatly reduces firms' investment in other productive activities. Iwayemi, (2008) also estimated that 20% of investment in large industrial projects is usually allocated to alternative source of electricity supply. A shortage of electricity could cause people to rely too much on more expensive alternative energy sources like solar, coal, and generators. Reliance on alternative energy sources can significantly impact a company's production costs (Ojiba & Olotu, 2024).

Inadequate transportation infrastructure can have negative impact on businesses, particularly small and medium-scale enterprises (SMEs), making it more challenging to carry out daily tasks as purchased items and raw materials may not arrive when needed (Ojiba & Olotu, 2024). Studies have shown that transportation infrastructure has contributed to the output of the transportation sector in Nigeria and other developing countries (Chi & Udo, 2020; Ghosh & Dinda, 2022). In addition, it is acknowledged that ICT adoption is a necessary prerequisite for SMEs to view technology as a critical tool to leverage in order to gain a competitive edge in international markets (Onileowo & Fasiku, 2021). Information technology has existed in Osun State, Nigeria, over the years, and numerous significant companies have incorporated it into their operations. Regrettably, some SMEs in Osun State, Nigeria, still use traditional payment in transacting their business, and payment is done at the counter. There is no application of a website or

introduction of customers on the internet, which helped the SMEs send and receive emails on their computers (Murat & Opusunju, 2017).

Several studies have been conducted on this subject matter in different geographical locations but little or none in this study area. This research therefore focuses on Osun state because osun state is becoming a fast growing commercial hub in the south-west nigeria among other states in the region. This research seek to provide answer to the following research questions: What is the extent to which electricity development affects the performance of small and medium-scale enterprises (SMEs) in Osun State? How does transportation development affects the performance of small and medium-scale enterprises (SMEs) in Osun State? What is the impact of telecommunication development on the performance of small and medium-scale enterprises (SMEs) in Osun State?

Literature review

Infrastructural development refers to the availability of those physical facilities that facilitate and enhance the provision of essential services required for the viability and sustainability of the economy and for improving the general wellbeing of the people (Asaju, 2023). Infrastructural development is crucial to the growth, development, and performance of SMEs in Osun State. This importance cannot be overstated, as infrastructural development is what gives SMEs their flavor: a power supply, a reliable water supply, a good road network and an efficient communication system. When an enterprise lacks one of the aforementioned infrastructure, it tends to perform below expectation, which eventually can lead to the enterprise closing if immediate action is not taken. Dimensions of infrastructural development used in this study include electricity infrastructure, transportation infrastructure, and telecommunication infrastructure. These dimensions were adopted because of the peculiarity of Osun State in south-west Nigeria, and this study agrees with the focus of the study, which is on economic infrastructure.

According to Modi and Adamu (2016), electricity is part of the infrastructure, which is a basic physical facility on which all other activities in the system significantly depend. The primary energy source for SMEs nowadays is electricity. Over the years, electricity outages have continued to frustrate many business activities in different parts of Nigeria (Adewuyi & Emmanuel, 2018). It was obvious that power disruptions have restricted the growth of SMEs and scared away a large number of domestic and foreign investors. Olatunji (2019) declares that electricity outages have led to the migration of many business organizations from Nigeria to different nations. Almost all commercial operations, particularly those in manufacturing facilities, depend on a steady and efficient supply of electricity. SMEs, particularly those in the industrial sector, utilize electricity for a variety of different purposes, such as production, storage, and powering office supplies and machinery. Therefore, the main purpose of electricity in manufacturing SMEs is to run equipment that is often essential to each production process.

Transportation infrastructure, involves the physical movement of goods from the point of production to the point where they are needed (Chi & Udo, 2020). Transporting commodities, services, and products to their destination after production is necessary. Transport infrastructure is a key subset; it accelerates access to services and markets, reduces wealth gaps, enhances social welfare, and lowers business costs (Farhadi, 2019). According to Yu and Luu (2022), increasing transportation infrastructure will boost employment in the economy. One factor influencing Nigeria's unemployment rate is the country's transportation infrastructure. The development of the nation's transportation infrastructure is essential to its social and economic progress. A well-developed transport system can both increase the number of workers and minimize income inequality (Ghosh & Dinda, 2022). Transport infrastructure is critical for developing countries because it provides many options for people to access jobs (Hernandez et al., 2020). Therefore, to support and guarantee a smooth business operation, transportation facilities need to be efficient and available.

ICT infrastructure refers to a company's ability to use different ICT applications to receive accurate, fast, secure, and trustworthy information by leveraging its technological and human ICT resources (Supardi et

al., 2021). Recently, technology has made it possible for firms to grow effectively and quickly. Businesses can target a larger consumer base and eventually boost sales with the help of enterprise technology, such as social networks, video conferencing, and other tools. Organizations can utilize technology to increase demand for their products by bringing their products and services closer to their primary target market and raising awareness of them through social networking. Telecommunication infrastructure is one of the most important elements of the economic infrastructure for the performance of SMEs, this enables enterprises to grow effectively and quickly. It however enable enterprises to bring their products and services closer to the global market and through social networking, video conferencing, and other tools which leads to boost sales, give necessary information to customer about certain products and hinder economic growth and development (Laborda & Sotelsek, 2019).

Performance denotes the fulfillment of tasks based on predetermined standards of accuracy, completeness, cost, and speed, it refers to an organization's success over a specific time frame (Dagunduro et al., 2022). According to Opusunju, Akyuz, and Jiya (2017), an enterprise's performance is determined by its members' productivity, which is expressed in terms of revenue, profit, and the organization's growth and expansion. Oghojafor et al., (2018) describe performance in terms of financial indicators, which include earnings for each market share, sales growth, profitability, productivity, return on equity, return on investment, and return on sale, among other metrics. An organization's performance is the overall success attained to accomplish its stated goals. This may include: profitability, growth in sales, employee and customer satisfaction, societal satisfaction, and survival (Kolawole et al., 2023. Furthermore, (Bello, 2020) added that business performance entails how well the business enterprise is managed in terms of the value perceived by customers in relation to the organization's delivery.

Conceptual Framework

Independent variable

Dependent variable

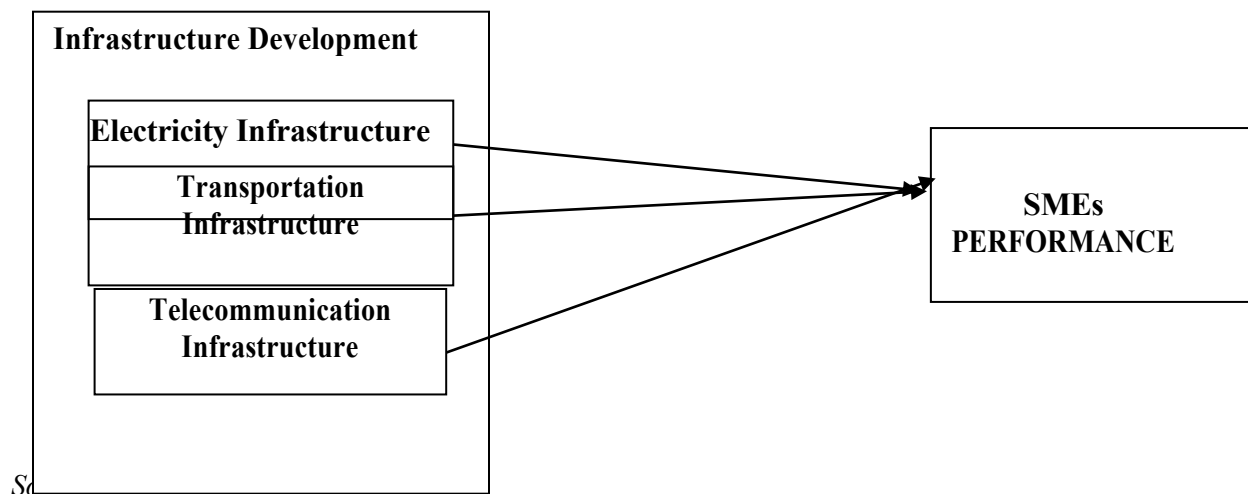


Figure 1.1.

Electricity Infrastructure and SMEs Performance

Shettima and Bello (2023) conducted research to assess the impact of infrastructure on SMEs' performance in Nigeria. The study adopted a quantitative research methodology, utilising a survey study design and employing an important and convenient sampling procedure to collect data from 240 respondents chosen from six significant SMEs clusters in the Bida Senatorial District Area of Niger State. The findings of the

study indicated that a significant number of small and medium-scale enterprises (SMEs) in Nigeria are individually responsible for the provision of their own infrastructure. Power and water infrastructure are essential to any commercial operation.

In their study, Ajibola et al. (2021) examined the impact of electricity on the performance of SMEs in Ado-Odo, Ota LGA, Ogun State. They employed the purposive sample strategy, while data was analyzed using variance analysis (ANOVA), correlations, ordinary least squares (OLS). The results showed that the availability of power significantly impacts the profitability of SMEs in the study area. This study aims to bridge the gap by delving deeper into the infrastructure development (electricity) and the performance of SMEs in Osun State.

Bassey and Ikpe (2021) conducted a comparative study of the effect of electricity supply on the performance of small and medium-scale enterprises in Calabar South and Calabar municipal, using small and medium-scale businessmen and women as well as power holding company staff, the study employed research survey design, which included randomly selected 248 small and medium-scale enterprise owners and power holding workers from the community. The findings indicated that electricity has a notable impact on the operational efficiency of small and medium-scale enterprises in the study area. This present study will close the gap by investigating more aspects of electricity infrastructure on the performance of SMEs in Osun State. Based on this the hypothesis below was formulated:

Ho: Electricity development has no significant affect the performance of small and medium-scale enterprises (SMEs) in the study area.

Transportation Infrastructure and SME Performance

Okafor et al., (2023) conducted a study on how transportation infrastructure improvements affect the performance of SMEs in Lagos State's Mainland Senatorial District area. The study employed a descriptive research design. The theory was tested using chi-square. The investigation revealed that the provision of transportation facilities significantly impacts the SMEs performance. Similarly, Akinlemi (2018) examined the effect of transport facilities on the performance of SMEs in Lagos State, Nigeria. The study employed quantitative approach. Data was collected from 200 respondents selected from four significant SME clusters in Lagos, employing a convenience and judgmental sampling. The result of their findings revealed that transport infrastructure significantly affect performance in the study area.

A study by Obokoh and Goldman (2016) in Nigeria explored the transport infrastructural problems on the performance of SMEs. Through structured interviews with their owners/managers, the study concluded that poor transportation infrastructure significantly affect SMEs performance. This study aims to bridge the gap by delving deeper into the transportation infrastructure and the performance of SMEs in Osun State. On this note the following is hereby hypothesized:

Ho: Transportation development has no significant affect the performance of small and medium-scale enterprises (SMEs) in the study area.

Telecommunication Infrastructure and SMEs Performance

Ojiba (2023), examined the relationship between SMEs' survival in North Central Nigeria and the development of ICT infrastructure. The precise goals were to ascertain the degree to which infrastructure related to ICT, energy, transportation, education, and health impacts the ability of SMEs in north-central Nigeria to survive. The study employed a cross-sectional survey design random sampling procedure was used to administer a structured questionnaire, the primary data collection instrument, to a sample size of 399 respondents. The study employed multiple regression analysis to conduct further analysis and test hypotheses. Additionally, we used the computer-based Statistical Package for Social Sciences (SPSS) version 23 to analyse the study's data using descriptive statistical tools like tables, charts, simple percentages, and frequencies. The research findings indicate that the aforementioned aspect of

infrastructure development significantly contributes to the survival of small and medium-scale enterprises (SMEs) in north-central Nigeria.

Akinyele et al. (2016) examined the effect that infrastructure have on SMEs performance in Ogun State. The primary aim of the study was to thoroughly analyse the impact of specific infrastructures on the performance of small and medium-scale enterprises (SMEs). The study employed a quantitative research approach, with a total of 239 respondents, the study employed both stratified and simple random sampling techniques. The results indicate a strong and positive relationship between infrastructures and SME performance. This suggests that infrastructure plays a crucial role in facilitating the successful operation of SMEs. However, the current research aims to address this limitation by examining additional dimensions of infrastructure (electricity, transportation, and telecommunication) and evaluating the performance of small and medium-scale enterprises (SMEs) in Osun State.

Ho: Telecommunication development has no significantly affect the performance of small and medium-scale enterprises (SMEs) in the study area.

Methodology

This study employed a cross-sectional survey design, which involves gathering data on two or more variables simultaneously from various respondents and analyzing the impact of one variable on another. The population of the study, comprised of SME owners and managers in Osun State, Nigeria. Population consists of 3,007 registered SMEs in Osun State. However, it is not possible to cover all SME owners/managers in the state, Three major towns in each senatorial districts were selected to include: Oshogbo, Ife, and Ede, representing Osun Central, Osun East, and Osun West senatorial districts, respectively, this ensure equal representation. This is because they are the most populous towns in the district and have the largest concentration of small and medium-scale enterprises, as well as more developed industrial centres in Osun State. Multi-stage sampling techniques was adopted for this study: at the first satge, the research purposive selected three (3) senatorial districts in Osun State, namely Osun Central, Osun East, and Osun West. In the second stage, judgmental sampling method employed to select three towns from each senatorial district, specifically Oshogbo, Ife, and Ede, as the study's population. Finally, the third stage employed purposive sampling; because the study intended to gather information from SMEs owner or manager in the manufacturing and service rendering sectors. Krejcie and Morgan's (1970) statistical table was used to calculate the sample size to determine the number of SMEs owners and managers within the chosen senatorial district. Therefore, the study used a sample size of 357 SMEs from 3,007 registered SMEs (SMEDAN & NBS, 2021). Test of validity and reliability was done using Cronbach Alpha.

Data were collected using questionnaire. There were two sections in the structured questionnaire: A and B, section A focused on the demographic characteristics of the respondents, while Section B addressed the research objectives on a five-point Likert scale. Three hundred and forty-three (343) questionnaires were retrieved of the three hundred and fifty seven (357) distributed.

Data collected were analyzed using descriptive and inferential analysis. The descriptive analysis, used frequencies, mean and standard deviations. Structural Equation Modeling (SEM) was used as the inferential analysis method to test the hypothesis under the study using Statistical Package for the Social Sciences (SPSS version 22) and AMOS version 22 respectively.

Results

Results generated from the analyses of the study were presented as follows:

Table 1. Demographic Information of Respondents

Demographic Characteristics	Categories	Frequencies (N=343)	Percentages (%)
Gender	Male	229	66.8
	Female	114	33.2
Age	Less than 29 years	84	24.5
	30 – 39 years	165	48.1
	40 – 49 years	54	15.7
	50 years and above	40	11.7
	Level of Education	No formal Education	25
Level of Education	Primary	48	14.0
	Secondary	59	17.2
	ND/NCE	78	22.7
	Graduate	108	31.5
	Postgraduate	25	7.3
Categories of Respondents	Owner	146	42.6
	Manager	82	23.9
	Owner and Manager	115	33.5
Years in Operation	Less than 5 years	68	19.8
	6 – 10 years	83	24.2
	11 – 20 years	109	31.8
	21 – 29 years	44	12.8
	29 years and above	39	11.4
Type of Business	Partnership	87	25.4
	Sole Proprietorship	149	43.4
	Private Ltd. Company	48	14.0
	Public Ltd. Company	59	17.2
Business Operation Sectors	Service Rendering	131	38.2
	Manufacturing	67	19.5
	Agriculture	93	27.1
	Trading	52	15.2
Number of Employees	< =10 employees	87	26.6
	11 – 49 Employees	157	45.8
	50 – 100 Employees	89	25.9
	100 – 200 Employees	97	28.3
Registered Businesses	Yes	343	100.0

Source: Researcher's Field Survey

Table 1. showed the distribution of the respondents' demographic characteristics, 229 (66.8%) were male and 114 (33.2%) were females, showing that most of the respondents were males. Similarly, 165 (48.1%) of the respondents were between 30–39 years, 84 (24.5%) were less than 30 years, 54 (15.7%) were between 40–49 years and 40 (11.7%) were above 50 years respectively, showing that most of the respondents were between 30 – 39 years. Also, 108 (31.5%) of the respondents were graduate, 78 (22.7%) were ND/NCE holder, 59 (17.2%) were secondary school holder, 48 (14.0%) were primary school holder, 25 (7.3%) had no formal education and 25 (7.3%) are Postgraduate holder respectively. this shows that majority of the respondents were graduate. Similarly, 146 (42.6%) of the respondents were owners of the SMEs, 115 (33.5%) were owners/managers and 82 (23.9%) were managers. More so, 109 (31.8%) the respondents affirmed that their businesses have been in operation between 11–20 years, 83 (24.2%) have been in

operation between 5–10 years, 68 (19.8%) have been in operation between for less than 5 years, 44 (12.8%) have been in operation between 21–29 years and 39 (11.4%) have been in operation for over 20 years, this showed that majority of the respondents have been in operation between 11–20 years. Furthermore, 149 (43.4%) of the respondents' type of business is sole-proprietorship, 87 (25.4%) of the respondents' type of business is partnership, 59 (17.2%) of the respondents' type of business is public limited liability company and 48 (14.0%) of the respondents' type of business is private limited liability company, this showed that most of the respondents' type of business is sole-proprietorship. Additionally, 131 (38.2%) of the businesses were into service rendering, 93 (27.1%) of the businesses were into agriculture, 67 (19.5%) of the businesses were into manufacturing and 52 (15.2%) of the businesses were into trading, this showed that most of the business were into service rendering. Also, 157 (45.8%) of the respondents' businesses has between 11–49 employees, 97 (28.6%) had between 100–200 employees, 89 (25.9%) had between 50–100 employees and 87 (23.6%) had less than 10 employees. This showed that most of the respondents' businesses have between 11–49 employees. Lastly, the study revealed that all the respondents' businesses in this study were registered businesses.

Measurement Model

The first step in performing SEM is to show the causal relationship between the measuring items and their underlying latent variables through the measurement model. Through the evaluation of model fit, the measurement model of a construct helps to analyze how effectively the observed variable is coupled to measure the underlying hypothesized contrasts (Weston & Gore, 2006). The measuring model of the latent construct was validated using the confirmatory factor analysis (CFA). According to Zainudin (2012), the CFA process evaluates whether the multiple-item measures of a latent construct align with the researcher's interpretation of the construct's nature. As a result, the measurement model's validity and reliability for each construct as well as its unidimensionality for each factor were evaluated in this study. The measuring model (CFA) shows factors (latent variables) as ovals and previously constructed indicators/items as rectangle-shaped observed variables.

Single-headed arrows were used to connect the incorrect phrases to their corresponding indicators and to connect the factors to their indicators. The correlations between the factors are displayed by the double-headed arrows. Values known as factor loadings or standardized parameter estimates appear on the arrows connecting the factors to their items. The numbers that show up next to the item edges are the latent variables' squared multiple correlations. The relationship among the factors is displayed as a value adjacent to the double-headed arrow with a curve. The measurement model was analyzed using three proposed factors or constructs, which comprise electricity infrastructure, transportation infrastructure, telecommunication infrastructure, and performance of SMEs.

Discriminant Validity

Discriminant validity involves a relationship between a particular latent construct and other constructs of a similar nature (Brown, 2014). As suggested by Fomell and Larcker (1981), to establish the discriminant validity of the construct, the value of the average variance extracted (AVE) belonging to each latent construct must be larger than any squared correlation among any pair of latent constructs. According to Fornell and Lacker (1981) and Hair et al. (2010), the correlation coefficient value (r) can be used to evaluate discriminant validity. A r-value greater than 90 signifies a strong correlation between two constructs, which in turn breaches the discriminant validity.

Table 3. Result Presentation for Discriminant Validity

Factors	CR	AVE	EI	TI	TE	SP
Elect. Infr.	0.86	0.56	0.74			

Trans. Infr.	0.75	0.52	0.763	0.85		
Tele. Infra.	0.88	0.55	0.664	0.711	0.79	
SMEs Perf.	0.57	0.93	0.725	0.624	0.715	0.71

Source: Extract from SPSS Output

The findings demonstrated the discriminant validity of the construct, as seen in table 2 , where all squared correlation coefficient values were less than the squared value of AVE and the squared correlation value was less than 90 which indicate a strong correlation between each construct and dependent variable.

Table 4. Reliability test for each Research Questions

S/N	Variable/ Research Questions	No of Items	Cronbach Alpha Reliability Scale	Decision
1.	Infrastructural Development	5	0.786	Good
2.	Fuel Prices	5	0.778	Good
3.	Challenges	6	0.796	Good
4.	SMEs Performance	7	0.734	Good

Source: SPSS Output

Table 3, the table of the reliability test of each research questions revealed that there is internal consistency and hence the research instrument is acceptable.

Path Analysis

Model Fit

Based on the goodness-of-fit (GOF) indices shown in Table 4.3, the CFA reported a very good fit between the data and the suggested measurement model, as shown in Figure 4.8. The results of the measurement model yielded the following fit model. [χ^2 (96) = 617.5, p = 0.000, CMIN χ^2 = 4.96, GFI = 0.96, AGFI 0.94, CFI 0.97, IFI = 0.99, NFI = 0.93; TLI = 0.92, and RMSEA = 0.070.

Table 5: Goodness-of-fit (GOF) Indices of Measurement Model

GOF Index	CMIN (χ^2)	χ^2 /df	CFI	IFI	TLI	RMSEA
Value	4.96	617.5	0.97	0.99	0.92	0.070

Source: Extract from SPSS Output

The CFI, as an incremental fit index, is 0.97, which fulfills the CFI cut-off points of 0.90 for an adequacy fit model. Equally, the IFI, a test of goodness-of-fit indices, appeared significantly above the 0.90 general guidelines and the TLI very close to the cut-off value of 0.90, which is 0.92. The relative Chi-square χ^2 (df) was well below 5.0, which is indicative of an acceptable fit between the hypothetical model and the collected data. In addition, the value of RMSEA was 0.070, which is clear evidence of a close fit.

Based on the goodness-of-fit (GOF) indices presented in Table 5, the CFA concluded that there was a very good fit between the proposed measurement model and the data. The relative Chi-square χ^2 (df) was significantly less than 5.0, indicating a satisfactory match between the observed data and the theoretical model. Furthermore, the RMSEA value of 0.07 indicates a strong close fit.

Structural estimate

The research study used SEM to evaluate the hypothesised routes based on measurement model fitness. Table 5. demonstrates that the SEM model fits the data well ($X^2/df.$ = 4.98, AGFI = 0.98, GFI = 0.95, CFI = 0.94, TLI = 0.99, IFI = 0.97, RMSEA = .007).

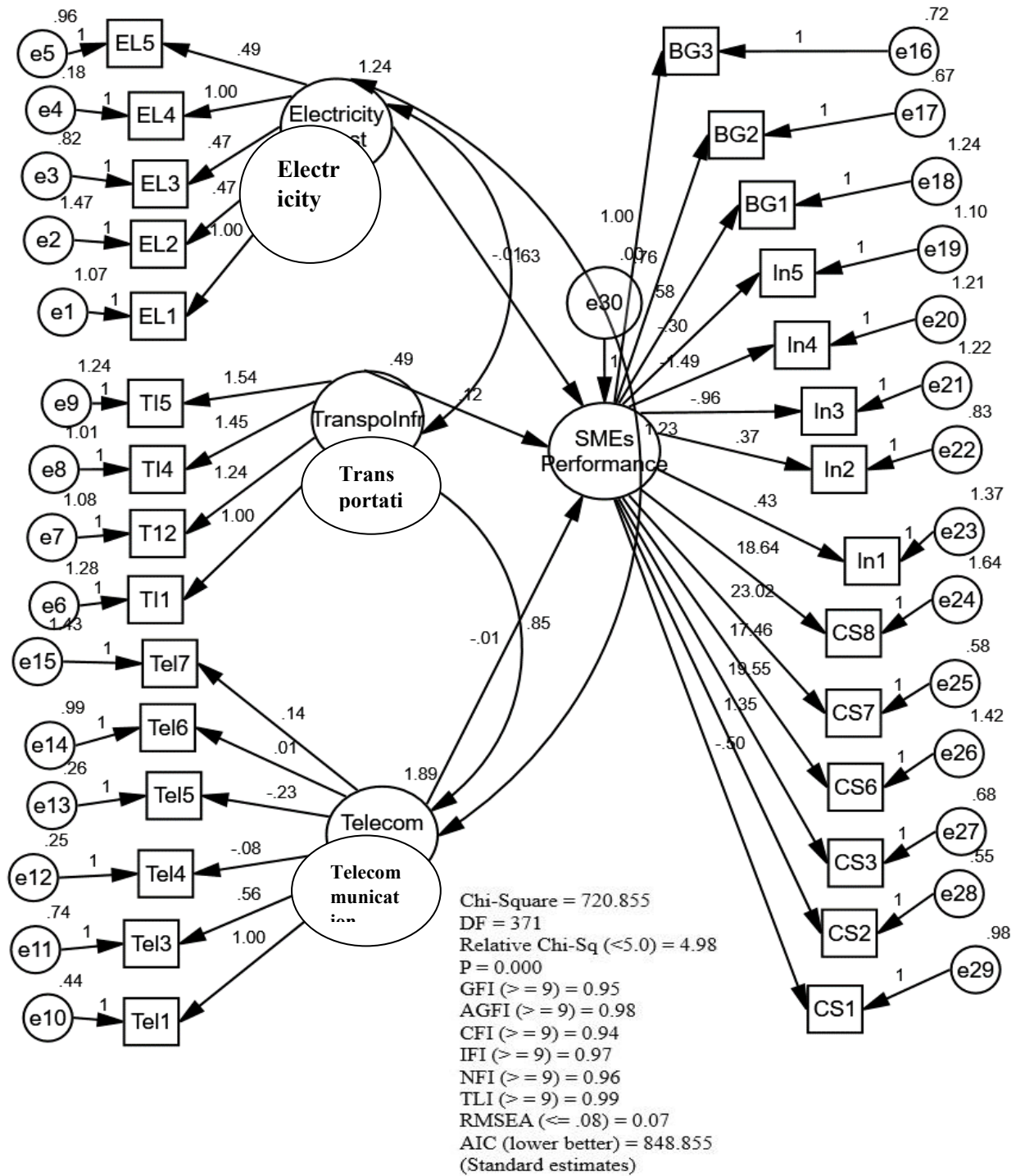
As shown in Table 5 the results revealed that the electricity infrastructural construct was found to have a positive and statistically significant effect on the performance of SMEs and the hypothesis was accepted (β = 0.034, C. R = 0.049, $p < 0.005$). This means that on average, a one-unit change in electricity infrastructure will increase the performance of SMEs by 0.034 units. Based on the structural model, the null hypothesis was rejected at the 1% significance level. Hence, H_1 was supported by statistical evidence, that is, electricity infrastructural has a significant effect on the performance of SMEs.

Table 4. results revealed that transportation infrastructural construct was found to have a positive and statistically effect on the performance of SMEs and the hypothesis was accepted (β = 0.015, C. R = 1.224, $p < 0.005$). This showed that, on average, a one-unit change in transportation infrastructure will increase the performance of SMEs by 0.015 units. Based on the structural model, the null hypothesis was rejected at the 1% significance level. Hence, statistics provided support for H_2 , that is, transportation infrastructural affects the performance of SMEs.

As depicted in Table 4. results indicated that the telecommunication infrastructure construct has a positive and statistically significant effect on the performance of SMEs and the hypothesis was accepted (β = 0.137, C. R = 2.939, $p < 0.005$). The result showed that, on average, a one-unit change in telecommunication infrastructure will increase the performance of SMEs by 0.137 units. Based on the structural model, the null hypothesis was rejected at the 1% significance level. Hence, H_3 was supported by statistical evidence, that is, telecommunication infrastructure has a significant effect on the performance of SMEs.

Table 6. Regression Weights

			Estimate(b)	Beta	S.E.	C.R.	P v.	Decision
SMEs_Pe rfor	<---	Electricity infrast.	.010	.034	.042	.049	.001	Accepted
SMEs_Pe rfor	<---	Transport Infrast.	.121	.015	.036	1.224	.001	Accepted
SMEs_Pe rfor	<---	Telecom. infrast.	.015	.137	.016	2.939	.003	Accepted



Source: Extract from SPSS Output (test of Hypotheses/ Results

Source: SPSS Version 22, AMOS Version 22

Discussion of Findings

Hypothesis One

The null hypothesis (Ho1) proposed that electricity development has no significant effect on the performance of SMEs in the selected senatorial districts of Osun State. However, the result of the structural equation model (SEM) revealed that the study presented that electricity infrastructural development has a significant effect on the performance of SMEs in the selected senatorial district of Osun State. As a result, the null hypothesis was rejected and the alternative hypothesis, which states that electricity development significantly influence the performance of SMEs in the selected senatorial districts of Osun State, was accepted. This result shows that electricity development positively and significant has effect on the performance of SMEs in the selected senatorial district of Osun State. Therefore, the findings of this hypothesis was accepted by the ($\beta = 0.034$, C. R = 0.049, $p < 0.005$). The result of this analysis relate to the study of Shettima and Bello (2023), Ajibola et al. (2021), and Bassey and Ikpe (2021), who also found that infrastructural development has impacts on the performance of SMEs. Their findings are similar to this research, as it was carried out among SMEs owners.

Hypothesis Two

The null hypothesis (Ho2) presented that transportation development has no significant effect on the performance of SMEs in the selected senatorial districts of Osun State. However, the result of the structural equation model (SEM) depicted that the study presented that transportation infrastructural development has a significant effect on the performance of SMEs in the selected senatorial district of Osun State. As a result, the null hypothesis was rejected and the alternative hypothesis, which states that transportation development significantly influence the performance of SMEs in the selected senatorial districts of Osun State, was accepted. This result shows that transportation development positively and significant has effect on the performance of SMEs in the selected senatorial district of Osun State. Therefore, the findings of this hypothesis was accepted by the ($\beta = 0.015$, C. R = 1.224, $p < 0.005$). The result of this analysis supports the works of Abi, and Onwuegbuna (2023), Akinlemi (2018), and Obokoh and Goldman (2016), who affirmed that the dimension of infrastructural development (transportation) has a significant positive effect on the performance of SMEs. Their findings were also similar to this research, as it was carried out in SMEs businesses.

Hypothesis Three

The null hypothesis (Ho3) proposed that telecommunication development does not affect the performance of SMEs in the selected senatorial districts of Osun State. However, the result of the structural equation model (SEM) revealed that the study presented that telecommunication infrastructural development has a significant effect on the performance of SMEs in the selected senatorial district of Osun State. As a result, the null hypothesis was rejected and the alternative hypothesis, which states that telecommunication development significantly influence the performance of SMEs in the selected senatorial districts of Osun State, was accepted. This result shows that telecommunication development positively and significant has effect on the performance of SMEs in the selected senatorial district of Osun State. Therefore, the findings of this hypothesis was accepted by the ($\beta = 0.137$, C. R = 2.939, $p < 0.005$). The result of this analysis collaborate with the study of Abakpa et al. (2021) and Akinyele et al. (2016), who opined that there is a significant relationship between electricity infrastructure, transportation infrastructure, and technology infrastructure and the performance of SMEs. Their findings are also similar to this research, as it was carried out in SMEs businesses.

Conclusion

This study examined the relationship between infrastructural development and the performance of small and medium enterprises (SMEs) in Osun State, Nigeria. From the results, it was observed that electricity, transportation, and telecommunication infrastructre has a significant positive impact on the performance

of SMEs. Thus, many small and medium-scale enterprise owners and managers in Osun State provides the basic infrastructural facilities themselves. The huge cost of the provision of these basic amenities has put many SME owners and managers delima running out of business. The development of infrastructure, including that related to energy, transportation, and telecommunication, is essential to the operations of all businesses in Osun State. Hence, for small and medium-scale enterprises (SMEs) to expand and succeed, infrastructural development is very paramount in sustaining businesses. The following are hereby recommended owing to the findings of this research: Government should make sure that the right policies are implemented to guarantee a steady and sufficient supply of power, as this will enhance the performance of SMEs in Osun Sstate and subsequently promote economic growth in the country. There should be rapid upgrading of road infrastructure by significant investments in road networking and transportation, since this would lower operating costs for SMEs, connect them to new markets, and ultimately enhance their performance. Small and medium-scale enterprises (SMEs) should be trained to adopt and use ICT tools, since doing so will enhance their performance and ultimately increase the profitability of conducting business by a small to medium-scale enterprises.

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