

Public Infrastructure and Private Domestic Firms' (MSMEs) Performance in Nasarawa State, Nigeria

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ABSTRACT

This study investigates the impact of public infrastructure on the performance of Micro, Small and Medium Enterprises (MSMEs) in Nasarawa State, Nigeria. Using primary data from 282 firms and a logistic regression framework, the analysis reveals a differentiated relationship. Public water supply significantly enhances firm output and capacity utilisation, while public transport services positively affect sales. Conversely, public electricity demonstrates an inconsistent and largely insignificant impact, attributed to endemic issues of unreliability and high costs. The findings underscore that effective public infrastructure is a critical driver of MSME performance by reducing transaction costs. The study further found that despite government initiatives, MSMEs face significant constraints, with infrastructure deficit being a primary bottleneck. The study concludes with targeted policy recommendations, including sector-specific infrastructure investments and public-private partnerships for reliable utilities, to foster a more enabling environment for domestic private investment and sustainable local economic development.

Keywords: Public Infrastructure, MSMEs, Firm Performance, Transaction Costs

JEL Codes: H54, L25, O18, R58

I. Introduction

Over the years, economic realism has demonstrated that investment is a foundation for real economic activity in any economy (International Monetary Fund [IMF], 2014; Solow, 1956). Investment can sustain growth of aggregate output and employment and Micro Small and Medium Enterprises (MSMEs) are formidable carriers of a significant proportion of domestic private

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investment in Nigeria (Ogunleye, Owutuamor & Nduka, 2020). However, these MSMEs are constrained by myriads of factors that may limit their performance in growth and employment. These challenges range from insecurity, poor infrastructure, poor funding and access to finance, as well as lack of enabling environment for entrepreneurial activities (Okonkwo & Eze, 2022). Infrastructure is one of the key constraints to doing business in Nigeria, as noted in the World Bank Enterprise Survey (2014), in addition to credit constraints and instabilities in the exchange rate and inflation rate, taxes, legal and institutional constraints. Thus, public infrastructure investment enters the discourse on private investment because of the cost associated in private investment in physical infrastructure, which they can hardly bear and the difficult investment environment.

In Nasarawa State, public infrastructure investment is a component of the salient state-anchored framework that shapes MSME formation, survival and scale. The state's integration in the Business-Enabling Reforms Action Plan (2025) is a multi-agency plan aligning with the Presidential Enabling Business Environment Council (PEBEC) that prioritises simplified procedures across land, urban development, justice, public procurement and revenue services. The plan institutionalises service standards, digitisation and inter-agency coordination tailored to address MSME bottlenecks. Moreover, the Nasarawa Investment & Development Agency (NASIDA) is a statutory investment promotion and facilitation one-stop shop that removes red tape, brokers PPPs and runs MSME initiatives (for example, pitch challenges, after-care services). Its corporate plan formalises deal-flow support, investor after-care and cluster development, which are relevant to MSME crowd-in and link to larger value chains (NASIDA, 2025).

In addition to digitised cadastral services and integrated land administration systems, public commitments indicate issuance of C-of-O in one month, which constitutes one of the post-reform gains for MSMEs needing titles as bankable collateral and for siting/expansion (NAGIS, 2025). Also, revenue harmonisation law (2020) and amendment (2023) consolidate and clarifies state and local government revenue items to curb multiple taxation, standardise assessments and improve taxpayer services under the Nasarawa State Internal Revenue Service (NSIRS). Public guidance and capacity-building have been rolled out to implement the new regime.

Tailored guidelines by the State’s Bureau of Public Procurement (BPP) have been provided to open government markets to small firms through measures such as lot-sizing, lowered participation thresholds, transparent notices and compliance support which provides a platform for MSME cash-flow and learning-by-doing. There has also been business-related reforms and annual reform cycles in which a rolling set of reforms (2022–2024 and onward) covering EoDB, SFTAS/SFTAS-2 compliance, open contracting (OCDS) and investment promotion actions—creating predictable, trackable deliverables for investors and MSMEs.

Access to markets platforms and partnerships through state-endorsed trade fairs and the NASSI–Dangote collaboration has also been created to boost MSMEs and attract investment signal coordinated market access and supplier-development pathways, especially for light manufacturing and agrifood MSMEs. Besides, tax administration process guidance and workshops for standardised taxpayer processes and periodic stakeholder training (for example, on national tax reform acts) to lower compliance costs, improve filing behaviour and reduce informal penalties that disproportionately harm small firms is one of such reforms. SME procurement capacity building and domestication of MSME policy through state-level dialogues, recommending domestication of the National MSME Policy and stronger MSME participation in procurement for enabling soft-law signal that feeds into formal reforms.

However, as Yaw Asante (2016) insightfully aver, domestic firms are the main carriers of private domestic investment in developing countries. Government’s claims of having implemented most of these strategies to enhance access to investment opportunities in diverse sectors of the Nigerian economy, especially of having helped the private sector contributes to output growth and employment remains vague. Therefore, the overarching objective of this study is to explore the impact of infrastructure investment on performances of private domestic investment at MSMEs firm level in Nasarawa State. The study specifically seeks to: examine the impact of public infrastructure on private domestic firms’ (MSMEs) growth/output performance; evaluate the impact of public infrastructure on private domestic firms’ capacity utilization; and analyse the impact of public infrastructure on private domestic firms’ exports in Nasarawa State.

2. Literature Review

2.1. Empirical Literature

Empirical studies have established the importance of private domestic investment as an engine of growth that generates employment and reduces poverty (Kaiechi, 2000), providing ample evidence that public infrastructure does have significant impacts on the performance of private domestic firms. Chen's (2021) study shows that infrastructure development, especially in public-private partnership (PPP), exhibits a positive spatial spillover effect and significant industrial heterogeneity, implying that PPP infrastructure investment can promote the development of regional economic integration. Furthermore, Fell and Mattsson (2021) reveal that public-private partnerships in housing can contribute to sustainable cities and communities.

Ascauer (1989a) assert that public infrastructure can boost economic growth, establishing that public investment in roads and other infrastructure have a significant positive impact on economic growth. Similarly, Aschauer (1989b) found that investments in roads, airports and irrigation contribute to reducing private costs of production, thereby boosting private productivity and profitability. In the same vein, the International Monetary Fund (IMF, 2014) states that public infrastructure has a positive impact on economic growth both in the short run and the long run. Furthermore, the impact of public infrastructure can be beneficial in reducing poverty and inequality when it provides roads, education and healthcare. Rural infrastructure can also improve access to markets, increase employment opportunities and enhance social services.

However, Majeed and Khan (2008), Oshikoya (1998) and Kolapo (2018) observed that private domestic investment rate in Nigeria remain persistently inadequate. Accordingly, Abdulazeez et al. (2023) found that poor planning and infrastructure deficits can pose significant challenges to public sector investment in construction projects in Nigeria. While Akomea-Frimpong et al. (2024) found that sustainable public-private partnership infrastructure projects require effective financial risk management measures to mitigate financial losses and promote sustainability. Also, resource constraints, corruption and poor management pose significant challenges to the provision of public infrastructure in countries.

Adegboye and Iweriebor (2017) summarise the general characteristics and performance structure of MSMEs in Nigeria in comparison with Sub-Saharan Africa and the rest of the world. They selected summarised groups based on overall firm characteristics. Average age of the surveyed firms for Nigeria is 15.9 years and 14.3 years in other Sub-Saharan Africa countries while other countries used in the survey recorded 16.5 years. They also found the general performance of the firms in the survey. For instance, capacity utilisation for the firms was 73 per cent for Nigeria and just below 70 per cent for other countries in SSA. The implication of this is that the surveyed firms have impressive capacity utilisation. This is particularly interesting for the Nigerian case where poor infrastructural facilities have hampered firm-level development in the country (Ikpeze, Soludo & Elekwa, 2004; Anyanwu, 2004). The performance of the firms in terms of real sales growth for the sample period (2014) was poor with -6.6 percent growth rate for Nigeria, although the rate for other SSA firms and that of the rest of the world was positive.

The current study is significant for several reasons. The first significance is that in a federated country such as Nigeria, state-level public infrastructure investments can have significant impacts on local businesses because they are the primary carriers of domestic investment. However, there seem to be low level of MSMEs contribution to economic growth at state level due to constraints noted by the World Bank Nigeria Enterprise Survey (2014). Public infrastructure is one of the most important factors that can boost domestic businesses, even at the state level, but the impact of components of public infrastructure investment have not been empirically tested in Nasarawa State, despite the state government's policies on intensive and extensive investment in public infrastructure. The study will contribute to the understanding of how infrastructure policies can promote performance of private domestic firms in Nasarawa State.

2.2. Theoretical Framework

The study adopts an integrated theoretical framework to provide a strong foundation for empirical testing and analysis. The New Economic Geography (NEG) theory, credited to Krugman (1991), which posits that public infrastructure shapes the spatial distribution of economic activities, is among the theories adopted. Infrastructure development can influence firms' location decisions, which can thus lead to agglomeration economies. Agglomeration economies refer to the benefits

that firms derive from being located near other firms, such as access to a larger labour market, specialised suppliers and knowledge spillovers. These can further boost production activities and increased distribution of output through sales in local markets and exports. More so, Rice and Venables (2003) showed that infrastructure development can lead to the concentration of economic activity in certain regions, resulting in increased productivity and economic growth. These invariably would include increased output, local distributions through sales and exports to foreign lands.

The NEG theory is complemented by the Transaction Cost Economics (TCE) Theory by Coase (1937) and Williamson (1979) by demonstrating that infrastructure reduces transaction costs and improves the efficiency of economic activity. Infrastructure can also reduce the costs of transportation, communication and other business activities and thus enhance firms' operational innovation capacity. This can also lead to increased utilisation of existing capacity and expansion. This theory is supported by Guasch (2004) who found that infrastructure investment can mitigate transportation costs and improve the competitiveness of firms in developing countries.

Besides, Romer (1986) and Lucas (1988) aver in their theory of endogenous growth that infrastructure investment does not only lead to long-term economic growth by increasing productivity and costs reduction. They maintain that infrastructure can also have a positive impact on human capital, leading to increased innovation and entrepreneurship. Thus, these three theories provide appropriate framework that elucidates the impact of public infrastructure on performance of private firms. This is because the reduction in costs, increases in productivity and improvement in the efficiency of private economic activities such as sales and exports due to infrastructure development can promote private investment and contribute to firms' economic growth and development.

3. Methodology

3.1 Research Design and Data Collection

The study employs an empirical approach which prioritises primary responses from a cross section of private firms (MSMEs) engaged in production of real goods and services in the area under study. The study relies on the responses to questionnaires from desk officers and MD/CEOs

of these categories of investors and key informant information for data gathering in the survey process. The sectors covered include agriculture, manufacturing, trade and commerce, restaurants and hospitality, ICT, etc. Structured questionnaires were administered to the selected CEOs/management heads of 300 MSME firms purposively selected and located in the LGAs. However, 282 responses were successfully retrieved and used for the analysis. Besides, a pilot survey was first conducted prior to the full survey of the study area.

3.2. Sampling Technique

Purposive sampling technique was adopted to draw respondents for the study. It is a non-probability sampling method used where sample randomness cannot be guaranteed in view of the fact that the elements of the population may not have the privilege of equal chance or definite probability of being selected in the sampling process (Asika, 1990). However, randomness may occur by chance. But it is of little significance whether randomness occurs or not in non-probability sampling process since the population elements are not deliberately given equal chances of selection (Jibril, 2010).

Karu, Keffi and Lafia LGAs were selected for the study because they are home to most of the private firms in Nasarawa State. These three LGAs constitute the industrial hub of the state and as such possess a concentration of firms compared to other LGAs. Consequently, 100 private firms (MSMEs) were drawn from each LGA for the study, even though, only 282 questionnaires were eventually returned and used for the study.

3.3. Model Specification

To examine the impact of public infrastructure provision on private domestic firms performance, the study begins with a general model in equation 1 below.

$$\sum q_i = f(\beta) \tag{1}$$

Where q_i is firms' responses and β represents a vector of public electricity supply, public water supply, public vehicle leases, public transport service.

Therefore,

$$MSMEQ = X_1 + X_2PuEl + X_3PuWa + X_4PuVL + X_5PuTr + \mu \quad (2)$$

$$MSMESa = X_1 + X_2PuEl + X_3PuWa + X_4PuVL + X_5PuTr + \nu \quad (3)$$

$$MSMEEEx = X_1 + X_2PuEl + X_3PuWa + X_4PuVL + X_5PuTr + \gamma \quad (4)$$

$$MSMEC = X_1 + X_2PuEl + X_3PuWa + X_4PuVL + X_5PuTr + \omega \quad (5)$$

Where $MSMEQ = MSME$ Output, $MSMESa = MSME$ Sales, $MSMEEEx = MSME$ Exports, $MSMEC = MSME$ Capacity Utilization, $PuEl = Public$ Electricity Supply, $PuWa = Public$ Water Supply, $PuVL = Public$ Vehicle Leasing, $PuTr = Public$ Transport Service, $X_1 - X_5 = parameter$ estiamtes, $\mu = stochastic$ error term.

3.4. Estimation technique

This study employs a logistic regression (logit) model for empirical estimation. This technique is appropriate because the dependent variables (firm performance indicators) are operationalised as binary outcomes. Logistic regression estimates the probability of an event occurring (in this case, a firm achieving a high level of performance) and is robust to the violations of normality and homoscedasticity assumptions common in OLS regression when dealing with binary data (Hosmer & Lemeshow, 2000).

The general logistic model is specified as follows:

$$P(Y_i = 1/X) = \frac{1}{1 + e^{-(\beta_0 + \beta_1PuEL_i + \beta_2PuWa_i + \beta_3PuVL_i + \beta_4PuTr_i)}} \quad (6)$$

So that $P(Y_i = 1/X)$ represents the probability that the performance outcome for firm i is equal to 1 (for example high sales) given the set of independent variables X .

Equation (6) above can further be transformed into a log-odds equation which is linear in parameters as shown thus:

$$\ln\left(\frac{P(Y_i=1)}{1-P(Y_i=1)}\right) = \beta_0 + \beta_1PuEL_i + \beta_2PuWa_i + \beta_3PuVL_i + \beta_4PuTr_i$$

Where the dependent variables (firm performance indicators) are binary variables coded as 1 or 0.

4. Analysis and Discussion of Results

This study seeks to investigate the impact of public infrastructure investment on real performances of private domestic firms in Nasarawa State. The analysis is based on MSME level survey of about 300 domestic firms spread out in selected LGAs. The major research instrument was structured questionnaires as well as key Informant Interview (KII). The presentation and analysis of the results are divided into two parts. The first part is the descriptive part in which we use tables and frequencies to present the analysis. In the second part, logit models are used to present results in line with the objectives of the study.

4.1 Descriptive Statistics

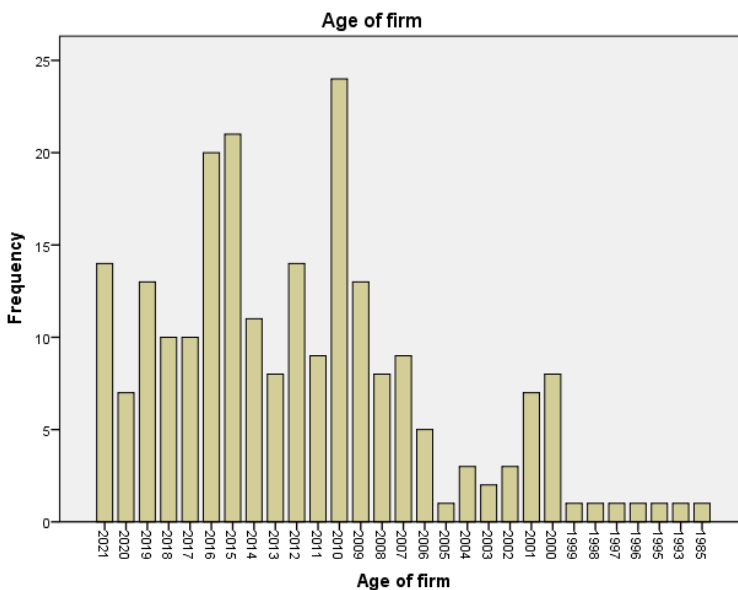


Figure 1: Age distribution of Firms

Figure 1 shows age distribution of firms, counting from the period of starting the business that there were periods of old and new firms co-existing. For example, the period 1985 – 1999 was a period of newly registered firms. From the year 2000 to 2002, there was an upsurge of startups. However, a general low level of startups from 2002 to 2005 was observed and a rising trend of

established firms from 2006 until a peak in 2011 was observed. From 2014 began another upward trend in number of established firms up to peaks in 2015 and 2016. Thereafter, there was a drop from the peak to lower number in 2017 and 2018, slight rise in 2019, a deep drop in 2020 and another rise in 2021 down to 2025.

A close perusal of these periods of high clusters and low clusters would reveal a close link with the economic situation that pervaded the nation and over the years impacted on the domestic investment environment. For example, the period 1985 – 1999 corresponds to the years of military rule, with its restrictive investment policies. Although privatisation began in 1986, most of private investments were from the sale of public enterprises, with few exceptions of those private firms that existed prior to the privatisation. Although this reflects the pattern of the participation of private investors in the economy, the upsurge from year 2000 to 2002 is probably due to democratisation and the deepening of economic liberalisation in early 2000. This boost in registration of the private domestic firms was, however, not sustained. There was a general low-level of registration from 2002 to 2005 due to early impacts of economic and institutional reforms of the NEEDS and SEEDS and LEEDS programmes which emphasised citizens' empowerment and wealth creation. However, it was not until 2006 that there was a rising trend of firms' registration from 2006 until a peak in 2011, probably due the positive effects of these programmes and the 7-point agenda of the Yar' Adua/Jonathan Era. The period 2011 to 2013 corresponds to another period of tense macroeconomic and political transition in Nigeria.

Table1 below shows the structure of domestic private investment by firm-level participation in productive sectors in the area of study.

Table 1: Sector Categorisation of the Domestic Firms

Sector	Frequency	Percent	Cumulative Percent
Agriculture/Agribusiness	12	4.3	4.3
Manufacturing	97	34.4	38.7
Trade & Commerce	45	16.0	54.6
ICT	22	7.8	62.4
Wood and Furniture	13	4.6	67.0
Restaurant & Hospitality	23	8.2	75.2
Food & Beverages	9	3.2	78.4
Services	61	21.6	100.0
Total	282	100.0	

Source: Authors survey data and SPS S output



Figure 2: Sectorial distribution of private domestic firms

Table 1 and figure ds2 demonstrate the diversity of domestic investment by firm level participation in productive activities in the study area. As pursuit to the diversification of the economy since

1986, when the economy was liberalised government pursued the policy of implementing policies which opened the economy for private investors to invest in the economy. The data responses to this policy can be seen that 12 firms, representing only 4.3% of the total number of firms in our sample, are engaged in Agriculture and Agriculture-related businesses in the study area.

Agriculture is regarded as the sector in which most citizens engage as sources of food, raw materials and employment. However, it can be observed from the graph that Agri-firms are not the dominant in the study area, even though government has demonstrated much support for the sector. However, this is expected and plausible since the study area is becoming more urban and cosmopolitan and the nature of the study allows for firms' participation from other sectors. Besides, 97 firms, representing 34.4% of the respondent firms were engaged in manufacturing. Although this category represents manufacturing firms, most of them were light manufacturing of products such as aluminum fabrication of tools, small spare part tools and household appliances and light fabric and foodstuff processing into final forms which are mostly cottage manufacturing firms. The second largest category of firms in the study area are providers of services. These include activities such as mechanics and automobile repairs, events management, tailoring and fashion designing and sales service companies, haircuts and hairdos, etc. This category contains 61 firms representing 21.6 per cent of the respondent firms.

Table 1 and Figure 2 further reveal that 45 firms representing 16% of the respondent firms were engaged in trade and commerce. This category covers firms engaged in exports of goods and services to foreign markets and firms engaged in whole sales and retail trading in physical goods in the local economy. This category is the third largest category in the study sample; it is however not exclusive since many manufacturing firms also export directly or sell in the local markets. This demonstrates a robust response of private domestic investment to government policy of structural diversification of the economy making contribution to foreign and local economy. The fourth largest category of domestic firms is that containing firms engaged in restaurant and hospitality industry. It includes hotels providing hospitality services and large restaurants that cater for food and hospitality needs of mostly the elite populations and tourists

4.2. Logistic Regressions

	<i>Model I</i>	<i>Model II</i>	<i>Model III</i>	<i>Model IV</i>
	<i>MSMEQ</i>	<i>MSMESa</i>	<i>MSMEE_x</i>	<i>MSMEC</i>
<i>PuEl</i>	0.910 (0.398)	0.780 (0.387)	0.982 (0.824)	2.604** (0.389)
<i>PuWa</i>	2.370*** (0.301)	1.329 (0.304)	0.613 (0.622)	1.974** (0.288)
<i>PuVL</i>	1.578 (0.456)	1.118 (0.376)	3.342 (0.663)	1.569 (0.381)
<i>X₅PuTr</i>	1.611 (0.477)	2.531*** (0.320)	2.963 (0.689)	0.780 (0.314)

Standard errors are in parentheses

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Stata Output, 2025

The result presented in Table 2 shows the impact of public infrastructure provision on various proxies of firm performance (MSME Output, MSME Sales, MSME Exports and MSME Capacity Utilisation) as represented by Model I, Model II, Model III and Model IV respectively. Model 1 reveals that public electricity supply has no significant impact on MSME Output. This shows that various policies on public electricity supply in recent years have not improved firms' output performance within the study area. This result is not in agreement with apriori expectation, for instance, Aschauer (1989a) showed that increase in public electricity would lead to increase in output. However, this contrary result from our empirical result may be due the problems associated with use of public electricity in Nigeria. The problems, as demonstrated in the descriptive analysis section of this study include frequent interruptions, high tariffs and high costs of purchasing generators for own source of electricity and the problem of distribution of hydro-generated power supply in Nigeria. The purchase of generators as safeguards against intermittent public electricity power supply has become a feature for private firms' investment in Nigeria. These may significantly increase costs and reduce the likelihood of impact of public electricity supply on production. On the contrary, water

supply exerts a significant positive impact on firm performance at one percent level of statistical significance. This result is plausible and consistent with a priori expectation, given the relative importance of water as key input in the production process of any manufacturing firm. The significance may be due to the low charges on public water supply. Besides, public vehicle lease and public transportation so not have significant impact on firm performance. A possible reason is the non-availability of public transport service when needed for immediate use.

The impact of public infrastructure on sales is presented in Model II. The result showed that public electricity has negative impact on firms' sales, with insignificant probability. The result implies that efforts by government to improve electricity supply, especially privatisation of electricity distribution has not significantly impacted on firms' share of domestic markets. This is in contrast with a priori expectation. Firms need electricity to boost sales in many ways such as refrigeration and cooling perishable products. With increasing risks of high temperatures and droughts, many firms may have resorted to use of own generators. Similarly, public water supply and public vehicle leasing exhibited positive, although insignificant impact on sales. The positive impact of water can be attributed to the fact that water is highly essential in the entire process of production and getting products ready for sales. However, public transport service was found to exhibit significant positive impact on sales, in line with a priori. Accordingly, a unit increase in public transport service provision will lead to a 2.53 unit increase in MSME sales within the study area.

Model III shows the impact of public infrastructure on firms' exports. Public electricity supply again exhibits positive effect on MSME exports in line with a priori, however, it was found to be statistically insignificant. Production for exports requires high energy needs due to requirements for refining, standardisation and packaging. Thus, the high tariffs on electricity could add to cost of export production, thereby decreasing exports of firms, which depend on public electricity. This is because the high tariffs increase the costs of exports production. The problems of electricity supply should therefore be adequately addressed to remove the crowding out effects. The generation and distribution should be open for private investors to participate instead of quasi state monopolist firms that ineffectively control generation and distribution in the study area. Public water supply exhibits a negative (although) insignificant impact on exports of firms even though the resource is primarily needed for industrial use. Public water supply is not adequate for industrial users, especially for firms who export their products. Private boreholes have become ubiquitous in most production locations

of domestic firms and the costs of their investment are obviously weighing negatively on export productions. Conversely, public vehicle lease and public transport service provision exhibit positive (insignificant) impact firms' export. The positive impact can be explained by cost effectiveness associated with public transport provision compared to huge private logistic costs associated with movement of goods. Model IV shows that public electricity supply exerts a significant positive impact on firms' capacity utilisation demonstrating the key roles of public electricity provision on MSMEs performance with respect to the indicator. The effect of public electricity on capacity is usually indirect; Public electricity provision can reduce production cost. If other determinants of the cost of expansion of production are also favorable, such as increased demand, firms can increase capacity utilisation. In previous results of our estimation, we saw that despite inflationary pressures, firms were able to shift costs to final purchasers in the form of inflation markup prices. Thus, public electricity supply to firms should be addressed adequately in conjunction with other incentives for private investment. Similarly, public water supply exhibits a positive impact on firms' capacity utilisation significantly. All things being equal, capacity utilisation is often increased to meet production targets either to meet immediate customers demand, or to maintain a stock of inventory against unexpected positive demand shocks. With restrictions on importation of goods coupled with increases in indirect taxes and inelastic demand in home markets, public water supply leads to expansion in capacity utilisation. This is because it eliminates production costs that would otherwise arise if firms invested in their water supply such as boreholes or purchase of water from subsidiary firms. However, public vehicle lease and public transport services were found to have insignificant impact on firms' capacity utilisation. In fact, public transport service exhibited negative impact on firms' performance within the study area. These findings demonstrate the poor state of public transport system in the study area, which therefore, increases private transportation costs and hence poor capacity utilisation by MSMEs.

5. Conclusion and Policy Recommendations

This study concludes that public infrastructure is a critical, yet varied, determinant of MSME performance in Nasarawa State. The empirical evidence confirms that public water supply consistently enhances firm output and capacity utilisation, underscoring its role as a vital production input. Similarly, public transport services significantly boost sales, facilitating market

access and logistics. Conversely, the impact of public electricity is mixed and largely insignificant, revealing that persistent issues like unreliability and high costs continue to negate its potential benefits. These findings affirm the core tenets of Transaction Cost Economics and Endogenous Growth Theory, demonstrating that effective infrastructure reduces operational costs and fosters productivity. Therefore, for MSMEs to truly thrive as engines of state-level economic growth, targeted and reliable public infrastructure investment is not merely beneficial but essential.

Based on the specific findings of this study, the following policy recommendations are proposed for the Nasarawa State government:

1. There is need for reforms in the electricity sector that will engender reliable electricity supply to MSMEs. This can be achieved by incentivising public-private partnerships (PPPs) for decentralised renewable energy mini-grids tailored to industrial clusters, providing direct and stable power to MSMEs and mitigating the high cost of private generators.
2. There is a need for the expansion and maintenance of water treatment plants and distribution networks, particularly in industrial zones, to ensure consistent and affordable water supply for manufacturing and agribusiness MSMEs.
3. The state government also needs to develop a structured and reliable public transport system focused on key economic corridors. This includes designating routes for goods carriage, providing subsidised fares for registered MSMEs and improving road infrastructure to reduce logistics costs and expand market reach.
4. There is also a need for dynamism in the formulation and implementation of policies. For instance, the government should recognise that infrastructure needs are not uniform across sectors. Policy should be tailored, for instance, by prioritising stable electricity and water for manufacturing clusters while focusing on transport and market access links for trade and commerce firms.

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