

Infrastructural Development and Growth of Micro, Small and Medium Scale Enterprises (MSME)

Monica Agu¹, E. E. Isichei², T. M. Olabosinde³

¹Department of Entrepreneurship, Nasarawa State University, Keffi, ¹E-mail: drmonicaagu@gmail.com

^{2,3}Department of Business Administration, Federal University Wukari,

²E-mail: isichei_ejike@yahoo.com (Corresponding author), ³E-mail: olabosinde@yahoo.com

Abstract

A critical perspective on micro, small and medium scale enterprises is the believe that it contributes to improve social and economic advancement of a nation. However, this critical component in an economy remains underutilized in most developing nations. This study on that background delved into unravelling infrastructural development effect to the growth of MSMEs. The new growth theory provided a theoretical underpinning to the study and extant literatures showed gaps that justify the need for the study. The population of the study was 1067 and using Taro Yamane formula a sample size of 300 MSME was used for the study. Content validity provided a validity with expert opinions on the instrument while reliability index was between 0.70 – 0.85 using Cronbach Alpha. The multiple regression technique was used to test the three hypotheses and the result proved the alternate hypothesis significant in all three hypotheses. The study concludes that infrastructural development has impacts on the growth of MSMEs. Therefore, the study recommends among others that government should pay to the infrastructural facilities in the country and ensure they imbibe a maintenance culture that helps reduce waste.

Key words

Infrastructural development, government policies, growth, Micro small and medium Enterprises

JEL Codes: M1, O4

© 2018 Published by Dimitrie Cantemir Christian University/Universitara Publishing House.

(This is an open access article under the CC BY-NC license <http://creativecommons.org/licenses/by-nc-nd/4.0/>)

1. Introduction

The sustenance and growth of Micro, Small and Medium Scale Enterprises (MSME) in any nation depends on a number of factors, of which Infrastructural development is a major factor to determining the extent of survival and growth of MSME. A nation is judged by the extent of infrastructural development. The availability of good infrastructural development plan is premised as the core to pivoting and stimulating business environment to meet the need of any nation's economy. The outbound effect is the existence of businesses that thrive not just on their own but are netter position for competition (Isichei and Leah, 2016). Wagner (2012) defines infrastructure as a business or economy's requisite structures that helps drive operations and improve services in order to attain their set goal and objectives. These are the nations end contribution for the thriving and sustaining of a business and its profitability. It is an interlinked interface of basic societal supporting structures that enhance the holistic development of a business and society (Wagner, 2012). MSME as the live wire of any economy depends mostly on infrastructure, when there is low infrastructural development in a nation; it affects the economy of the nation.

Infrastructure in the context of business is not limited to facilities like communications, good road and rail network, several modes of transportation (road, water, rail and air) communication etc. but it also includes economic policies and regulations affecting businesses such as tax, import and export duties, tariff value added tax (VAT) etc. Grants, incentives, legislations, sourcing of relevant information and raw materials are aspect of infrastructure in relation to business as well as developing and updating of databank on MSMEs and providing information on available local technologies, machinery and prototypes to small businesses. A small scale industry can be explained in terms of project cost, capital, number of employees, sales volume, annual business turnover and the financial strength. There have been varying views and scholarly opinions on what constitute small scale industry. However, this varying view has been anchored on a business capital base, machinery, staff strength, market share and fixed capital investment (Ayozie *et al.*, 2013). It is right to state that this characteristic varies from countries and their economic strength. However, most countries classify micro enterprises as a business that have less than 10 employees, Small scale enterprise as a business with less than 50 employees while Medium Scale Enterprise as one with about 250 employees.

In Nigeria, inadequate infrastructural facilities have been a bane to MSME development. The epileptic power supply, bad road network, lack of pipe borne water etc. have brought about the death of many MSMEs. It has also increased the cost of production making it difficult for local product to compete with imported products, making establishment of many MSME difficult. Many policies have been made to promote MSMEs by the Federal Government of Nigeria, which has aided the

growth of MSME. Despite the policies, development of MSME has not come to full fruition due to infrastructural deficit. A nation that does not put in place policies that will improve infrastructure development is bound to have low MSME and economic development. Therefore speeding up the delivery of infrastructure as well as maintenance of infrastructure is a way of improving MSME growth (Ayozie *et al.*, 2013). In Nigeria, MSME has not performed well in bringing the needed economic growth to the State. Many reasons have been adduced for this, one of which is the lack of infrastructural development that creates enabling and stimulating environment for business activities. It is against this background that it becomes imperative to study how infrastructural development affects the growth and sustenance of micro, small and medium scale enterprises in Nigeria.

1.1. Objectives of the Study

The general objective of the study is to examine the impact of infrastructural development on the growth of MSME in Eungu state, Nigeria. The specific objectives are to:

1. Determine the extent to which innovation affect growth of MSME,
2. Assess the influence of technology on the growth of MSME,
3. Examine institutional support influence on the growth and sustenance of MSME.

1.2. Research Questions

1. To what extent does innovation influence the growth of MSME?
2. To what extent do government policies impact of the growth of MSME?
3. To what extent does institutional support influence the growth of MSME?

1.3. Research Hypothesis

Ho: Innovation does not have significant impact on the growth of MSME.

Ho: Government policies do not have significant impact on the growth of MSME.

Ho: Finance institutions support does not have significant impact on the growth of MSME.

2. Literature review

2.1. Theoretical foundation

The theory used to underpin the study is the endogenous growth or the new growth theory. This theory holds that a major component of growth is the attainment of the highest level of technological and innovation that is exogenously transmitted (World Bank, 2000). Aghion and Howitt (1992) are major proponents of the new growth theory and they stated that there is link between technological change and increase in knowledge. This is based on the believe that economic growth is realised when there is increased positive outcomes from application of knowledge. This theory emphasises the need for improved investment in creation of knowledge as it will help sustain growth. Infrastructure development that is anchored on the new growth theory ensures that growth is achieved when there are consistent investment in not just the human capital but in the provision of basic knowledge that allows for transfer from one generation to another. In addition, the theory holds that government policies are critical to economic growth and development. It recommends intervention to influence growth in the economy in long run. The model supports government and public policies in human capital formation. The model also supports support financial institution support and encourages the need for private investments in the economy (Meier, 2000).

2.2. Conceptual Framework

Infrastructure forms a major business needs that drives the existence and survival of the business and ensures that the organisation meets its expected target. Akinyele *et al.* (2016) defined Infrastructure as the core structures that any organisation requires for a smooth operation. It is a requisite that is often used for measuring and assessing a country or region's development (Akinyele *et al.*, 2016, Frischmann, 2007). Rao and Srinivasu (2013) argue that infrastructure as a bane in any society is not what brings about production of goods and services rather it is engine room that ensures the needed requirement for business and economic relevance. Adenipekun (2013) and Adeola (2005) stated that quality infrastructure presence in any society is vital to business and their owner's success all over the world. It has the enablement to improve the various sectors of the economy. It is on this premise that Madden and Savage (1998) stated that many businesses have collapsed due to lack of infrastructure to support their growth. They also purported that

infrastructure negative influence can be intertwined as it can overlap over various sector of the organisation or society. It provides the best explanation to major challenges faced in most economies that are developing.

Fulmer (2009) asserts that infrastructure is used to assess a country's success in terms of development as it is the nominal structures that hold and support the society such as water supply, electricity grids, bridges, roads, telecommunications, and sewers. In addition, Donaldson (2010) stated that infrastructure explains the physical mechanism of interconnected systems that provide goods and services that are vital to sustaining and maintaining social life and values. In the same vein, Emeh *et al.* (2012) opine that infrastructural facilities aid the development of the mind, body and assist productivity in any environment as well as increase SMEs performance effectively and efficiently. Infrastructure as it relates to growth and sustenance of micro, small and medium enterprise as the structure that enables effective functioning of the society or nation. It includes all the services, facilities, policies and regulations that provide inputs which facilitate economic, political, social, religious and cultural activities in a particular state or nation. It enhances the production of goods and services.

Shanks and Barnes (2008) classified infrastructure into two broad groups economic and social. They stated that the economic infrastructural are the following basic facilities like port stations utilities, bridges, transport interconnectivity, electricity and telecommunication networks. The social infrastructures are facilities like educational institutions, hospitals, colleges and community and justice facilities. Wang (2002) argues that infrastructure enables primary, secondary and tertiary production process to take full operation in any organisation and the lack of infrastructure leads to negative performance of MSMEs.

2.2.1. Infrastructural Facilities and Performance of Micro, Small and Medium Enterprises

The vital role infrastructure plays to encouraging productive and competitive economy is numerous. Such that low or lack of infrastructural development has a negative multiplier effect on the economy of the nation, since infrastructure is the bed rock of a nation's development. The level of infrastructural development directly correlates to the level of economic development all over the world (Wang, 2002). Top in the list of the key infrastructure that affects the performance of MSME is power. Akinyele *et al.* (2016) opines that a major setback to SMEs in most developing countries is the challenge of meeting up with the power need of the SMEs. These businesses are force to generate their own power with generating set and this contributes to increase their cost and weigh down on the performance of the SMEs. SMEs have thus, been compelled to install their generating sets and transmission equipment, thereby adding considerably to their operating and capital costs. Tsauni, (2005) observed that the rate of power supply which is the major infrastructure needed by MSME when unreliable, entrepreneurs source for alternative means of power supply which increases overhead cost of production. It leads to price increase that makes the goods produced in third world countries like Nigeria more expensive than similar goods produced in more developed economies. Consumers are more likely to demand for cheaper products which most of time are produced overseas.

Aworemi and Ajayi (2013) and Wahab and Adeyinka (2016) contend that there is hardly any human society or human settlement system that can function efficiently and effectively without adequate, reliable, safe and affordable transport systems. The most fundamental reason for this being the catalytic effect of transport development on socio-economic growth and development. Transport also plays a significant role in territorial administration, political development, and the defence of territories as well as the promotion of regional cooperation (through the flow of people and goods along the import-export corridors of neighbouring countries). This inevitability of transport to SME stems from the derived demand function of moving people, produce and or services from one place to another just for the purpose of human satisfaction (Wahab and Adeyinka, 2016). Transportation is an indispensable infrastructure that facilitates the growth and sustenance of MSMEs all over the world. Economic activities cannot be possible without transportation. Many centuries back, camels and horses were used as means of transportation to facilitate economic activities (Wahab and Adeyinka, 2016).

Adeniji (2000) states that transport is as vital as human blood circulatory system whose healthy function are necessary for sustenance of human life. Transport infrastructure is a basic infrastructure that propels economic activities; it is needed for the operation of a nation and effective functioning of economy. It facilitates trade by improving and enhancing the movement of goods, people, ideas, technology and services. It also brings about friendship and fraternal relations among people (Mamoud, 2007). Wagner (2013) discovered that \$7 billion is lost in a year over traffic congestion in a study carried out in the found that in the United States of America. This has not just financial cost implication but it is stressful, time wasting and fuel consuming yet government expenses on infrastructure has dropped to 2.4 percent of GDP in 2011, when compared to 3.1 percent in the 1960s. This situation has capacity to drag the performance of SMEs because in the absence of sufficient infrastructural support to SMEs there is bound to be economic loss of value. The roads are in disrepair and difficult to access especially roads in the rural areas making transportation of farm produce difficult. The industries raw

materials used by cottage industries are sourced from mainly from rural areas and bad road network increases the cost of transportation that invariably affects cost of production leading to price increase of finished product.

Despite the indispensable importance of transport infrastructure in facilitating economic activities, Nigeria has not done well in the provision of this infrastructure. The country is faced with depilated roads that are not motor able. The railway system that has attracted increased government of recent still has nothing to offer as an expectation despite attempts to revitalise this sector of the Nigerian transport system. The airports have not performed any better compared to the other medium of transport in the country and they all contribute to the slow pace of economic development and progress experienced in the country (Tsauni, 2005; Iwayemi, 2008). Doe and Asamoah (2014) reveal that the basic infrastructure such as roads, electricity, railways and airports were abandoned and rather political and unsatisfactory approaches led to the spate a decadence that is experience in Nigeria when compared with other African country. Kessides (1993) attempted to link infrastructure development to economic growth and the study showed that it is not just a determinant but also a prerequisite to enhancing economic growth and development in any society. The study showed that improved transportation system in the country created a balance in cost, saved time and ensure that long hours of wait never existed again. Mohammed, Aminu, Rahama and Murtala (2015) emphasised on the need for an infrastructural system that reduces cost of production as transport companies make their charge less when the mode of transportation is save and higher if the mode is bad.

Aworemi and Ajayi (2013) state that a critical challenge in the agriculture sector among developing countries is the inability of rural settlers to move their farm produce from their farms to the urban areas, thereby resulting in waste and increased poverty. This they stated reduces the income of the rural dwellers and makes it difficult to prepare for the next planting season. Inadequate transport infrastructure is one the causes of rural-urban drift. The existence of good transportation interconnectivity network in the rural area, it helps improves the standard of living of the rural dwellers and increase income through the sale of the farm produce. Sani (2010) holds that there is a gap in the measure of micro economic infrastructural projects and this explains the inefficiency in the operation of existing infrastructural facilities.

3. Methodology of research

The study adopted a survey research design because of the nature of the research problem and the objectives of the study. The study cover MSMEs in Enugu Metropolis and according to SMEDAN and CBN survey (2013) there are 1067 registered MSMEs in Enugu. The sample size for the study is 300 registered MSMEs in the state. Taro Yamne formula was used in determining the sample size and selecting the participants for the study the researchers used simple random sampling technique, thereby given equal chance of selection and representation in the study. The source of data collection for the study is a primary source and the method of collection of the data involved the use of a specific variable based questionnaire. The questionnaire was self-designed and was administered by the researchers. The research questionnaire was subjected to content and construct validity and was found suitable for the study. Item analysis was done to examine the validity of the items to the variable and remove items that are not sufficient to describing a variable. Cronbach Alpha reliability was carried out on the instrument to ascertain its reliability for the study. The reliability index was between 0.70 – 0.85 which is high to conclude the instrument is reliable for the study as suggested by authors (Pallant, 2011, Serkaran and Bougie, 2010, Sekaran 2003). The researchers used multiple regression technique in analysis of data gathered. The choice of regression is based on the techniques ability to predict and show relationship between variables of interest in a research.

4. Result and Discussion of findings

Table 1. Descriptive Statistics of variables measuring infrastructural development and growth

	Mean	Std. Deviation	N
Growth	3.0567	1.48125	300
Govt policies	3.8233	1.36565	300
Innovation	3.3600	1.26322	300
Institutional support	3.4000	1.24035	300

Source: SPSSv20

Table 2. Model Summary showing infrastructural development impact on the growth of MSME

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836 ^a	.699	.696	.81647

a. Predictors: (Constant), institution support, innovation, policies

b. Dependent Variable: growth

Table 3. ANOVA showing infrastructural development impact on the growth of MSME

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	458.718	3	152.906	229.375	.000 ^b
	Residual	197.319	296	.667		
	Total	656.037	299			

a. Dependent Variable: growth

b. Predictors: (Constant), institutional support, innovation, govt policies

Table 4. Coefficients showing infrastructural development impact on the growth of MSME

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.467	.288		5.091	.000		
1 Govt policies	.570	.052	.525	10.969	.000	.443	2.257
Innovation	.249	.053	.212	4.721	.000	.502	1.990
Institution support	-.251	.048	-.211	-5.191	.000	.618	1.619

a. Dependent Variable: growth

Source: SPSSv20

The descriptive statistics table (Table 1) will be interpreted using Serkaran and Bougie, (2010) recommendation which state that score of less than 2.33 are low, 2.33 to 3.67 are moderate and 3.67 - above are high. Therefore, given the above government policies have the highest mean ($M=3.82$, $SD=1.366$), followed by institutional support ($M=3.40$, $SD=1.240$) moderate, and followed by Innovation ($M=3.36$, $SD=1.263$). Table 2, 3 shows the result for the data gathered for the study. Table 2 below present the variable used in the study. The overall model (government policies, innovation and institutional support) was investigated to establish its ability to predict growth. The result as indicated in Table 2 shows $R= .836$, $R^2= .699$, adjusted $R^2=.696$, $SD = .81647$. The multiple correlation coefficients (R) between the predictors and the criterion variable is .836. This indicates 83.6% level of association. The predictors (government policies, innovation and institutional support) accounted for 69.9% of the variance in growth. This means that 69.9% of the variance in growth is as a result of the independent variables (government policies, innovation and institutional support). The significant F-test (Table 3) shows that the relationship (229.375, $p<0.05$) indicates the overall prediction of independent variable to the dependent variable is statistically significant, therefore, justifying the conclusion that infrastructural development has significant influence on growth of MSMEs.

Further, the relative contribution of each independent variable is shown in tables 4, 5 indicated the largest beta coefficient is government policies ($\beta=.525$), indicating that government policies makes the strongest unique contribution to explaining growth in MSMEs; when the variance explained by all other variable in the model are controlled. In addition, finance institutional support ($\beta=.211$) made the least contribution to explaining growth in MSMEs.

Table 5. Summary table of test of hypothesis and Decision

Hypothesis	Variables	Beta	t-value	p-value	Findings
H ₁	Innovation	.525	10.969	.000	Accept
H ₂	Government policies	.212	4.721	.000	Accept
H ₃	Institutional support	-.211	-5.191	.000	Accept

Source: Authors computation, 2018

The table 5 above shows the summary of the regression analysis which indicates that three of the variables hypothesized have direct relationships with the dependent variable have been tested and found to be statistically significant. Innovation, Government policies and Institutional support were statistically proven to be related with growth in MSMEs. The findings agree with the findings of Akinyele *et al.* (2016) and similarly Ebitu *et al.*, (2016).

5. Conclusions and Recommendations

The perception that societal growth is hinged on government and private sector involvement has further been reemphasized. This study has shown that a major challenge to MSME in most developing countries is the absence of basic infrastructural facilities; and this agrees with the theoretical foundation of the study that holds that knowledge or innovation

is a basis for growth. Until there are basic, infrastructural facilities that seek to promote the activities of MSME the country will remain under developed. This study therefore concludes that financial institutions as the private sector arm of any economy has sufficient contributions to MSME growth and sustenance. In addition, infrastructural development remains a pivot wheel to accelerate improved growth and economic development. The researchers hence make the following recommendations based on the findings of the study:

1. There is need for improved private-public sector involvement in the improvement of the provision of infrastructural facilities for growth of MSME.
2. There is need for government to ensure harp attention is paid to the infrastructural facilities in the country and imbibing a maintenance culture that helps reduce waste.
3. Government policies should seek to protect and ensure the growth of MSME and not contribute to the burden of MSME through unpopular policies.
4. MSME should be sensitized on available government infrastructures that are established to promote their growth and give them international platforms for expansion.

The study was limited to Enugu, which is one of the most commercial cities in southeast Nigeria. Further studies can be carried out on the entire country and compare the findings. In addition, this suggest that future research should be carried out in identifying the key infrastructural facilities that will have immediate impact to MSME growth so government can focus attention to them as it may not be rich enough to provide all the facilities needed for growth of MSME. Further studies can be carried out using a mixed method, as this was limited to the use of a quantitative method.

References

- Adeniji, K. (2000) Transport Challenges in Nigeria in the next decades; Keynote Address delivered at The National Council on Transport Meeting Organized by the Federal Ministry in Transport, Abuja, Nigeria.
- Adenipekun, M.T. (2013), "Sustainable rural infrastructural development in Nigeria within the context of Vision 20:2020", International Journal of Development and Sustainability, Vol. 2 No. 1, pp. 254-269.
- Adeola, F. A. (2005) Productivity performance in developing countries: Case study of Nigeria. United Nations Industrial Development Organization (UNIDO) Report.
- Aghion, P., & Howitt, P. (1992). A model of growth through creative destruction. *Econometrica*, 60(2), 323–351.
- Akinyele, Akinyele and Ajagunna (2016) Infrastructural Development as Predictor to Small & Medium Enterprises Performance in Nigeria, Kuwait Chapter of Arabian Journal of Business and Management Review. Vol. 6, No.3.
- Aworemi and Ajayi (2013) Impact of Integrated Transport System (Its) on the Productivity of Smes in Selected South-Western States of Nigeria. *Journal of Economics and Sustainable Development*, Vol.4, No.8.
- Aworemi, K. and A. Ajayi (2013). State Infrastructure and Productive Performance. *American Economic Review* 86 (5), 1095-1111.
- Ayozie, Oboreh, Umukoro and Ayozie, (2013). Small and Medium Scale Enterprises (SMES) in Nigeria the Marketing Interface. *Global Journal of Management and Business Research Marketing* Volume 13 Issue 9.
- Doe, F. and 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, 32-48.<http://dx.doi.org/10.7441/joc.2014.03.03>
- Ebitu E.T., Basil G and Ufot J. A (2016). An Appraisal of Nigeria's Micro, Small And Medium Enterprises (MSMEs): Growth, Challenges And Prospects. *International Journal of Small Business and Entrepreneurship Research*, Vol.4, No.4, pp.1-15.
- Eme, O. I. & Emeh, I. E. J. (2012). Bureaucracy and Rural Development; the Role of Public Administration in National Development: The Nigerian Perspective. *Global Journal of Management and Business Research* Volume 12 Issue 4.
- Friscmann, B.M. (2007), "Infrastructure Commons in Economic Perspective" in *First Monday* (Online), 12(6), 04 June. Available at <http://firstmonday.org/article/view/1901/1783>.
- Fulmer, Jeffrey (2009): What in the world is infrastructure?. *PEI Infrastructure Investor* (July/August): 30–32.
- Iwayemi, A. (2008). Nigeria's Dual Energy Problems: Policy Issues and Challenges, *International Association for Energy Economics*, Fourth Quarter 2008.
- Isichei E.E and Leah M. (2016). Counterfeit and Unwholesome product: An integrated Management Approach. *JURNAL KEMANUSIAAN*, 61 – 73.
- Kessides, Christine. 1993. *The contributions of infrastructure to economic development : a review of experience and policy implications (English)*. World Bank discussion papers ; no. WDP 213. Washington, DC : The World Bank.
- Meier, G. M. (2000). The old generation of development economists and the new. In G. M. Meier & J. E. Stiglitz (Eds.), *Frontiers of development economics: The future in perspective* (pp. 13–50). Washington, D.C.: World Bank/Oxford University Press.
- Mohammed, Aminu, Rahama and Murtala (2015). Empirical Review on the Determinants influencing Firm Performance in Developing Countries, *International Journal of Scientific and Research Publications*, Volume 5, Issue 6.
- Pallant, J. (2011). *SPSS survival manual. A step by step guide to data analysis using the SPSS program*. 4th Edition, Allen & Unwin, Berkshire.

- Rao, P. S., and Srinivasu, B. (2013). Infrastructure Development and Economic growth: Prospects and Perspective. *Journal of Business Management & Social Sciences Research*, 2(1), 81-91.
- Sani, B.M. (2010). 'The Collapse of industries in Kano: Causes and Solutions. Paper presented at joint Annual general meeting of manufacturers Association of Nigeria. Kano.
- Sekaran, U. (2003). *Research Methods for Business A Skill-Building Approach*. 4th Edition, John Wiley & Sons, New York.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business A skill-building approach* (5th ed.). Haddington John Wiley & Sons.
- Shanks, S. and Barnes, P. 2008, *Econometric Modelling of Infrastructure and Australia's Productivity*, Internal Research Memorandum, Cat No. 08-01, Productivity Commission, Canberra, January, unpublished.
- SMEDAN and National Bureau of Statistics Collaborative Survey: Selected Findings (2013).
- Tsauni, A.M. (2005). 'Infrastructure and Business Performance in Nigeria: Evidence from manufacturing Sector (1985-2004). Conference Paper presented at Department of Business Administration Annual Conference. Bayero University, Kano.
- Wahab and Adeyinka, (2016). An Empirical Analysis of Infrastructure Investment and MSMEs' Performance In Nigeria, *Journal of Policy and Development Studies (JPDS)* Vol. 10, No. 4.
- Wang, E.C. (2002). 'Public infrastructure and economic growth: a new approach applied to East Asian economic', *Journal of Policy Modeling*, vol. 24, pp. 411–35.
- World Bank. (2000). *Entering the 21st century—World development report 1999/2000*. New York: Oxford University Press.