

## DOES MARKET INFRASTRUCTURE IMPROVEMENT DEVELOPED MICRO-ENTERPRISES IN DELTA STATE, NIGERIA?

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### ABSTRACT

The study was conducted to determine market infrastructure improvement as a catalyst to developed agro-based micro-enterprises in the informal sector of Delta State, Nigeria. The descriptive statistics and multiple regression model were used to analyze the data. About 150 micro-entrepreneurs were interviewed using pretested questionnaire. The results showed that majority of entrepreneurs are females with mean age of 38years, had some form of education. They had enterprise experience of 11years and average employees of 8 persons. The average value of asset holding was N142,400. 00. The result indicated that 90.7% of the entrepreneurs have no access to market stores, the mean cost of renting a stall was N60,200 per annum. Majority (85.3%) of the entrepreneurs have no access to cold-rooms and 88.0% of the entrepreneurs have no access to electricity supply from the national grid, but uses private generators which increases the cost of production. The result of the regression analysis shows that the revenue from the micro-enterprises was best estimated using the double-log function, which explained 66.8% of the total variation. The study found out that length of experience in business, education, asset holdings, access to market, cost of renting stores and access to electricity supply, age of entrepreneur, number of employees and access to cold-rooms influence enterprise development.

**Keywords:** market, infrastructure, improvement, informal sector, micro-enterprises.

### INTRODUCTION

In many countries micro-enterprises are referred to small commercial operations owned and managed generally by the low-income people that constitute the majority of businesses (Simmons, 2004). Microenterprise plays considerable role in generating cash to positively contribute in improving the standard of living of the people. Vanderschueren, Wegelin and Wekwete (1996) opined that in the South Africa some have even described microenterprise as the backbone on which the urban economy survives in most countries. Formal employment in large firms and the public sector long since ceased to keep pace with this demand for employment. So every year millions more turn to small informal enterprises to make a living: making it the fastest growing area of employment. Micro businesses are catalyst in the socio – economic development of any country. They are a veritable vehicle for the achievement of national

macroeconomic objective in term of employment generation at low investment cost and enhancement of apprenticeship training, domestic savings accumulation/capital formation and the structural definition of the economy. A study by Ikpi (2001) revealed that through an interaction of many natural and artificially created powerful forces, micro-enterprises are known all over the world to have emerged as important agents of economic and social transformation that deeply affect the lives of all people. Olayemi (1998) added that micro-enterprises are often the chief economic defense of the most vulnerable households in high-risk environments such as during civil conflicts or natural disasters. The socio-political contributions include the satisfaction, peace, security and happiness they bring to the owner-operators and the larger society they serve; and the general desirable transformation they bring to society.

In Kenya, for instance, Kombo, Justus, Murumba and Makworo (2011), submitted that “micro and small scale entrepreneurs who include agriculture and rural businesses have contributed greatly to the growth of Kenyan economy”. The sector contributes to the national objective of creating employment opportunities, training entrepreneurs, generating income and providing a source of livelihoods for the majority of low income households in the country. Micro and small scale enterprises (MSEs) have been widely acknowledged as the springboard for sustainable economic development (Oboh, 2004; Odeh, 2005). Micro-enterprises have a good prospect to contribute more to society if encouraged by a suitable infrastructural development policy framework. Infrastructures such as electricity, road, market stores, cold rooms, pipe-borne water among others are crucial to the overall development of micro-enterprises (Pardey, Roseborn and Beintema (1995). Eboh (1995) indicated that the provision of infrastructural facilities was part of the general rural development policy during the early 70s and 80s aimed at making basic amenities accessible to rural communities to facilitate production and the orderly conduct of rural enterprises. The goal was to improve the living conditions in rural areas, enhance social and economic activities and stem the tide of rural-urban migration.

According to Ikpi (2001) improvement in infrastructures and rural development has been executed through several institutions and programmes. They include: The Directorate of Food, Roads and Rural infrastructure (DFRRI), ADP and

the various local government councils among others. However, Ayichi (1995) stated that these efforts, policies and programmes failed to make the desired impact as a result of financial constraints, frequent changes in administrative apparatus and poor maintenance of facilities provided. Micro-enterprises in Delta State seems to be lacking market infrastructure as they are seen scattered everywhere especially in the State. A study by Steel (2000) identified market fragmentation and inadequate infrastructure as major impediment to the development of these enterprises. Although micro enterprises might be seen as private sector concerns but government actions through its agencies is crucial to facilitating their smooth operation. However, the lack of baseline empirical information on the access of these enterprises to enabling infrastructure incapacitates informed policy responses by government.

The study was aimed at addressing this knowledge gap. The specific objectives of the study are; identify the socio-economic characteristics of the micro-entrepreneurs, assesses the level of access to market stores, cold rooms and electricity as well as determines and analyzes the cost of renting private market stores. These issues are considered to be some of the most critical in the development of micro-enterprises in Delta State.

### Materials and Method

Delta State is divided into three agricultural zones namely Delta North, Delta South and Delta central. which also represent its three senatorial districts. In order to obtain a good coverage of the study area random sampling techniques was employed for the study. Three (3) local government areas, each from the three agricultural zones were purposively sampled, namely: Ughelli North, Isoko North and Oshimili South. Furthermore, five (5) communities were randomly selected from each of the three (3) local government areas making a total of fifteen (15) communities. Also, ten (10) micro-entrepreneurs were selected from each community bringing the sample size to 150. The instrument for data collection was the questionnaire. Descriptive statistics and multiple regression model were used for the analysis.

### Multiple regression model specification

In studies where the relationship between the dependent and independent variable are estimated, the most analytical technique used is the regression analysis (Awoke, 2002). Regression analysis uses statistical model to measure the average amount of change in the dependent variable associated with a unit change in the amount of one more independent variable (koutsoyannis, 2003). A regression is said to be multiple when it has more than one independent variable that is:

$$Y = f(X_1, X_2, X_3, X_4, X_5, \dots, X_n) \quad (1)$$

This means that  $X_s$  is functionally related to the model hence they are called the independent or exogenous variable. Nonetheless, the  $Y$  is to be determined by  $X_s$ , hence, the  $Y$  is called the dependent or endogenous variable ( Koutsoyannis, 2003). The model is expressed as:

$$Y = f(X_1, X_2, X_3, X_4, X_5, \dots, X_n + e) \quad (2)$$

The  $e$  is the error term; the error term will capture the omitted variables. It will also take care of the unpredictable nature of human behavior, error of measurement and aggregation (Awoke, 2002). The analysis will help to determine the factors influencing micro-enterprise development, if any are statistically associated with the performance of micro-enterprises. It is implicitly specified as:

$$Y = f(X_1, X_2, X_3, X_4, X_5, \dots, X_n + e) \quad (3)$$

Where

$Y$  = return to the entrepreneur (₦) (proxy for enterprise development)

$X_1$  = age

$X_2$  = gender of owner

$X_3$  = length of experience in business

$X_4$  = educational level of micro-entrepreneur

$X_5$  = number of employees

$X_6$  = value of asset holding

$X_7$  = access to market

$X_8$  = cost of renting stalls

$X_9$  = access to cold-rooms

$X_{10}$  = access to electricity

### Socio-Economic Characteristics of the Micro-Enterprises

**Age of entrepreneur (operator):** Age is an important factor to be considered in any socio-economic study. For each group of respondents the survey result indicated that majority (50.7%) of the entrepreneurs fell between 31 and 40 years of age as shown in Table 1. The survey revealed that 13.3% represent age bracket between 30 years and below, 34.7% falls between 41 and 50 years and 1.3% for above 50 years. The average age was 38 years. The implication of this is that the entrepreneurs

**Gender of operator:** The survey statistics presented in Table 1 show that female proprietor dominated (58.0%) relative to male owned enterprises (42.0%). This result reflects the known fact that the female population are less in the civil service and that they are mostly employed in micro-enterprises. Also the female youths are more desirous to be self-employed in the State than their male counterparts who would rather engage in underground oil business related activities including militancy.

**Length of business:** The result indicated that most of the micro-enterprises are relatively young (52.0%) going by the number of years of establishment probably formed as a result of the recent campaign on importance of micro-enterprises in the State, and the government proposed incentives to agro-based micro-enterprises. The survey result as shown in

Table 1 indicated that 52.0% of the enterprises have existed between 1 and 10 years, 37.3% between 11 and 20 years and 10.7% between 21 and 30 years. The average experience in the business is 11 years. This implies that there was an unfilled gap in the structure of Delta State economy. Micro-enterprises are known for their structural definition of the economy of any nation.

**Educational level:** Higher educational attainment of micro-entrepreneurs is expected to be an asset with respect to quality of management and access to facilities offered by micro-enterprises support agencies. The survey result in Table 1 indicates that 20.0% of the entrepreneurs had no formal education, 36.0% had primary, 34.0% had secondary education and 10.0% had tertiary education. The relatively high educational attainment recorded in the survey (at least 44.0% has secondary education and above) is expected to impact positively on quality of management and positive disposition to credit and other assistance services.

**Size of micro-enterprise:** Size of micro-enterprise measured by number of employees has an implication for economy of scale. The result in the Table 1 indicated that 80.7% of the enterprises employed between 1 and 10 persons (including unpaid family workers), 13.3% employed between

11 and 20 workers and 6.0% employed above 20 workers. The mean size of employees was 8 persons. The survey results indicate that majority of the businesses are small and cannot enjoy reasonable economy of large scale. This has an implication for acquiring market infrastructure. They may not be able to afford market stores, cold rooms etc.; this call for assistance from micro-enterprise development agencies to provide market infrastructure at affordable rate.

**Value of asset holdings:** A high value of asset-holdings of an enterprise is an indication of a strong and viable business. Such a business is most likely to receive better attention from micro-enterprise development agencies. The survey result in Table 1 shows that 6.0% of the enterprises had less than ₦100,000 as assets, 54.0% had between ₦100,000 and ₦150,000, 40.0% had ₦150,000 and above as assets. The average value of asset holding was ₦ 142, 400. This is inline with the USAID (2003) definition of micro-enterprise as “businesses with not more than ₦150, 000.00 assets including stores and machineries. This implies that about 94.0% of the enterprises had ₦100, 000 and above as assets. This relatively strong asset base is likely to allow the enterprises enjoy economy of scale.

**Table 1: Socioeconomic Characteristics of Entrepreneurs (N = 150)**

Variables	Frequency	Percentage	Mean/Mode
<b>Age (years)</b>			
30 and below	20	13.3	
31-40	76	50.7	38 years
41-50	52	34.7	
Above 50	2	1.3	
<b>Gender</b>			
Male	63	42.0	Female
Female	87	58.0	
<b>Length of business (years)</b>			
1-10	78	52	
11-20	56	37.3	11 years
21-30	16	10.7	
<b>Education level</b>			
No formal education	30	20.0	
Primary education	54	36.0	Primary education
Secondary education	51	34.0	
Tertiary	15	10.0	
<b>Size of microenterprise</b>			
1-10 employees	121	80.7	
11-20	20	13.3	8 employees
Above 20	9	6.0	
<b>Value of Asset Holdings</b>			
Less than ₦100, 000	9	6.0	
₦100, 000 – ₦150, 000	81	54.0	₦ 142, 400
Above ₦150, 000	60	40.0	

Source: Field survey,2017

**Access to market stores:** The result in Table 2 revealed that only 9.3% of the micro-enterprises studied have access to government allocated market

stores. Also, 90.7% of the respondents claimed that market stores were not accessible to enterprises probably because administrative bottlenecks.

**Table 2: Distribution of Access to Market Stores**

Access to Market Stores	Frequency	Percentage	Mean/mode
Yes	14	9.3	
No	136	90.7	Yes

Source: Field survey, 2017

**Rents on private market stores:** The findings in Table 3 showed that 72.7% of the respondents said the cost of renting private market stores was above ₦60, 000. The average rent for market store was ₦

60,200. The high cost of renting a store can affect the profit of the entrepreneur and this may discourage enterprise development.

**Table 3: Distribution of Rents on Private Stores**

Rents on private stores	Frequency	Percentage	Mean/mode
Less than ₦60,000	41	27.3	
₦60,000-₦80,000	49	32.7	₦ 60,200
Above ₦80,000	60	40.0	

Source: Field survey, 2017

**Access to cold-room:** Cold-room is very essential for agricultural micro-enterprises considering the fact that most of the products are perishable. These products need to be preserved against the next market meeting. The result in Table 4 shows that

only 14.7% of the respondents have access to cold-room facilities, while 85.3% have no access to this facility. The implication of this result is that most of the products which are not sold on one market day may be wasted.

**Table 4: Distribution of Access to Cold-Room**

Access to Cold-Room	Frequency	Percentage	Mean/mode
Yes	22	14.7	
No	128	85.3	No

Source: Field survey, 2017

**Access to electricity supply:** Electricity services are very important tools for business development. Electricity used to power processing machines, preserve perishable goods and general lightening of the market area and stores. The result in Table 5

showed that only 12.0% of the respondents had access to electricity supply in their market areas. It implied that 88.0% uses private generators which increases cost of production.

**Table 5: Distribution of Access to Electricity**

Access to Electricity	Frequency	Percentage	Mean/mode
Yes	18	12.0	
No	132	88.0	No

Source: Field survey, 2017

#### **Determinants of Socio-Economic and Institutional Factors of Micro-Enterprise Development**

The result of the multiple regression model is presented in Table 6. The result of the regression analysis shows that the revenue from the micro-enterprises was best estimated using the double-log function, which explained 66.8% of the total variation. The study found out that length of experience in business, education, asset holdings, access to market stores and access to electricity supply were positive and significant at 1% level. However, cost of renting stalls was negative and significant at 1% level. Age of entrepreneur, number of employees and access to cold-rooms were also

positive and significant at 5% level. It should be noted that a positive sign on a parameter indicated that higher values of the variables tend to reduce the likelihood of micro-enterprises inaccessibility. Age of the entrepreneur variable significance is indicative of the fact that the income of enterprise will improve with age. Performance tends to increase with experience in the enterprise operators. The more experienced the enterprise operator, the better performance of the firm to generate more income. The findings is in consonance with that of Rosli, (2011); and Maes et al. (2005). The education of the entrepreneur had a positive significant influence on the income of the firm. This implies that increase in

educational level will lead to a corresponding increase in enterprise development. The number of employees had a positive influence on enterprise development. This could be attributable to the fact that increase in number of employees will lead to increase in enterprise development. The value of asset holding of entrepreneur was significant and had positive influence on enterprise development. This could be because the higher the asset owned by the business owner, it will lead to enterprise development. The coefficient of access to market stores was significant and had positive influence on enterprise development. This means that increase in access to market stores by business operators will

lead to enterprises development. The cost of renting stores was significant and had negative influence on enterprise development. This could probably be due to the fact that increase in renting stores will decrease enterprise development. The coefficient of access to cool-rooms was significant and had positive influence on enterprise development. This implies that increase in access to cool-rooms will lead to increase in enterprise development. The result showed that access to electricity was significant and had positive influence on enterprise development implying that availability and easy access to source of energy will lead to enterprise development.

**Table 6: Determinants of Socio-Economic and Institutional Factors of Micro-Enterprise Developments**

Variable	Coefficients	Standard error	t- statistic
Constant	4.277	2.270	1.876*
Age (X <sub>1</sub> )	0.680	0.246	2.758**
Gender of owner (X <sub>2</sub> )	0.364	0.300	0.899
Length of experience in business (X <sub>3</sub> )	0.021	0.005	3.925***
Educational level of micro-entrepreneur (X <sub>4</sub> )	0.504	0.168	2.986***
Number of employees(X <sub>5</sub> )	0.557	0.248	2.248**
Value of asset holding(X <sub>6</sub> )	0.495	0.181	2.736***
Access to market stores(X <sub>7</sub> )	1.040	0.443	2.348***
Cost of renting stalls (X <sub>8</sub> )	-2.354	0.342	6.883***
Access to cold-rooms (X <sub>9</sub> )	0.035	0.013	2.692**
Access to electricity(X <sub>10</sub> )	2.041	0.383	5.334***
R <sup>2</sup>	0.6681		
F- value	12.374		

**Source: Field survey, 2017**\*\*\* significant at 1% level, \*\* significant at 5% level, \* significant at 10%

### Conclusion and Recommendations

The survey examined the improvement of market infrastructure as a strategy for the development of informal sector micro-enterprises in Delta State. The findings revealed that there is an acute shortage of market infrastructure available to prospective micro-enterprises. Electricity supply is not steady, there are too few cold-rooms available in the State; worst still is the inadequate market stores available and the high cost of renting private market stores in the State.

From the findings it could be concluded that there is need for a total redirection of resources to improve infrastructure to encourage private investment. There is also need to improve on general rural development strategies by making basic amenities accessible to rural communities to facilitate production and the orderly conduct of rural micro-enterprises.

The results of the study call for policies aimed at encouraging informal sector agro-based micro-enterprises development by improving on the market infrastructures to expand and boost agricultural intensification. Finally, a legislation to control the rent of market stores may improve access.

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