

MOTORABLE ROADS AND TRANSPORTATION SYSTEM IN THE AGRICULTURAL ZONES OF IMO STATE, NIGERIA: THE MISSING FACTOR IN FOOD PRODUCTION AND DISTRIBUTION

Pat-Mbano, E.C. & Okeoma, I. O.

Department of Urban and Regional Planning
Imo State University Owerri

Abstract

Amidst the abundance of fertile agricultural land, it was observed that the availability of food has remained a major problem in many African nations. The agricultural zones of Imo State, Nigeria were used as a case study. A sample of 600 rural dwellers was used to find out the missing factor in food production and distribution. The result showed that lack of adequate transportation systems and infrastructure are responsible for the shortage of food. Also the youths have drifted to the urban areas leaving the rural areas to the mercy of the aging population who do not have enough strength to sustain the traditional farming system. It is recommended that motorable roads especially farm to market roads be constructed. Also modes of transport that can go into the farmlands like òKekenapepò, buses, taxis should be made available to ease the problem of transporting improved seedlings and agricultural products. Improving the water transportation, providing credit facilities as well as development of markets and agro-allied industries will go a long way to improve the production and distribution of food in Nigeria.

Keywords: Motorable roads, Transportation development, Agricultural zones, Rural areas, Food security.

Introduction

Globally, transportation has contributed to the development of many countries. Barwell (1996) stated that transportation development in most African countries has contributed to a positive improvement in the agricultural sector which also increased the quality of life. Any nation without an effective transportation system may not develop properly. This point is corroborated by Falani (1978) and DFID White Paper (2009) who opined that an immobile nation is a poor nation, but mobility is impossible without transportation development. Falani also stated that transportation affects every human being in the course of his or her daily activities and it is difficult to conceive of a situation where transportation does not play a significant role in the life of any given individual or society. Consequently, people have to travel to work, to play, to buy and sell, to obtain professional services, to socialize and to convey agricultural products from one place to another. Road is an asset to any setting as it provides farmers access to their farms. This is more so in cases where the roads are motorable (Fakayode 2008). An adequate transport network from farm to market is crucial to efficient marketing structure (David 2008, Nwakubo 2004).

Food is a basic necessity for the survival of man. This calls for the production, availability and easy accessibility to man. It is expected that Nigeria being an agrarian economy should make the production, availability and accessibility of food possible for her citizens. In Nigeria, Imo State for example, lack of good roads in the rural areas has affected agricultural development and food distribution. According to Fakayode (2004), agricultural products are mostly traded in small markets around the vicinity of farmers farm and this reduces the selling price of farm products compared to the price traded for them in bigger markets due to lack of good motorable roads.

Most rural communities in the agricultural zones of Imo State have rich and extensive fertile soil that is suitable for agriculture, which will invariably improve food security if properly harnessed. Despite the rich and fertile agricultural zones in Imo State, food production and distribution have been on the very low side due to lack of motorable roads and effective transportation system. This situation makes it difficult for farmers in these agricultural zones to convey agricultural inputs and seedlings to the farm and bring out produce to the market for effective distribution. It is therefore the thrust of this paper to find out ways of boosting food production and distribution through improved transportation network and infrastructure.

The Study Area

Imo state is made up of three distinctive agricultural Zones- namely Okigwe, Orlu and Owerri. All the agricultural zones produce crops like maize, yam, cocoyam, rice, cassava, palm oil, vegetables and plantain in abundance and have extensive fertile farmlands. That notwithstanding, some areas are more naturally endowed in case of fertility than others and so produce more crops than others. There are 11 local government areas in Owerri Agricultural Zone, 10 LGAø in Orlu Agricultural Zone and 6 LGAø in Okigwe Agricultural Zone.

Sampling Technique

Data were sourced primarily from rural farmers in the three Agricultural Zones in Imo State. To ensure proper representation, multi stage random sampling technique was employed.

Stage one was the selection of 2 LGAø from each of the Agricultural Zones using simple random sampling technique. A total of 6 LGAø were selected. These are as follows:

1. Owerri: Oguta and Ohaji/Egbema LGAø
2. Orlu: Orsu and Ideato South LGAø
3. Okigwe: Isiala Mbano and Ihitte/Uboma LGAø

Stage two was the selection of 2 communities from each of the LGA using simple random sampling technique. A total of 12 communities were sampled. They include

1. Oguta LGA (20 communities): Oguta and Obidi Agwa
2. Ohaji/Egbema LGA (16 communities): Awara and Obitti
3. Orsu LGA (21 communities): Okwufuruaku and Etiti Awo-Idemili
4. Ideato South LGA (23 communities): Dimagu and Umuchima
5. Isiala Mbano LGA (27 communities): Obollo and Umueze
6. Ihitte/Uboma LGA (19 communities): Ezimba and Umuoma

Stage three was the selection of 50 heads of households from each of the 12 communities using systematic random sampling technique. A total of 600 heads of households were sampled.

Data Collection

Data were collected from the heads of households using a structured questionnaire. The two researchers assisted by two research assistants administered the copies of the questionnaire face to face to the respondents. In the absence of any head of household, an adult member from the household was sampled.

Data Analysis

Data collected were analysed using simple percentages and frequency distribution.

Results and Discussions

A. Sex

The sex distribution table below shows that 65.3% of the respondents are females. This implies that the population of women who are heads of their various households in the 12 communities sampled are far greater than men. This has an impact in the types of crops grown because traditionally men cultivate yam mostly while women face other crops like cassava and cocoyam. It could be that the male heads of households have died or are living in the urban areas while their wives are heads of households in the rural communities. This may result to shortage of such crops grown by men.

Table 1: Sex of Respondents

Sex	No of Respondents	Percentage
Male	208	34.7
Female	392	65.3
Total	600	100

Source: Field Survey 2008

B. Age

Greater percentage (50.83%) of the respondents is between the ages of 55 ó 65 years. Only 87 respondents are at most 45 years old. This means that the population in the rural communities is aging. This invariably has a negative effect on agricultural development and food production since traditional farming systems which are labour intensive are still in practice in the rural communities. It will be very difficult for the elderly ones to walk very long distances and this could affect production especially where their farm lands are located far away. It is possible that a good number of the youths who have the energy to go into agricultural production have migrated to the urban areas in search of greener pastures. This could be as a result of lack of incentives for agricultural development like transportation facilities or lack of interest. Table 2 below shows the age distribution of respondents.

Table 2: Age of Respondents

Age group	No of Respondents	Percentage
Below 25	13	2.17
25 ó 35	20	3.33
35 ó 45	54	9.00
45 ó 55	172	28.67
55 ó 65	305	50.83
65 & above	36	6.00
Total	600	100

Source: Field survey 2008

C. Occupation

Table 3 below shows the occupational distribution of respondents. Out of the 600 people sampled, 54.83% engage in farming, 8.67% engage in fishing while only 10.50% are civil servants. Majority of the fishermen are also farmers. Even the civil servants combine their work with farming. Despite the fact that majority of the respondents are farmers and also the fact that there are large fertile farmlands, lack of roads and modes of transport have hindered effective production and distribution. Other factors could also account for low productivity of food. However, in this situation the problem seems not to be poor soil or availability of land but means of accessing farm sites and bringing out agricultural products.

Table 3: Occupation of respondents

Occupation	No of respondents	Percentage
Farming	329	54.83
Fishing	52	8.67
Trading	108	18.00
Civil Service	63	10.50
Others	48	8.00
Total	600	100

Source: Field survey 2008

D. Income

The monthly income as shown in Table 4 indicated that 49.17% of the respondents earn between N10,000 ó N20,000 monthly. Since Table 3 showed that 54.83% of the respondents are farmers, it therefore means that majority of the farmers in the study area fell in the above income class which is low. The low income may not be attributed to the fact that the farmers are not hardworking, it could be related to poor transportation system. If farmers are unable to bring out their produce to the market for sale, the produce perish in the farm and the farmers are impoverished. The low income therefore could be attributed to the very little quantity of produce they are able to carry to the market due to lack of transportation. However, their income according to Riverson (2001) could be improved by creating motorable tracks between the villages and major roads. This invariably will increase the farm gate prices. Nigeria's rural road network according to Fakayode (2008) is

one of the least developed in Sub-Saharan Africa. He also stated that the limited accessibility has also cut off small scale farmers from sources of input, equipment and new technologies.

Table 4: Monthly Income of Respondents

Income Group	No of respondents	Percentage
Less than 10,000	47	7.83
N10,000 - N20,000	295	49.17
N20,000 ó N30,000	176	29.34
N30,000 ó N40,000	44	7.33
N40,000 and above	38	6.33
Total	600	100

Source: Field survey 2008

E. Means of Transportation to and fro Farm Sites

The predominant means of transportation to and fro farm sites is by foot and 61% of farmers trek to their farms and carry their produce on their heads to the markets. They walk long distances for over 3 hours before reaching the markets. This limits to a reasonable extent the quantity of produce available for sale. This fact is in line with the views of Amartya (2007) who stated that food is produced by peasants not to demonstrate how much can be grown but to make economic use of them ó to eat, to sell, to exchange. He added that we cannot directly infer how much have been produced merely by looking at what was actually produced. To be sure we do know that what was actually produced was possible but we do not know how much more could have been produced if there are economic incentives like transportation facilities for expanding output. This economic distinction though elementary, is quite important in assessing the global food problem. The 100 respondents in Oguta LGA (16.67%) indicated that their major farm sites are located across the Lake and so use canoe to go to their farm as well as bring out agricultural produce. There are complete absence of buses, taxis, speedboats, barges and other faster means of transportation which can carry large quantities of produce at a time to the markets. Only 7.5% of the respondents use motorcycle to access their farm sites and 14.83% use bicycle. Table 5 below shows the details.

Table 5: Means of Transportation to and fro Farm Sites

Transport Means	No of Respondents	Percentage
Canoe	100	16.67
Speed boat	0	0
Pontoon	0	0
Bus/Taxi	0	0
Motorcycle	45	7.50
Bicycle	89	14.83
Foot	366	61.00
Total	600	100

Source: Field survey 2008

F. **Problems Encountered in Transporting Agricultural Products to the Markets**

Apart from respondents that access their farm sites through waterways, 456 respondents indicated that there are absence of buses/taxis which are capable of conveying large quantities of produce to the market. The roads are often water logged and slippery during rainy season. Respondents in Oguta have such problem as lack of developed water transport and presence of manually driven canoes. These canoes take several hours to bring out agricultural produce during the harvest periods. Sometimes, products like fruits, vegetables, cassava etc. decay in the process of transporting them across the lake where they could be sold. The only pontoon available is in deplorable state due to poor maintenance.

Distance to farm sites is a major problem since majority of the respondents (415) goes on foot. The distances they cover to their farmlands are long and they still have to carry their heavy produce on their head to the market. According to Nwakubo (2004), the condition of road infrastructure from the farm to the market will also determine the type and quantities of input used in agricultural production and the returns obtained. Most times, some crops are left to perish in the soil due to lack of transportation. Other farmers sell their crops in the soil unharvested at a very low price due to lack of means of conveying them to the market where the value will be higher. All these problems are some of the reasons why farmers earn low income and even the youth desert the rural areas in search of greener pastures in the urban centres. In highlighting some of the constraints to rural development in Sub-Saharan Africa, Calvo (1998) stated that inadequate rural transport and lack of mobility pose a constraint to development. African villagers walk and carry their loads. She also emphasized the fact that most common means of transport in Africa are the legs, heads and backs of African women. Lack of mobility as opined by DFID White Paper (2009) and Cleaver (1993) can dramatically inhibit the agricultural productivity of small scale farmers. Table 6 below shows some of the problems encountered by farmers in the study area.

Table 6 Problems Encountered by Farmers

Problems	Frequencies
Lack of developed water transport	98
Presence of old vessels/canoes	100
Eroded/flooded roads	398
Absence of buses/taxis	456
Distance to farm sites	415

Source: Field Survey 2008

Conclusion

Many African countries are agrarian in nature so proper attention must be paid to agriculture to ensure food security. This can only be achieved if the transportation sector is developed especially in areas where food is produced in large quantities. Investment in rural infrastructure, particularly rural roads, storage, processing and marketing facilities will therefore be required to support the anticipated growth in agricultural production. Transportation is therefore very important if the issue of food production and distribution in Nigeria is to be achieved.

Recommendation

Having exposed the present condition of transportation network and infrastructure in the rural communities as it affects food production and distribution, it is pertinent to make recommendations that will promote food security in Nigeria and other African countries. This can start from paying adequate attention to rural transportation especially roads and water ways that lead to areas of bumper harvest. This is in line with the 7-Point Agenda of President Umaru Yar'Adua, on revolutionized agricultural sector to achieve food security. The following recommendations are therefore made to address the problem of food production and distribution:

- Construction of farm to market roads.
- Provision of buses, taxis, tricycle (Kekenapep) that would ply farm roads and convey agricultural products to the markets and beyond.
- Dredging the inland water ways and provision of big vessels and pontoon for easy transportation of goods and services.
- Development of rural infrastructure to discourage rural-urban migration
- Development of agro-allied industries that would readily use agricultural products as raw materials.
- Creating markets for the sale of agricultural products as well as finished goods from the agro-allied industries.
- Provision of credit facilities, agricultural lands, improved seedlings, mechanized farming systems to farmers.
- Promotion of self-help aids and formation of co-operative societies.
- Enlightenment programs, extension services and education of farmers on production enhancement methods.

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