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**A Study of the Transportation Factors Militating Against
Agricultural Production in a Developing Country:
The case of Nigeria.**

**Ajiboye, Araoye Olarinkoye
rinkoyemii@yahoo.com**

**Afolayan, Olu
Transport Management Unit,
Department of Management Science,
Ladoke Akintola University of Technology,
Ogbomoso, Oyo State, Nigeria.**

ABSTRACT

Transport is regarded as a crucial factor in improving agricultural productivity. It enhances quality of life of the people, creates market for agricultural produce, facilitates interaction among geographical and economic regions and opens up new areas to economic focus. This paper will examine the transportation factors militating against the development of agriculture in developing world generally and to Nigeria in particular.

A total of 100 questionnaires were administered to farmers which were randomly selected and interviewed representing 5% of the registered farmers in the study area. The analysis of the data collected from the questionnaire were based on simple statistic supported by series of tables and figures showing percentage distribution of some variables while Spearman's Rank Correlation Coefficient (r^2) was used to test the relationship between the factors militating against agricultural production generally and the ones mentioned by the respondents while the ranking of the variables were done by given these values 1, 0.5 and 0 to seriously agreed, agreed and not agreed which were sum up and the ones with highest and lowest sum total ranked first and last. The study revealed that there are many factors militating against agricultural production in developing world in general and Nigeria in particular but transport factor play a leading role.

Key words: Transportation factors, Agricultural Production

1.0 INTRODUCTIONTransport is regarded as a crucial factor in improving agricultural productivity according to Ajiboye, (2009). It enhances quality of life of the people, creates market for agricultural produce, facilitates interaction among geographical and economic regions and opens up new areas to economic focus while agricultural production is very important to the economy of developing nation as a whole and Nigeria in particular. It is the major occupation of the inhabitants and people of the country while it provides employment directly or indirectly for at least 70% of the people in Nigeria according to Aihonsu (1992). The major agricultural products are cash crops of cocoa, kola-nut, rubber, palm-oil, citrus trees and the arable crops such as yam, maize, cassava, rice, coco-yam, sugar-cane and melon to mention a few. These products serve as food for

man and raw materials for agro-based industries within and outside the state while they also provide revenue to farmers and generate foreign exchange to the government. Despite the fact that Nigeria is basically an agrarian nation and the majority of the goods to be transported are mostly agricultural products which according to Igben (1977) are by nature often bulky, low-priced, highly perishable and must be conveyed from their area of production to their zone of consumption with minimum delay and cost, as well as widely dispersed over the available land area according to Upton (1988); it therefore requires a correspondingly wide-spread transport net-work to take produce from farm to market. This was not the case as observed by Ajiboye (1995) that inadequate supply and high cost of food stuff is as a result of inefficient transportation and distribution. Idachaba (1980) in his study of food production problems in the rural areas contended that transportation among other factors represents the most serious constraint to agricultural product and development in Nigeria.

The role of transport is therefore very crucial and it is a phase in production process which is not complete according to Adefolalu (1977) until the commodity is in the hands of the final consumers. Similarly, the availability of transport facilities which has been identified by Ajiboye (1994) as a critical investment factor that stimulates economic growth through increased accessibility, its efficiency and effectiveness, all affect the basic function of production, distribution, marketing and consumption in many ways while it also influences the cost of commodity consumed and the purchasing power of the consumers.

It is therefore against this background that an attempt is made in this paper to examine in depth transportation factors militating against agricultural production situation in the study area among other factors. The paper is therefore divided into four sections. Section 1 gives a background study of the paper, section 2 discusses the methodology and section 3 examines the transportation factors militating against agricultural production while section 4 concludes the paper with some recommendations.

1.2 METHODOLOGY

A total of 100 questionnaires were administered to farmers which were randomly selected and interviewed representing 5% of the registered farmers in the study area. The analysis of the data collected from the questionnaire were based on simple statistic supported by series of tables and figures showing percentage distribution of some variables while Spearman's Rank Correlation Coefficient (r^2) was used to test the relationship between the factors militating against agricultural production generally and the ones mentioned by the respondents while the ranking of the variables were done by given these values 1, 0.5 and 0 to seriously agreed, agreed and not agreed which were sum up and the one with highest sum total ranked first while the one with lowest sum total ranked last.

1.3 ANALYSIS OF THE TRANSPORTATION FACTOR MILITATING AGAINST AGRICULTURAL PRODUCTION

An attempt was made to find out from the respondents the major factors militating against increased agricultural production in Nigeria. Thirteen of such constraints were identified as shown in Table 1. Transport which is regarded as a crucial factor in improving agricultural productivity, enhancing quality of life of the people, facilitating interaction among geographical and economic regions, spreading the trade and ideas, creating market for agricultural produce, opening up new areas of the country to economic focus at all levels and promoting specialization in product through ability to procure other goods needed from the widely diverse production areas according to Ajiboye (1995) was ranked first as a serious problem by all the respondents among other constraints facing agricultural production in the study area. The respondents also confirmed the general belief that transportation has an effect on the production level of the farmers as well as the price of the agricultural products. 30% of the respondents very much agreed that the above statement is true, another 48% mentioned they agreed, 20% slightly agreed and the remaining 2% do not agree at all. This further shows the importance of transportation in agricultural development. If there are no good transport facilities, the farmers would not be able to produce more since they would not be quite sure of how they would evacuate the products from their farms and the price of the little available crops in the markets would be very high as many people would not be able to afford it.

The inadequacy of transport facilities was followed by inadequacy of credit facilities in which score total was 95 while inadequate modern farming equipment came next with score total of 94. High cost of transport resulting from inadequate and lack of transport facilities, poor condition of roads, poor accessibility of some places and invariably very few vehicles plying some routes to mention a few was ranked with 91. Inadequate and lack of Government support through the provision of farm input and extension services came next with 90, while inadequate and lack of infrastructural facilities rank sixth with total score of 89.5. This has drawn a lot of able bodied men and women away from the rural areas and farms to the urban areas This was followed in order of ranking by inadequate /lack of modern market, inadequate/lack of farm input, inadequate/lack of medical facilities, inadequate land for farming, poor storage facilities, high rate of pest and disease infection and inadequate labour supply and the score total are 87.5, 86.5, 71, 65.5, 58.5, 41.5 and 11 respectively. A ranking of the suggestions for the improvement of the constraints listed above was made as shown in Table 2 below. These are provision of good motorable roads, vehicles, credit facilities, infrastructural facilities, modern markets, farm inputs, modern farming equipments, farmable lands, pest and disease control facilities and adequate medical facilities as well as cheap labour. From the rank analysis, all the respondents attested to good road transport system as the most favored facility and followed closely by the provision of vehicles to ply the routes with score total of 95. The farmers gave their opinion on the issue that inadequate transportation facilities have a negative effect on the production and price charged on agricultural products. 72% of the respondents believed that an improvement on the road condition among other factors

can motivate them to grow more agricultural products and this in essence will mean more improvement in transport services and will also attract more buyers into the region as well as possible higher profit margins for their products.

The provision of credit facilities came next with scored total of 94 and the provision of modern market with necessary facilities ranked fifth with scored total of 90 while the provision of infrastructural facilities such as adequate water supply and electricity was ranked sixth with score total of 86 while the provision of farm input such as seedlings, high yield and resistant seeds as well as fertilizers ranked seventh with the scored total of 80. Other facilities needed by the farmers are provision of land for landless especially the non-indigenes with score total of 78.5 and the provision of modern farming equipment with score total of 75. Adequate government support at all levels and more in the area of extension services as well as in financing and equipment procurement came next with score total of 72 while provision of improved storage facilities, pests/disease control facilities, adequate medical facilities as well as cheap labour followed one another with the score total of 71, 48, 45 and 43 respectively.

TABLE 1:FACTORS RESPONSIBLE FOR LOW AGRICULTURAL PRODUCTION AS PERCEIVED AND RANKED BY THE RESPONDENTS

Factors responsible for low agricultural production	Seriously agreed	Agreed	Disagreed	Total	Scored Total	Ranked
Inadequate/lack of transport facilities	100	—	—	100	100	1
Inadequate credit facilities	90	10	—	100	95	2
Inadequate modern farming equipment	88	12	0	100	94	3
Inadequate/lack of farm input	81	11	8	100	86.5	8
Inadequate infrastructural facilities	82	15	3	100	89.5	6
Inadequate/lack of government support	80	20	0	100	90	5
High cost of transport	83	16	1	100	91	4
Poor storage facilities	40	37	23	100	58.5	11
Pest/disease infections	24	35	41	100	41.5	12
Inadequate/lack of modern market	76	23	01	100	87.5	7
Inadequate medical facilities	55	32	13	100	71	9

Inadequate land for farming	53	25	22	100	65.5	10
Inadequate labour supply	01	20	79	100	11	13
Sum	853	256	191	1300	906	
Mean	66	20	15	100		
STD	31.08	10.05	26.07			

Source: Author's Field Survey, 2008

**TABLE 4.6: FACILITIES NEEDED BY THE FARMERS AS A SOLUTION TO
THE CONSTRAINT AS GIVEN BY THE RESPONDENTS**

Facilities needed by respondents	Seriously agreed	Agreed	Disagreed	Total	Scored Total	Ranked
Provision of good motorable road	94	6	0	100	100	1
Provision of Credit facilities	90	8	2	100	94	3
Provision of Vehicles	92	6	2	100	95	2
Provision of Farm Inputs	72	16	12	100	80	6
Provision of modern farming equipment	65	20	15	100	75	8
Provision of Infrastructural facilities	80	12	8	100	86	5
Provision of Modern Market	85	10	5	100	90	4
Provision of improved storage facilities	59	21	20	100	71	10
Pest and disease control facilities	32	32	36	100	48	11
Provision of Land	68	21	11	100	78.5	7
Adequate Medical facilities	30	30	40	100	45	12
Adequate Government support	52	40	8	100	72	9
Availability of cheap labour	24	36	40	100	42	13
Sum	843	258	199	1300		
Mean	65	20	15	100		
STD						

Source: Author's Field Survey, 2008.

TOTAL

75

Source: Author's field Survey

X = Factors militating against agricultural production

Y = Facilities needed by the respondents

X_i and Y_i = Rank of X and Y respectively

d = difference between the ranks

Null Hypothesis: There is no positive correlation between the factors militating against agricultural production and the facilities needed.

Alternative Hypothesis: There is positive correlation between the factors militating against agricultural production and the facilities needed.

Level of significant is 1%

$$\text{Formula} = 1 - \frac{6[d^2]}{n(n^2 - 1)}$$

Where d² = summation of squares of the difference between them = 75

n = number of pairs of data = 13

Substituting the values in the formula

$$r^2 = 1 - \frac{6 \times 75}{13^3 - 13}$$

$$= 1 - \frac{450}{2197 - 13}$$

$$= 1 - \frac{450}{2167}$$

$$= 1 - 0.2077 = 0.79$$

The value of r varies from +1 indicating perfect positive correlation to -1 indicating perfect negative correlation. Therefore, with the r value of 0.79 as calculated above, it can be said that there is a high positive correlation between the two pairs of data.

Hence, the null hypothesis is rejected and the alternative hypothesis is accepted.

That is there is a positive relationship between the factor militating against agricultural production and the facilities needed by the respondents.

However, to test the probability of the occurrence of the relationship by chance, the students "t" test is used.

$$\text{Formula } r = \frac{n-2}{1-r^2}$$

Where r = 0.79 and n = 13

Substituting the formula

$$1 - (0.79)^2$$

$$= 0.79 \times 13 - 2$$

$$= 0.79 \times \frac{1 - 0.8281}{0.1719}$$

$$= (0.79) \times 63.99$$
$$= 0.79 \times 8.0 = 6.32 = 6$$

Degree of freedom (df) = 13-2 = 11

The 't' value in statistical table under 6 df at 1% significant level is 2.71. Therefore, since the calculated 't' value is above the 1% (0.01) significant level, this indicates that there is low less than one chance in thousand that the relationship has occurred by chance.