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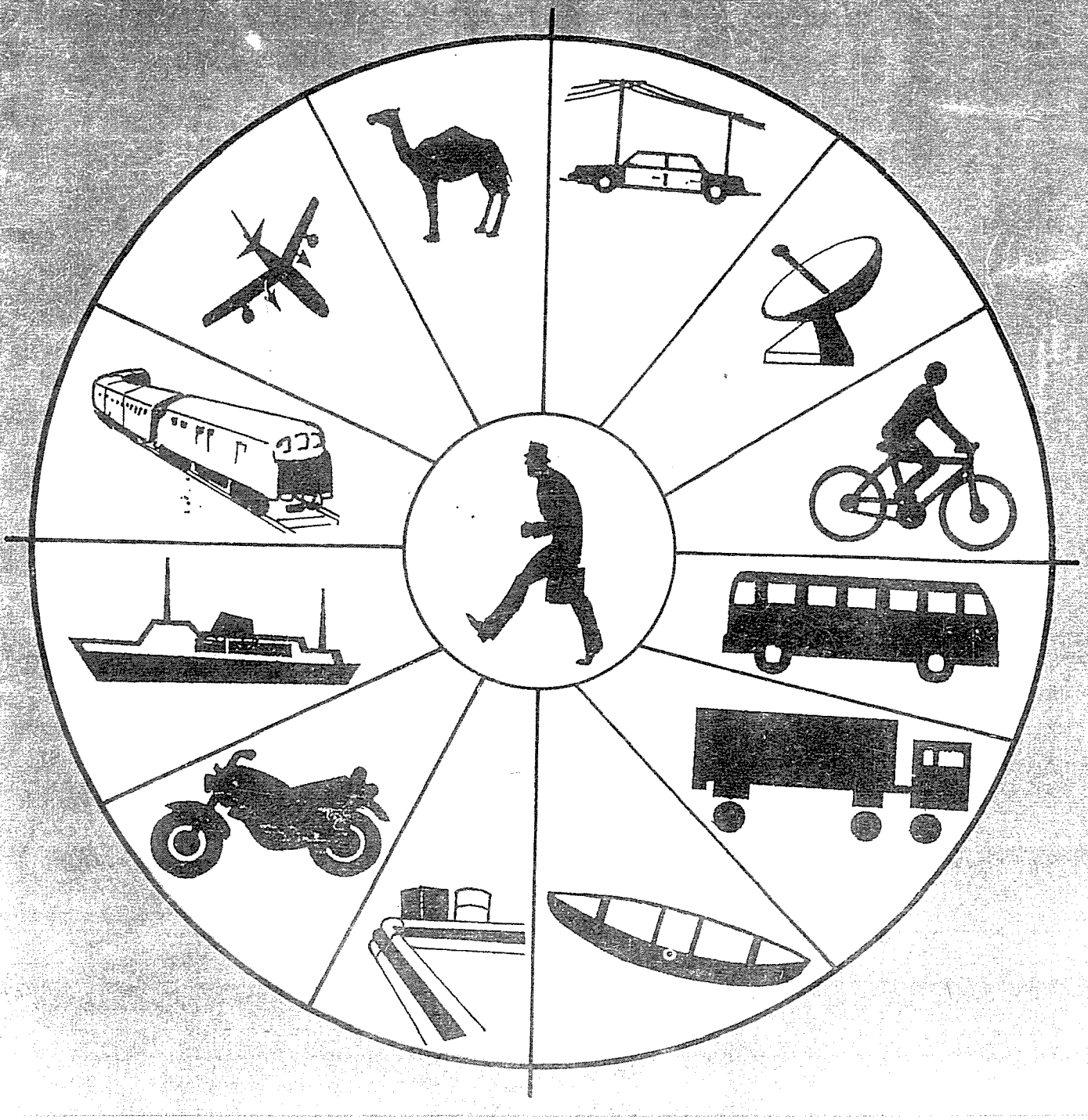

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TRANSPORT FACTOR IN CASH CROP PRODUCTION AND DISTRIBUTION: THE KOLANUT EXAMPLE

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INTRODUCTION

The pivotal role played by transport in the overall development of any country cannot be over emphasised since it is a key factor in all aspects of development. There is hardly any aspect of a nation's development in which transport is not an essential ingredient since there is always the need to collect, assemble, transfer and distribute people, goods and services. Transportation therefore has rightly been seen as a catalyst to development and has become of particular concern to those at the helm of governments as well as planners. Even though it is generally conceded according to Onokala (1988) that it is very difficult to measure the exact impact of transport investment on development because of the subtle and yet complex nature of the role that transportation plays in economic development.

The role transportation has been echoed by Munby (1986) when he declared there is no escape from transport while it has also been remarked that in an exchange economy transport can be regarded as the one land-use that makes other land-uses possible. The role of transport is therefore very crucial, and as phase in the production process which is said not to be complete (Adefalolu 1977) until the commodity is in the hands of the final consumer. Furthermore, availability of transport facilities has been identified as a critical investment factor that stimulate economic growth through increased accessibility, and invariably influencing both effectiveness and efficiency of production, distribution, marketing and consumption of agricultural produce in many ways.

Agricultural production including cash crop is very important to the economy of developing nations as a whole, Nigeria inclusive. It is the major occupation of the rural dwellers of the nation, who constitute at least 65% of the nation's total population. The major agricultural produces are the cash crops, including cocoa, kola-nuts, rubber, palm-oil and kernel, citrus, and cotton, while the food crops include yams, maize, cassava, rice, etc. These products serve as food for man and raw-materials for agro-industries within and outside the country while they also provide revenue to farmers and foreign exchange to the government.

Nigeria being basically an agrarian nation, the majority of the goods to be transported are mostly agricultural produce which by nature are generally bulky, low-priced, highly perishable and must be conveyed from their areas of production to the areas of consumption with minimum delay and cost. Given the dispersed cultivated land area, there is therefore the need for a correspondingly wide-spread transport net-work to take farm inputs to the farms as well as take produce from farms to the widely spread markets; and

this network is usually not available or even when available very inefficient. Little doubt that Olayide (1972) reported that inadequate transport provision leads to a waste of 25% of the total agricultural food stuffs produced while Idachaba (1980) in his study of food production problems in the rural areas contended that transportation, among other factors represent the most serious constraints to agricultural development in Nigeria.

In spite of the inevitable role of transportation in the distribution of agricultural produce, there is an increasing concern about the ability of available transportation facilities to meet the growth of the nation. For instance, Adeniyi (1993) has shown that owing to the major internal and external crisis facing the Nigerian Railway Corporation, the railway is losing traffic, and in fact has lost its significant place in freight haulage traffic. Furthermore, it has been established by Onakomaiya (1981) and Filani (1987) that road transport system in Nigeria accounts for more that 90 percent of all freight moved and that it is the most widely used and apparently the most patronized according to Mbagwu (1981) for movement of goods and people.

In fact, the poor conditions of the numerous rural roads, which are constructed to link the agricultural producing areas with the consumption areas, have resulted in transport services being restricted or even removed completely, thereby imposing severe constraints on the marketing of farm produce thus leading to wastage, low agricultural productivity as well as high production and marketing cost. (Aloba 1986, Ajiboye 1994).

Effective and efficient transportation and distribution of kola nut, a major cash crop poses a great concern for the farmers the rural dwellers, the produce buyers and marketers, the urban dwellers, and the governments in Nigeria.

It is against this background that an attempt is made in this study to examine in depth the transportation situation of Remo land, Ogun State as it relates to the production, distribution and marketing of kola nut, an important agricultural produce, Remo being the most important kola nut producing area in Nigeria (Odugbemi 1992).

SOME CONCEPTUAL AND THEORETICAL ISSUES

It is considered necessary to try to link this study with some of the existing theoretical attempts advanced to understand and explain the role of transport in agricultural produce distribution and marketing.

Many theories and concepts relevant to this study have been formulated and applied in different parts of the world. Among these are the concepts of threshold, the concept of internal trade for less developed countries, the spatial interaction model and the concept of redistributive marketing system; the last one will be briefly discussed for reason of relevant.

Concept of Re-distributive Marketing

The importance of an effective and efficient transportation and distribution system in the socio-economic development of a nation cannot be ignored since it plays a key role in agricultural production and in the marketing of agricultural produce. Some scholars such as Bauer and Yamely, Berry, (1967) have shown concern about the efficiency of the distribution system, the level of marketing facilities, the institutional role of middlemen, place utility, the distribution system as well as the process which creates utility of place.

There are very few economic studies of market and marketing system that are quite relevant to spatial studies according to Onakomaiya (1975). Jones (1968) proposed a theory of re-distributive marketing system which is an exception to the earlier studies and has an implicit spatial relevant to the developing countries of Tropical Africa including Nigeria. He suggested that the degree of correlation between the prices of a given commodity in a pair of market over a period of time is an appropriate measure of trading connection and information flows over space.

He made some assumptions like Christaller in his central place Theory that:

i. there is m supply area which sends its produce through middlemen and itinerant trader to a bulking point k from where the wholesaler moves it to I distributing traders who then resell it to wholesalers and retailers in n consuming centers,

ii. the traders in bulking point k are promptly aware of any surplus or deficit in the supply area m and will adjust their bargaining position accordingly;

iii. buyers from I distributing centre who are met in bulking point k or distributing centre I by bulkers are fully informed about the total supply situation while they themselves are fully informed about the total demand situation in the n consuming centres, and finally

iv. with bulkers and distributors well informed about the market, the price arrived at under competitive conditions should reflect all knowledge in the system and spatial price differentials would then be expected to reflect only transportation costs.

In reality, however, there would be more than one bulking point and equally many distribution centres. For instance, for the kola nut production and distribution in Nigeria the following towns viz Sagamu, Abeokuta, Ifo, Ijebu-Ode, Ibadan Osogbo, Ile-Ife, Ondo, Ore, and other south-western bulking centres would become k while places like Kano, Zaria, Kaduna, Jos, Katsina, Sokoto Gusua, Bauchi, Maiduguri and other northern distributing centres become I.

It could therefore be argued that the redistributive marketing system actually exist in the geographical spaces and conform with the long distance inter-regional trade in Nigeria.

A number of studies have been carried out on the role of transport in the production, distribution and marketing of agricultural products both within and outside Nigeria. A few of such works include Maduagwu (1994), Adesanya (1991), Mbagwu (1987), Filani (1988), Idachaba (1980), Olajide (1972), Smith (1967), Ward (1975), Weakes – Nagliani (1985), Onakomaiya (1975) and Akinbode (1982).

Ajiboye (1994) in his study of rural accessiblity and transportation problems of Ijebu-North, Ogun State assessed the socio-economic roles of good accessibility and transportation to rural development. He used Spearman's rank correlation coefficient (rs) to test the relationship between the constraint on increased agricultural production and the problem mentioned by the respondents. From the analysis, it was discovered that there was a positive correlation between the two and that inadequate transport facilities was the most significant among the various constraints associated with rural development which included agricultural.

This study no doubt lent support to earlier study by Olajide (1972) that inadequate transport provision leads to the wastage of 25 percent of the total agricultural food stuff produced. Similarly, 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 production and development in Nigeria.

Mbagwu (1981) in his own study confirmed that road transport is apparently the most patronized means in consideration of speed and haulage capacity among other modes and that it is most suited for the conveyance of agricultural produce because of its wide geographical coverage, its flexibility in scheduling departure and arrival time, road accessibility and prompt service and delivery of commodities. He did test the hypothesis that the efficiency of agricultural commodity flow from the rural to urban areas depends very much on the transport facilities available and in use at that particular point in time. From the study, he stated that transport constraint arise from different locations as a result of the following:

i. Absence of certain transportation modes or inter-modal types so that there is limited or no choice of medium of transportation,
ii. Inefficiency of the means commonly used and
iii. Poor condition of the surfaces over which traffic flows

There are other studies in Nigeria that attempted to analyse the movement of commodities as between towns and different ecological areas.

The study by Onakomaiya (1975) uncovered a rather complex flow situation which followed the pattern of Smith and Hay (1970). These two studies both agreed in identifying the relationship between the number, size and distribution of individual consignments of trades while Bolade (1982) established the relationship between the flow variable, and the focus is on inter-city flows with emphasis on the following variables as major determinants of inter-city freight flows. These are population, income levels, accessibility and number and size of industrial, educational and health establishments.

THE STUDY AREA

The study area is Remo land, comprising three Local Government Areas namely Sagamu, Remo North and Ikenne. Among the major settlements in the study area are Sagamu, Iperu, Isara which are designated as urban by the Ogun State Government in 1988, other prominent ones include Ikene, Ilishan, Ogere, Ode-Remo, Akaka, Irolu, Ilara, Ode-Lemo, Ewu-Osi, Ewu-Ode, Emuren and Ipara.

The 97,298.24 hectare study area is bounded in the east by Odogbolu and Ijebu-North Local Government Areas, in the north by Oyo State, in the south by Lagos State and in the west by Obafemi/Owode and Ifo Local Government Areas. It is one of the areas that occupy a very strategic position in Ogun State. The link between Lagos and the rest of the country both to the east and the north must inevitable pass through Remoland. Climatically, the study area is basically tropical in nature and is characterised by two distinct seasons namely the rainy season (April – October) and the dry season (November – March) while it experiences, mean annual rainfall ranges from 2032mm to 2540mm with more rainfall during the rainy season especially May to July. The temperature of the area is generally about 26.6^0 C but varies

between the dry and rainy seasons. The climatic condition favours the cultivation of wide varieties of cash and food crops. The cash crops include kolanut, cocoa and palm produce while the stable food crops include yam, melon, coco-yam, maize and cassava. The study area is an important commercial area. Apart from agriculture a considerable number of people of Remo land show interest in trading including kolanut trading. There are 20 daily, periodic and night markets in the study area which serve as outlets for agricultural produce and other goods from within and outside Remo land. Prominent among these markets are Sabo-Ofin, Awolowo, Falawo, and Oja Oba in Sagamu; Ifepade, and Magbon in Isara, Akesan in Iperu while Sabo – Ofin market is the largest market noted for kolanut in Nigeria.

THE ROAD TRANSPORT SCENE IN THE STUDY AREA

Road transport is the most predominant mode of transportation in Remo land. One major aspect of the field survey was a focus on the nature, quality, quantity and characteristics of the road network as well as the traffic situation in the study area. Six major types of road were identified, namely the expressway, trunk A roads, trunk B roads, the secondary roads, rural roads as well as the bush/foot paths (see Tables I and 2 for the details). Two important expressways pass through the study area, viz, the Lagos – Ibadan and the Sagamu – Benin. The former is a four-lane dual-carriage-way linking the south-western part of the country to the north. It covers a distance of about 32kms of the study area while the later is also a four-lane dual carriage way linking the west to the east and covers a distance of 24kms of the study area. The expressways were constructed and owned by the Federal Government of Nigeria and designed for a maximum speed of 100km per hour and have a right of way clearance 91 metres. Furthermore, they have bitumen surfacing with some uneven surface as a result of heavy traffic and bad construction. They are all-season roads with wide shoulders which is usually over-grown with weed, and the drainage blocked by sand deposit all the due to poor maintenance culture. There are 6 and 4 bridges built on the two expressways respectively, with iron and concrete, and they are relatively wide. The Trunk A roads were built, maintained and owned by the Federal Government. They are tarred with asphalt and well aligned, but with bends along the roads. They have 2 lanes, with some potholes and uneven surfaces although designed to be motorable all seasons. The drainage facilities are blocked by sand deposit and the shoulders are overgrown with weeds while the bridges are made with iron and concrete. Example of this type of road are Ikorodu-Sagamu and Sagamu-Idi Ayunre where 27 and 20kms respectively of the roads pass through the study area. They connect settlements like Iperu, Ode-Remo, Ishara, etc. Trunk B road were constructed, owned and maintained by the Ogun State Government. They have the same attributes as Trunk A road but more in kilometres coverage while they are often linked with the main towns .Examples of this type of roads are Ilishan-Irolu-Ago-Iwoye, and Siun-Ogere-Iperu-Ilishan-Odogbolu.

Secondary roads are local government roads and are divided into two, namely the tarred and un-tarred. They are relatively wide with about 16 meters right of way, surfaced with asphalt or laterite. They are generally poorly aligned, poorly drained, while the road shoulders are usually over-grown with weeds and

characterized by pot holes but fairly motorable throughout the year. They are narrow and in many cases, with poorly constructed bridges that hardly admit two vehicles at a time. Other hydraulic structure like concrete culverts are generally common given the drainage and climatic characteristics of the study area.

Table 1 Characteristics of the Major Road Transport Facilities in Remoland

ROUTE	ROAD CATEGORY	DISTANCE	OWNER - SHIP	ALIGNMENT	SURFACE CONDITION	SHOULDER CONDITION	DRAINAGE FACILITIES	BRIDGES & CULVERT
Lagos-Ibadan	Expressway	32kms	Federal Govt.	Except some curves along the road	Tarred with Bitumen but some uneven surface	Well provided but over grown with weeds	Facilities provided but now blocked with sand deposit/ debris	Well constructed with iron and concrete and very wide
Sagamu-Benin	Expressway	24kms	Federal Govt.	Well aligned	Well surfaced and tarred with Bitumen	Well provided and maintained	Facilities available and well drained	Well constructed with iron and concrete and very wide
Sagamu-Idi-Ayunre	Trunk A	20kms	Federal Govt.	Not well aligned and some bends along the road	Asphalt surfacing with some pot holes	Not well provided and over grown with weeds	No drainage facilities	Wide but low and constructed with iron, concrete and culverts
Ikorodu-Sagamu	Trunk A	27kms	Federal Govt	Not well aligned and some bends along road	Asphalt surfacing with some pot holes	Not well provided and over grown with weeds	No drainage facilities	Wide but low and constructed with iron, concrete and culverts
Siun-Ilishan	Trunk B	21kms	State Govt.	Well aligned with some bends	Asphalt surfacing with some pot holes	Not well provided and over grown with weeds	No drainage facilities	Wide but low and constructed with iron, concrete and culverts
Ilishan-Ago-Iwoye	Trunk B	45kms	State Govt.	Not well aligned and full of bends	Asphalt surfacing with some pot holes	Over grown with weeds	No drainage facilities	Wide but low and constructed with iron, concrete and culverts
Sagamu-Ikenne	Trunk B	7.5kms	State Govt.	No well aligned	Asphalt surfacing with some pot holes	Over grown with weeds	No drainage facilities	Wide but low and constructed with iron, concrete and culverts

Source: Authors Fields Works, 1995-96.

Note: The distance of the road that passes within the study area are only considered and not the entire length of the road.

The tarred ones are very common as township roads in the urban centers of Sagamu, Iperu and Isara and semi-urban centers of Ikenne and Ilishan while the other exmaples connect settlements such as Ilishan-Ilara-Ode –Remo-Akaka; Sagamu-Makun-Araromi; and Sagamu-Aiyepe.

The other type of road found in the study area are the rural roads. They are of two main types namely the wide, surfaced rural road and the less wide un-surfaced rural road. The wide surfaced rural roads are relatively wide, of about 16 meters right of way mostly built by communial effort but slightly better in terms of surface and construction, and motorable throughout the year, with the bridges reinforced with culverts. Most of these roads, however, have been taken over by the Local Government Councils but they are often not well maintained due to the poor financial position of the Councils as well as the large number of roads under their care.

The second type of rural roads are widened tracks or bush paths which are big enough for motor vehicles link the villages with one another. These roads are usually built by communal efforts and they are numerous. They are generally circuitous with poorly constructed bridges and culverts if any, and often swept away by floods during the rainy seasons, thereby reducing the already poor accessibility between the villages.

The last type of road found in the study area are the tracks or bush paths of about 3m width which are least developed but are by far the most common and connected. There are three types namely the inter-farm bush paths; the footpaths that connect the scattered farms with the farmstead; and the foot paths that connect the farmsteads to the village paths. They are developed through clearing bushes and constant trekking over the years by the people. The commonest vehicular traffic on these routes are bicycles and motor-cycles while a large number of people make their journey on foot. The widespread nature of this category of roads is attributed to the culture of the people and the prevailing land tenure system which allows the division of family land among the heirs of the deceased person. This resulted in the creation of small scattered and uneconomic farm holdings which make the farmer to seek or rent land elsewhere and has therefore resulted in farm fragmentation. Due to this, many farmers have two or more farms which are dispersely located and this encourages the growth of this category of rural roads.

The relatively poor conditions of most of the roads, and inadequate transport infrastructural facilities in Remo land no doubt affect the agricultural development of the area a great deal including kolanut production, distribution and marketing as would be seen shortly.

Table 2: Attributes of the Roads in Remoland

VARIABLES	ATTRIBUTES	KILOMETRES	PERCENTAGE
Condition, of the surfaced	Tarred Untarred	190 329	37 63
Type of surface	Bitumen Asphalt Laterite	90 100 329	17 20 63
Number of lanes	Four lanes Two lanes One lane	53 137 329	11 26 63
Motorable	All season Partially seasonal Springly seasonal	190 129 200	37 25 38
Ownership Tarred Roads	Federal Govt. Ogun State Govt. Local Govt.	100 52 38	53 27 20
Bridge Material	Iron and concrete Culvert and concrete Plants and tree trunks		10 53 37

Authors Field Work 1995-96.

METHODOLOGY AND DATA ANALYSIS

The method of investigation for this study was essentially both descriptive and analytical in nature and therefore relied heavily on field study complemented by desk research. The approach to the study was mainly through observations, surveys, interviews and analysis of returned questionnaires.

Primary data were collected mainly through the use of questionnaires. Three sets of questionnaires namely for the kolanut farmers, the kolanut traders and the transporters were used with the main aim to elicit information on the role of transportation on kolanut production and marketing, the operating characteristics of transport system, the administration of the service, the quality of services rendered as well as the characteristics of the respondents.

The first questionnaire was addressed to the farmers and it sought information on the socio-economic characteristics of the respondents, the type and quality and quantity of kolanut produced, type and frequency of modes of transportation used, the marketing channels, the effect of transport on kolanut production, the constraints to kolanut production and the suggested solutions.

The second questionnaire focused on the kolanut buyers and marketers who are mostly middlemen between the kolanut farmers and the kolanut traders in the northern part of Nigeria. The questionnaire sought information on types and volume of kolanut purchased, place of purchase, and the transportation and collection problems encountered.

The third questionnaire addressed to the transporters sought information on their assessment of the nature and condition of the roads, the cost of plying the routes, cost of trip and the problems they encountered.

Using the updated lists of the farmers, traders and transport operators involved in kolanut production, the table of random numbers was used to select respondents for the interview. In the final analysis, 100 farmers, 100 traders and 50 transport operators gave substantial co-operation in answering the questions.

The information and data obtained on the field through the use of questionnaires, informal interviews and through the documented materials were all subjected to various descriptive and analytical tools. In determining the nature and condition of the road transport facilities in the study area, the following indices were observed and measured during the field survey. These are the conditions and width of the road, the period of motor-ability, material used in the construction of the roads and bridges, type of surfacing, number of lanes, conditions of alignment and shoulder as well as the drainage facilities which were later used to classify the roads into their various types.

The analysis of demographic, and socio-economic characteristics of the respondents was done using simple measures of central tendencies Pearson Product moment coefficient was used to test the closeness of the relationship that the means of transportation of kolanut is directly related to the type of trips while Spearman's Rank Correlation coefficient (r2) was used to test the relationship between the factors responsible for the low agricultural production generally and the ones mentioned by the respondents; as well as the relationship between the ranking of the distributional problems and the ranking of the suggested.

From the analysis, the average age of the respondents was 43 years with a range of 17-66 years while the proportion of respondents in their productive years (18-50 years) was 85%.

The marital status of the respondents shows that 13%, 65%, 4%, 7% and 11% are not married, married, separated, divorced and widowed.

On the level of education attained by the respondents, 55% of them had no formal education, while 14%, 7%, 14%, 6%, and 4% of them passed out of Primary school; Modern School/Junior Secondary School; Senior Secondary School; Teacher's/Technical Training Colleges; Polytechnic/College of Education/School of Nursing; and University. Of special significance is that there were 2,3, and 6 university graduates involved as kolanut transporters, farmers, and traders respectively. The reason given for getting involved include inability to secure a good job on time, retired to them after active service, and wish to be self employed and self reliant. From further analysis, only 11% of the respondents are government workers with subsidiary occupation of farming, trading and driving in order to make ends meet while the remaining 89% are self employed with or without paid employment. The nature of the employment of the respondents vary from one person to another. Some 65% of the respondents are on full time 11% on part time, the remaining 24% are daily paid workers.

All the respondents are Nigerians who come from different parts of the country. Remo land has the highest number of respondents with 37%, followed by other parts of Ogun State (15%) the neighbouring states of Oyo (10%) and Ondo (8%). This could be attributed to geographical contiguity of the States to the study area. Kano, Bauchi, Kogi and Borno States have 7%, 4%, 3% of the respondents respectively

Other states represented are Benue, Kwara, Edo, Taraba, Katsina, Sokoto, Enugu and Abia States. The willingness of the people to migrate out of their traditional areas to Remo land is mainly to engage in kolanut production and marketing especially for the respondents from the northern parts of the country.

An analysis of the ethnic composition of the respondents shows that Yorubas are 72%, Hausa/Fulani (14%), Ebirra (3%), Kanuri (3%), Igala, Edo and Igbo 2% respectively. The ethnic mix has not only promoted cultural affinity but enhanced kolanut production as ethnic barriers are over come and the general socio-economic development of Remo land enhanced.

Some 58% of the respondents said they do produce the commercial type of kolanut 'Obi Gbanja' only, another 26% of them specialise in producing social type of kolanut 'Obi Abata/Gidi' while the remaining 16% agreed that they produce both varieties of the crop. The farmers were also asked about the length of period they have been engaged in farming with more emphasis on kolanut production. The responses were grouped into five classes namely below 5, 6-10, 11-15, 16-20 and above 20 years and the % distribution was 6%, 15%, 18%, 26% and 35%, with 1 year to 45 years as the range.

The mode of transportation often used in transporting kolanut from the source to destination was also considered as presented in Table 3.

Table 3: Available and Mostly used Means of Transportation

Type of Trip	Lorries	Public Transport	Taxis	Motor Cycle	Bicycle	Head Porterage	Total
Farm to Farm	-	-	-	-	3	97	100
Farm to Farmstead	-	-	-	1	7	92	100
Farm to village	-	-	-	3	12	85	100
Farmstead to village	-	1	2	5	15	77	100
Village to Village	2	5	5	14	15	59	100
Village to Town	3	15	10	20	12	40	100
Town to Headmaster	1	21	18	32	10	18	100
Total	6	42	35	75	74	468	700
Percentage	1%	6%	5%	11%	10%	67%	100
Mean	1	6	5	11	10	67	

Authors Field Work 1995-96

It could be seen from the Table 3 that 67% of the respondents used head porterage as a dependable means of transport to carry Kolanut from one area to another.

Motorcycle usage followed head porterage with 11% of the sampled farmers using it. This is attributed to the introduction of motorcycle as a mode of public transportation in Nigeria including the rural areas as well as its low fuel consumption, low maintenance costs and its high flexibility. Bicycle haulage come next with an average percentage of 10% and this was followed by public transport (i.e. buses and pick-up van), taxi and lorry with 6% , 5% and 1% respectively. In the rural areas where vehicles are found and used, they only ply the roads on the market days while on the ordinary days, traffic is generally very light if at all, and the frequency of patronage often reduced to zero during the rainy season on some roads. From the use of Pearson product moment correlation coefficient (r) to test the closeness of the relationship between the means of transportation of kolanut and the type of trips, it was found out that there was a positive correlation between the pairs of observation with value of 0.56.(Appendix).

The distances covered by the Kolanut farmers from their farms to the nearest motorable road, and from their houses to farms and markets were also analysed. On the distance between their farms and the nearest motorable road, 84% of the respondents have their firms within a radius of 0-3 kms while the remaining 16% have their farms beyond the radius of 3km.

Table 4: Distances involved on Point-to-Point Transportation of Kolanut from the Farms

Distance	Farm to Motorable Road %	Farm to House %	Farm to Market %
Below 1 km	21	10	12
1 – 2kms	21	12	20
2-3kms	42	35	22
3-4kms	13	31	17
4-5kms	2	8	15
Above 5 kms	1	4	14.
Total	100	100	100

Source: Author's Field Work 1995-96.

From Table 4, the distances covered by the farmers on the daily journey to farm from their various houses are shown. Only 57% of the respondents had their farms within the radius of 0.3kms and 31% covered an average distance of 3-4 kms before reaching their farms while 8% of them covered 4-5kms and the remaining 4% had their farms located at least 5kms from home. Furthermore, on the distance covered by the farmers to get their products to the markets and collecting centres, 54% of the respondents had the market within the radius of 3kms to their respective farm while the remaining 46% covered a distances above 3kms to their respective farms.

The frequency and methods of selling kolanut by the farmers were also focused upon. The response given by 48% of the respondents was that they sold their kolanut on daily basis, 20% sold theirs on seasonal basis, 18% on weekly basis, while the remaining 9% and 5% of the respondents well on monthly and quarterly basis respectively. However, it is generally believed that the best time for a farmer to sell kolanut is between May and July before the harvesting of kolanut which commence in late July to September of the year.

On the mode of selling, 40% of the respondents said they sold through the middlemen that came around and visited the farmers at their farms and homes and buy the processed nuts, while another 35% of them sold their own products at the specialised kolanut market. Another 13% indicated they always took their kolanut to the urban market (Sabo, Sagamu) to sell while the last group of respondents which make up 12% indicated they sold their fresh unprocessed nuts directly on the farm and at home to the itinerant woman assembler who later sold to the local consumers thus completing a three link channel as identified by Onakomaiya (1975). The majority of the kolanut farmers who sell their products on the farm indicated that this was done to minimise transportation cost and problem involved in trying to process the kolanuts.

An attempt was made to find out from the respondents the major constraints faced in creasing kolanut production in Remoland. Thirteen of such constraints were identified as shown in Table 5. Inadequate or lack of transport facilities was ranked first as a serious problem by all the respondents. This was followed by inadequacy of credit facilities with a score of 95. 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 third 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 fifth with total score of 89.5. This was followed by inadequate/lack of medical facilities, inadequate land for farming, poor storage equipment and inadequate labour supply. These problems were ranked by assigning these values, 1, 0.5 and 0 to seriously agreed, mildly agreed and not agreed, and the score total are 86.5, 71, 65.5, 58.5, 41.5, 19 and 11 respectively.

A ranking of the suggestions for the improvement of the constraints listed above was made as shown in Table 4. From the table, 32% of the respondents attested to good road transport system as the most favoured facility, followed by the provision of vehicles to ply the routes which recorded 12% of the total respondents while the provision of credit facilities, market came next with 11% and then the provision of infrastructural facilities such as adequate water supply and electricity by 10% of the respondents. The provision of modern market with necessary facilities ranked next with 8% of them agreeing to it while the provision of farm input such as seedlings, high yield and resistant seeds as well as fertilizers ranked seventh with 6% of the farmers agreeing to it. Other facilities needed by the farmers are provision of land for landless especially the non-indigenes with 5%, adequate Governments support at all levels and more in the area of extension services as well as in financial assistance, provision of improved storage facilities, and pests/disease control facilities.

Table 5: Factors Responsible for low Kolanut Production as Ranked by the Respondents

Factors Responsible	Seriously Agreed	Agreed	Disagreed	Total	Score Total	Ranked
Inadequate/lack of transport facilities	100	-	-	100	100	1
Inadequate credit facilities	90	10	-	100	95	2
Inadequate modern farming equipment	08	22	70	100	19	12
Inadequate/lack of farm input	81	11	8	100	86.5	7
Inadequate Infrastructual facilities	82	15	3	100	89.5	5
Inadequate/lack of Government Support	80	20	0	100	90	4
High Cost of transport	83	16	1	100	91	3
Poor storage facilities	40	37	23	100	58.5	10
Pest/Disease infections	24	35	41	100	41.5	11
Inadequate/lack of modern market	76	23	01	100	87.5	6
Inadequate medical facilities	55	32	13	100	71	8
Inadequate land for farming	53	25	22	100	65.5	9
Inadequate labour supply	01	20	79	100	11	13
Sum	77.3(60%)	26.5(20 %)	26.5(20%)	1300	906	
Mean	60	20	20	100		
STD	31.09	10.05	26.07			

Source: Author's Field Work 1995-96

Table 6: Facilities Suggested by the Farmers to Solve the Identified Constraints

Facilities by the Farmers	Seriously agreed	Milky Agreed	Disagreed	Total	Score Total	Rank
Provision of good motorable roads	94	6	0	100	96	1
Provision of credit facilities for farmers	90	8	2	100	94	3
Provision of vehicle to ply the routes	92	6	2	100	95	2
Provision of medical facilities	72	16	12	100	80	6
Provision of farm input	65	20	15	100	75	7
Provision of modern markets	80	12	8	100	86	5
Provision of Infrastructural	85	10	5	100	90	4
Provision of improved storage	56	24	20	100	71	10
Provision of pests control facilities	32	32	36	100	48	11
Provision of land	62	24	14	100	74	8
Provision of modern farm equip	30	30	40	100	45	12
Adequate govt. Support	52	40	8	100	72	9
Provision of labour	24	36	40	100	36	13
Total	837(64%)	264(20%)	202(16%)	1300	967	
Mean	64	20	16			

Source: Author's Field Work 1995-96.

From the calculation and testing of the relationship between the facilities needed to solve the problems associated with kolanut production and the constraints, using Spearman correlation coefficient (r^s), (see Appendix) it showed the value of 0.91 which is considered high according to Makintoch rule of thumb thus meaning 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 there is no significant difference between the constraints to kolanut production and facilities needed. This further shows why improvement in transport facilities is very important in agricultural production.

CONCLUSION

This study has confirmed the importance of transportation to agricultural development more especially for kolanut production and marketing in Remoland. The kolanut producing areas of the study area are not quite accessible and are faced with serious transportation problems which have affected the level of kolanut production of the farmers and their enthusiasm to produce more since most of their products could not reach the markets.

Similarly, the flow of kolanut products from the producing to the consuming areas has been beset with the dominant use of the relatively inefficient

means of transport such as head – porterage, bicycle and motor-cycles. The poor conditions of the roads also affect the speed and haulage capacity of the farmers and the traders in the movement of the kolanuts to the markets. There is therefore the problem of inadequate flow of kolanut products from the farms to the markets and collecting centres.

However, it is the considered opinions of these researchers that if the rural-urban accessibility situation of the study area is improved upon, the following potential benefits shall accrue to Remo land apart from the development of kolanut production and distribution. These are that it would further open up the rural area for further economic integration, promote the improvement and modernisation of agricultural activities, make exchange of agricultural products easier, facilitate the dispersal of economic activities, gaining access to various natural resources and market, making the diffusion of growth inducing processes easier, promote the social and political cohesion among the people, as well as facilitate the execution of various beneficial political and administrative programmes and projects. Furthermore, it could help the rural dwellers to diversify their income earning pursuits, decongest the urban centres as well as assist in the development of tourism and in the provision of essential social services.

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