

LAND TENURE AND LAND
REFORM IN NIGERIA

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Land Tenure and Land Reform in Nigeria

ABSTRACT

This thesis examines the current land tenure systems in Nigeria and concludes that they (land tenure systems) constitute formidable obstacles to the development of agriculture in the country. They prevent or militate against the development of the "essentials" for agricultural development.

The five policy measures recommended in this thesis should help greatly in removing the constraining effects of land tenure systems, and thereby accelerate the development of agriculture in Nigeria. The experience of other countries has shown that land reform program when properly carried out results in increased productivity of both land and labour. It seems most likely that if land reform is carried out in Nigeria as an integrated part of economic development it will facilitate agricultural development in the country.

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Introduction

This thesis examines critically land tenure, a factor which constitutes an obstacle to agricultural development in Nigeria and makes some policy recommendations for removing the constraining effects of the existing system. The dominating importance of agriculture is widely recognized within the country. It is the basis of the present strength of the Nigerian economy employing about 80 percent of the labour force. In 1963/64 it was responsible for about 60 percent of the Gross Domestic Product.¹ It provides much of the resources needed to develop other sectors of the economy; and its export earnings are substantial.

However, inspite of the importance of agriculture it is apparent to the Government that Nigerian Agriculture faces hard and difficult tasks now and in the years ahead.² It has to provide an adequate and well-balanced food supply for the fast growing population. The magnitude of this task can be fully realized when it is noted that the population of 56 million in 1964 is expected to increase by about 55 percent between 1964 and 1980.³ Agriculture is expected to provide the raw materials needed by the country's new and developing industries. This means in effect that production of raw materials must increase to meet both domestic and export requirements. It is still expected to contribute a larger portion of the capital needed to finance economic development. Agricultural methods need to be modernized to increase the productivity of land and labour. It is hard to envisage how

agriculture in Nigeria can achieve these broad national objectives without fundamental changes. There is serious doubt whether the capacity of agriculture in the country can develop further in the face of the severe limitations imposed on it by the land tenure system.

Footnotes to Introduction

1. F. A. O., Agricultural Development in Nigeria 1965-1980, p. 7.
2. This concern for agriculture is expressed in many of the Government's public utterances and publications.
- See Nigerian Economic News, No. 3, November 1970.
3. F. A. O., Agricultural Development in Nigeria 1965-1980, p. 7.

Chapter I

The Current Land Tenure Systems in Nigeria.

In this chapter the land tenure systems in Nigeria will be discussed in two separate but related theses, namely: (a) the present systems constrain agricultural development and (b) the modifying forces in the existing systems are not fast enough. Then the other agrarian structures will be briefly discussed. In this chapter and in the rest of this thesis attention will be focussed on the first thesis.

(a) The Present Land Tenure Systems

It seems logical to begin discussion in this section with the definition of land tenure.

Land Tenure

Land tenure may be defined as the interrelationship between men in the use and control of land resources. In a narrower sense it may be described as a body of rules which govern the allocation of land, the practice of cultivation and the apportionment of produce. This relationship is a complex one in all societies regardless of stages of social and economic development.¹ Land tenure involves considerations that are sociological, political and economic.

Some writers on the subject presume to have discovered a natural tendency for land tenure to evolve generally

"from the more collective tenure and extensive cultivation to the individual and intensive."² According to this theory, at one point in time land was originally the property of a tribe or group whose members worked the land jointly and took equal shares of the produce. Later control and ownership of land passed to the village community.³ Lord Lugard was the first to apply the general theory of evolution of land tenure from collective to individual ownership to the study of land tenure in Nigeria.⁴

There are more than three hundred distinct tribes in Nigeria at various stages of social and economic development, and this means that there is great variety in the systems of land tenure. There are marked climatic and topographical differences between Northern and Southern regions of Nigeria. Hence land tenure systems differ in the two regions. The general principles of land tenure common to the whole country will be stated first and will be followed by a discussion on land tenure systems as they exist in each of the two broad geographical areas.

As a general rule, African land tenure is neither completely communal nor completely individualistic. It contains elements of both. In all communities in Nigeria, the rights of the group and those of the individual exist side by side within the same system of tenure.

Though there are many different land tenure practices in different communities and different land tenure systems in different ethnic groups, certain concepts are common to traditional tenure in Nigeria and form the foundation of every

tenure system in the country.

Land is regarded throughout Nigeria as the property of the Community. Here "Community" may refer to a family, a clan, or a village consisting of a number of kindred or lineage groups or families. A family in the Nigerian sense usually consists of a man, his wife or wives, and children, the wives of his sons and their children, his brothers, their wives and children and other close relatives.⁵ In all matters pertaining to land, it is the group that exercises the right of ownership. The individual does not possess absolute title to land. His right in land co-exists with those of the community to which he belongs by birth or adoption.

The claim of a Nigerian to a particular piece of land derives from his membership of land-holding group. The relation of the individual to the group is governed by custom and not by written laws. The head of the family or the chief of the village is the customary authority in land matters. The chief in his capacity as the repository of the traditions and customs of the group, exercises control over the land of the group and allocates land to its members. The chief's position does not confer upon him rights which are superior to those enjoyed by any other member of the group. The chief is not a landlord. His claim over land arises from his membership in the community. Individuals are prohibited from disposing of the land of the group by sale or mortgage.

We can now turn to discuss the divergences from the main body of principles governing customary tenure in the two major geographical regions in Nigeria.

Southern Nigeria

In the three regions (East, West and Mid-West) that make up Southern Nigeria, land tenure systems show only slight variations from the general principles that govern customary tenure in the country. Quite in contrast to the northern region and except for a brief period in Benin history,⁶ no alien conqueror has ever claimed ownership of land in this region of the country. In both Eastern and Western Nigeria land is regarded as inalienable property of the community. The peasant cultivator's unlimited right of user derives solely from his membership in the community. He enjoys unlimited security of tenure as long as he makes beneficial use of the land. Divergences from the main body of principles of indigenous tenure which are observable in southern Nigeria are due to differences in social and political organization among the peoples in the area.

Among the Ibos "ownership of land is divided upon among small groups of nearly related kinsmen, branches of various kindreds, with the exception, here and there, of a residue of land which may still be the property of a whole kindred."⁷ Among the Yorubas it is the family that exercises control over land. But elsewhere in Southern Nigeria effective rights of ownership are exercised by the village.

In Yoruba provinces and in Benin the Oba or head chief administers the law and custom pertaining to land. In the kingdom of Benin all land was claimed as the property of Oba, and this was due to the fact that there administrative control

was more centralized than elsewhere in Southern Nigeria. This claim must be understood to mean that control of land was vested in the Oba for common use.⁸ The Oba of Benin was known to have claimed the right to levy annual tributes on his subjects and had the power to revoke a grant of land.

Among the Ibos control over land is vested in a small land-holding group and there is no one individual who is looked upon as holding the land in trust for the Community. Nevertheless, the small land-holding group does acknowledge the rights of the community in its lands by the fact that small groups of elders of the clan or village are called upon to witness the divisions of land among the heirs.

The British rule in Southern Nigeria left the rights of the Community in lands unimpaired. At no time did the state attempt to claim the ownership of land. The land legislations were designed primarily to protect the peasant against unlawful transfer of land to foreign concession seekers by ignorant or improvident chieftains or by avaricious members of land-holding communities. The Native Lands Acquisition Proclamation of 1910 with its numerous amendments remains important land legislation in Southern Nigeria. It forbids any aliens to acquire "any interest or right in or over any lands within the protectorate from a native except under an instrument which has received the approval in writing of the governor."⁹

The land laws in Southern Nigeria recognise both individual proprietary rights and the right of absolute ownership vested by customary law in land-holding communities. This is quite in contrast with the situation in Northern Nigeria where

legislation denies to the individual and groups the right of ultimate ownership in land.¹⁰

Northern Nigeria

In Northern Nigeria too there are some variations from the general principles that govern customary tenure in Nigeria. Within the last one hundred years customary tenure has been subjected to two major influences that were quite unknown in the South. Between 1804 and 1810 the Fulani overpowered the Hausa states and conquered most of the territories in Northern Nigeria. Then they arrogated to themselves ownership of the land. Former tribal chiefs of the Savanna were replaced by the Fulani emirs who founded dynasties. This claim to ownership of the land was in keeping with the Maliki Law of Islam which stipulates that all "lands which come into the possession of the Faithful through conquest, except waste and unclaimed lands become WAKF, that is, are tied up immediately after the conquest has been completed."¹¹

For ease of administration and to facilitate the collection of tribute, the emirs established a simplified feudal system governed by Islamic law in which the land was conferred as fiefs or estates on officers of State, members of royal families and other notables, while in many cases the indigenous inhabitants were reduced to the status of feudal serfs. Indeed this was in sharp contrast to the more usual form of African land-tenure in which the land-allocating member of the community enjoys no greater rights in the land than any other member of the community.¹²

In the circumstances of Northern Nigeria in the 19th century it was neither practicable nor desirable to extinguish completely the rights of the peasantry merely by invoking religious and legal sanctions. The fief-holders could not farm their estates themselves. They depended on the peasants who continued to occupy and use the land but who were now compelled to pay taxes on both their lands and crops. Moreover most of the fief -holders were absentee landlords who lived in capital towns and rented their estates to middlemen who exacted high taxes from the peasants.

In those parts of Northern Nigeria that never came under Fulani rule, land was administered on behalf of the community by village and clan chiefs and family heads.

In the first decade of this century the Fulani emirs were conquered by the British. Immediately after the conquest the High Commissioner for Northern Nigeria formally declared that all lands which previously had been the property of the Fulani rulers had reverted to public lands. The British like the Fulani before them, arrogated to themselves ultimate overlordship of Northern Nigerian land. It was Lord Lugard who gave currency to the notion that in Africa control of conquered lands passes to the conqueror.

In 1908 Land and Native Rights Ordinance was passed. Its provisions were based on the recommendations of a committee which had studied land tenure in the territory. The general principle underlying this ordinance was that title to land was based upon a communal usufructuary right and that the chief's rights did not amount to anything more than an

administrative control over vacant land in the interest of the whole community. The chief was henceforth bound to assign land, when available, without rental charges to adult males who required it. Allowances were made for transfer of land rights under Muslim laws of inheritance to continue to take place in some of Northern Nigerian emirates where the population was predominantly Muslim.

A trend that was common to both British administration of Northern Nigeria and the Fulani regime was the theory of "title by conquest." This theory provided the theoretical justification for much of the land policies in Northern Nigeria. It could be remarked that Lugard the chief protagonist of the theory was fully aware that "a large part of Northern Nigeria had never been conquered by the Fulani,"¹³ and that conquest "does not among civilized nations confer the right to confiscate private property."¹⁴

It may be of interest to find out the effect, if any, of Islamic law and British legislation on the traditional rights to land of the peasantry in Northern Nigeria. In Islamic as in English law, land can be privately owned, inherited and alienated. This is in direct opposition to the basic principle of indigenous land tenure in Northern Nigeria. The attempt of the Fulani conquerors to graft Islamic law of tenure on the traditional tenure introduced a fundamental conflict. The conflict between Islamic and customary laws of tenure has often been resolved in favour of the latter, and as Anderson observed, it "is in the matter of land tenure that native law and custom has won its most decisive victory over the

general ascendancy of the Sharia in the Muslim Emirates of Northern Nigeria."¹⁵

It is the consensus of opinion that British legislation did not produce radical changes in the position of the peasants in Northern Nigeria.¹⁶ Some of the provisions of the legislation remained in practice inoperative.

It still remains true that in the face of powerful alien influences the Northern Nigerian peasant continues to enjoy undisturbed his usufructuary rights which arise from his membership of a land-holding community.

Rights Over Trees

In this section we consider only those trees that are important either as source of income or as source of food supply. These include oil palms, raffia palms, coconut, oranges, breadfruit, oilbeans, rubber, cocoa, iroko, mahogany. In considering rights over these trees a distinction must be made between those that grow "wild" and those that are planted by individuals. For those that grow uncultivated on lands that are owned in common by a group of kinsmen, the general principle is that their produce is owned in common by the owners of the lands. Trees planted on lands that are owned in common or on lands that belong to different land-holding groups remain the personal property of the person who planted them. In some parts of Ibo land what is needed to establish ownership in such a case is evidence from a person or persons who were present when the trees were planted. While planting

trees on other people's lands is not encouraged it is nevertheless tolerated as part of custom in the country.

(b) The Modifying Forces in the Existing Systems

As indicated above religious laws and British legislation exercised very little influence on the traditional rights enjoyed by the peasantry in Nigeria. However, the underlying principles of traditional tenure have been undergoing continuous modifications owing to rapidly changing social and economic conditions. Among the factors that are contributing to the changing pattern of traditional tenure are increasing population, adoption of a sedentary way of life, commercialization of agriculture and the growth of a money economy.

The population of Nigeria has been growing at a very rapid rate. This has led in some areas to the breakdown of communal tenure into one of individual holdings. The effect of the great increase in population is more conspicuous in Eastern Nigeria than in any other part of the country. In this region population pressure has resulted in the fragmentation of family holdings and has led to the emergence of holdings on a "Semi-individual basis."¹⁷ Since the peasant farmer cultivates his small holding more frequently than is provided in the traditional system of agriculture because of population pressure he naturally comes to regard it as his absolute property. In the denser areas of Onitsha and Owerri there are now many transactions involving outright sale of plots of land. Theoretically the community can overrule these rights.

As people in the country have adopted a sedentary way of life more settled conditions have resulted. The breakdown into individual holding is the direct result of settled conditions and individual payment of tax. Formerly it was the head of the family who had to pay tax but this has changed. As the individual now bears responsibility for the payment of his tax, he demands a share of the land which he can use to provide his subsistence and raise his tax money.

By commercialization of agriculture in Nigeria, we mean the production of such cash crops like rubber, cocoa, palm oil, groundnuts and cotton for export market. The production of these crops on a large scale has substantially modified the traditional concepts of tenure. It can be illustrated how the cultivation of rubber for export market (that is commercial farming) modifies the underlying principles of customary tenure. Rubber is a perennial and so ties up the land for a longer period than other crops of subsistence farming. The life of a rubber plantation is well over thirty years. As indicated above, the traditional tenure recognises the rights of the cultivator over economic trees planted by him. In effect a rubber plantation would mean an indefinite interest on the part of the cultivator in a piece of land that belongs to the family or group. There is another important point. Producers of rubber, cocoa and other cash crops have the right to mortgage their crops though not the land. At death their right over these crops can be transferred to their heirs. In this way the community gradually loses its rights over the plots of land on which these economic trees are grown.

With the growth of money economy land comes to have monetary value hitherto unknown in the indigenous economic system. In both urban areas and rural communities land has become a negotiable property freely transferred by sale, mortgage or lease.

This process of land commercialization is not a new phenomenon in Nigeria. Ward-Price found many cases of land sale in many of the major towns in Yorubaland in the later part of the nineteenth century. Similarly in 1961 Cubb cited cases of outright sales of lands among the Ibos of Eastern Nigeria.¹⁸ As mentioned before, population pressure has resulted in fragmentation of holdings into uneconomic units in many areas. Those who are unable to make a living from such holdings have disposed of their rights either by pledging them as security against debts or by outright sale. In the rest of Ibo country, especially in those areas where the consciousness of the cash value of land is growing, land is openly sold outright but with one condition attached: it is not sold to strangers, who may be defined as persons from another clan.

The situation in Northern Nigeria with regard to alienation of land by sale is not radically different from what obtains in other parts of the country. There are many records of commercial transactions in land. "Though in theory illegal," writes Rowling about Kano province, "the sale of rights is known by everyone to be universal and common."¹⁹

In many parts of the country the customary obligation to make presents of produce and drinks for permanent or temporary

grants of land is being commuted into cash payments. These payments are not distinguishable from rent or purchase price, and are a manifestation of the increasing economic value which land has acquired. All the factors discussed above have brought modifications in the traditional concepts of land tenure. But it still remains true that these modifications are not sufficient to accelerate agricultural development because the pressure for modifications is not evenly distributed throughout the country. For example, in the northern region people are thinly spread over vast areas of land, so population pressure does not exist there.

We shall now discuss other agrarian structures in Nigeria.

Other Agrarian Structures

Fragmentation of Holdings

Fragmentation of holdings is the splitting or subdividing of holdings into a number of small isolated plots. It is a feature of field layout found in countries at all levels of economic development. It is often associated with earlier feudal forms of land tenure, and is prevalent in countries as highly developed as France, Switzerland and Southern Germany.²⁰ United Nations report on "Land Reform" pointed out clearly that in Asian and African countries fragmentation is a widespread condition, so it is not surprising to find that it is a prominent agrarian structure in Nigeria.

In Nigeria fragmentation is due mainly to the prevailing system of inheritance in combination with the pressure of population. In most of the over-populated districts in Southern Nigeria (especially in Owerri province) fragmentation of holdings has gone to extreme length. Consequently many of the farm units are of uneconomic size.

Table 1: Percentage distribution of farmers according to size groups

Size of area farmed (acres)	Northern Nigeria 1957-58 (Percent)	Western Nigeria 1958-59 (Percent)	Eastern Nigeria 1959-60 (Percent)
under 0.25	1.9	4.7	20.5
0.25 " 0.50	5.5	8.5	19.8
0.50 " 1.00	11.0	14.7	24.6
1.00 " 2.50	27.7	35.6	27.1
2.50 " 5.00	27.5	23.0	6.7
5.00 " 10.00	19.0	10.4	1.1
10.00 " 25.00	7.0	3.1	0.2
25.00 " 50.00	0.4	---	---
over 50.00	0.0	---	---

Source: Nigeria Agricultural Sample Survey,
Bulletins Nos. 3, 4 & 5,

Federal Department of Statistics, Lagos

As can be seen from table 1 the average size of farms is generally small. The predominance of very small farms in Eastern Nigeria is most striking. In chapter 3 the influence of fragmentation on Nigerian agriculture will be discussed.

Insecurity of Tenure

As in most of the developing countries of Africa, land in Nigeria is regarded as the joint property of the

community and there is no basic concept of individual rights of permanent ownership. A member of a group or village is entitled to a plot of land to grow his crops and as soon as he has harvested his last food crops the plot reverts to communal ownership. The peasant farmer knows that he would not get the same plot of land at the next rotation cycle. This is in keeping with the traditional notion of justice; one plot may be more fertile than others, so members of the group or village must take turns farming on it. This encourages the peasant to exploit any plot he gets. He would not hesitate to carry out any farming practice which in the long-run would ruin the fertility and/or conservation of the soil but would yield immediate good results. He would not carry out any improvement on the soil that would not yield results for him in a short time; that is, within the crop year.

The landlord-tenant relationship is not a common feature of Nigerian systems of tenure. The peasant farmer enjoys a measure of freedom and independence. Although this may serve a useful function of maintaining social stability, it does slow down the rate of progress. The fact that individual rights are exercised within the framework of the kindred organization and are qualified in many important respects, particularly as regards the right of alienation, goes to show that the system is good only for subsistence farming and therefore will present serious impediments to agricultural development on modern lines.²¹

In some parts of the country, annual or periodic allocation or reallocation of village lands is a common technique

for ensuring a fair distribution of land. The land of a group or kindred that has died out reverts to the community, and is distributed among those who are short of land. There can be no doubt that this kind of periodic reallocation is good for ensuring a fair share of land for all, but it seriously impairs security of tenure.

In the native customary law there is absent any limitation of time within which claims over land can be asserted or enforced. Under shifting cultivation system, this has no serious consequence, for if a farmer is dispossessed of one plot of land he can go to another. But where land has become valuable, or plantation crops are grown, serious injustice may be inflicted on a farmer by suddenly dispossessing him of any plot of land. The absence from the native law of any of limitation of time-period during which claims over land can be enforced is a serious bar to security and development.

Tenancy

Tenancy is a feature of land tenure systems. In many of the underdeveloped countries the proportion of tenants to the number of farmers varies widely from country to country. Tenancy in itself is not an unsatisfactory form of tenure, where rents are not excessive and where security of tenure is safeguarded by legislation. But these conditions are lacking in Nigeria. As indicated above, tenancy is not a prominent feature of Nigerian systems of tenure. However,

there exists in the Southern regions of the country a group known as migrant sharecroppers. These share-croppers obtain leases (for periods varying between six months and one year) for harvesting oil palms and rubber. They usually enter into agreement with the owners of these trees, and the owners receive an agreed proportion of the produce. During the course of the agreement the owner of the trees has no right to interfere with the management, tapping or processing operation.

Though there are no statistics on rental charges in the country there are statements from which we can estimate the level of rent. "In payment for the use of rubber trees the sharecropper contracts to return to the owner of the trees,

- (a) either half of the produce in the form of sheet rubber or, where facilities do not exist for sheet manufacture, lump,
- (b) or half of cash return from the sale of the total produce of the holding."²²

In most cases the contractor employs hired labour in tapping and other operations and has to pay it out of his own share. This naturally reduces his own share. The present arrangement does not seem to ensure the share-cropper getting a substantial share of the harvest and the impeding effect of this will be discussed in chapter three.

Opposition by Traditional Land-allocating Authorities to
Tree-crop Planting

Opposition to tree-crop planting by the traditional

land-allocating authorities is as influential in limiting the scope of agricultural development in the country as any of the structural defects already discussed. The traditional concept of land usage does not mean more than growing of food crops on the communal or family land by the peasant cultivator. After harvesting his last food crops of the cultivation cycle the land reverts to communal ownership. The introduction of permanent tree crops such as rubber, cocoa and cultivated oil palms has raised some problems. As has been stated before, it is in accord with traditional tenure that a tree is the property of the person who plants it, even when the land on which it stands has reverted to the ownership of the group. It became evident that allowing the planting of large blocks of trees would ultimately lead to the recognition of permanent individual ownership of the land upon which they stand, and this would greatly reduce land available for other members of the group. Land allocating authorities do all in their power to prevent the planting of tree crops. The attitude of land allocators is summed up in this quotation,

"Over large areas where land is communally owned by the clan, and this applies more to the Mid-West than in the Western Region, there has been fierce resistance from the Elders to any suggestion that any further areas should be devoted to oil-palms. The argument advanced is that a sufficiently high proportion of the land is now occupied by oil-palm groves and is unavailable for food production; that any planting of palms would further reduce the area of land available for food production, thus leading eventually to starvation. Moreover, palms planted by individuals would become the property of the individual and

not available for communal exploitation as wild palms are."²³

A similar attitude prevails in Eastern Region with regard to oil-palms and other tree crops.

Inheritance

Any account of land tenure in Nigeria would not be complete without discussion on inheritance because it is the customary inheritance law that creates and/or perpetuates the problems in the country. When a man dies his property is divided among the claimants. The elders in the community normally form the tribunal that examines each claim and then allots the deceased's property among his rightful heirs in strict accordance with the customary rules. While the broad pattern of inheritance is the same throughout the country, there are however minor variations in different areas. Only the major differences will be commented upon here. Patrilineal and matrilineal inheritance will be discussed.

In all patrilineal areas when a man dies his property (including his animals, trees, cash, if any) is shared among his sons in order of seniority, excepting that a younger son will receive more land or animals or trees if he is not married before his father's death. It is part of traditional custom for the father to defray all expenses for his son's marriage and to give him some cash to enable him to start a new life. Where this was not done before the father's death

the younger son will be entitled to receive more land or trees. The younger wife/wives are remarried to his sons. Where this is not possible on account of age, then the deceased's brothers may remarry them.

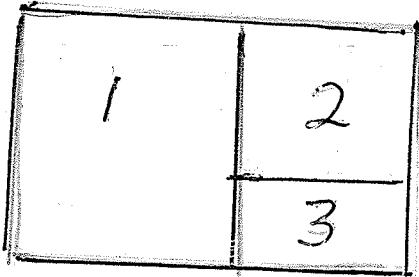
Among the Ibos daughters get no share of their father's land. However, provision is made for their maintenance until they get married. This is quite in contrast to what obtains in Yoruba where daughters get shares.

If the deceased had no sons, his land is inherited by his brothers and other immediate relatives. If he had no sons, brothers or immediate relatives, his land becomes the property of the village or community. The elders can dispose of it in any way deemed to be in the best interest of the village. For example, if there is a man from another clan or village living in the community who has a proven reputation for honesty and fair dealing, he will be given this public land with one condition attached, that the land will revert to the community if he leaves the community.

There is a big difference observable in inheritance practice among the Yoruba. It is the priority accorded to the younger brothers of the deceased. The brothers inherit before the sons but this is never so among the Ibos. The sons' shares are determined by age and responsibility, example, being married. In this area too, daughters do get shares in their fathers' lands, but these are smaller than those of sons. The diagrammatical illustration shows how far fragmentation has gone especially in Yorubaland.

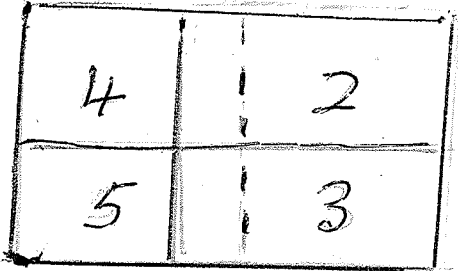
Diagram A: Subdivision and Fragmentation

On a man's death his land, not necessarily all in one place, is divided among his sons in diminishing shares.

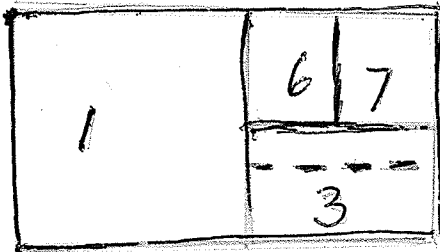


The farm at death of a holder is divided among his sons 1, 2 and 3 in diminishing shares.

At death of No. 1, Nos. 2 & 3 increase their shares out of their elder brother's share. Sons of No. 1 namely 4 & 5 get shares



At death of No. 2 (No. 1 still living) No. 3 increases his share out of his elder brother's share. Nos. 6 & 7 sons of No. 2 get shares.



At death of No. 3 (Nos. 1 & 2 still alive) Nos. 1 & 2 get no share of younger brother's. Nos. 8 & 9 sons of No. 3 get shares.

1	2	
	8	9

	6	'6	7
4	7	1	---
5	$\frac{8}{9}$	18	9

After deaths of Nos. 1, 2 & 3 No. 1's share is divided between his two sons (4 and 5) and a little is given to each of his younger brother's sons (6 and 7, 8 and 9). No. 2's share after being increased a little from No. 1's share and decreased a little by the claim of No. 3's sons (8 & 9), is then divided between his sons 6 & 7. No. 3's share is increased by some from No. 1's share and from No. 2's share, and then is divided between his sons 8 and 9.

Source: Ward-Price, H. L. Land Tenure in Yoruba provinces, page 34.

Fishing Rights

Rivers are open for fishing to anybody from the villages through whose lands they flow. In some rivers fishing is taboo. Fishermen from other parts of the country must acquire rights since the nature of their business makes some form of settlement on land necessary. They pay rent in kind or cash, nowadays usually the latter, for the right to fish in the river and its tributary or in the creeks in the area. The rent is normally paid annually. Where two or

more community lands border a fishing pool disputes as to the rights are frequent and usually arise when a group grants rights to strangers to which another group lays claim. In some cases the disputes lead to much bloodshed and loss of life.

Fishing along the shore of Oguta Lake in Owerri is the right of the landowners. It is usual for each family to define its area by stakes fixed in the water.

When and where a small group or hamlet feels that its fishing right has been encroached upon a complaint is lodged with the government. Then there will be investigation and steps will be taken to safeguard the rights of the group concerned.

Hunting

Organised hunting has largely ceased in areas of greatest density because there is very little cover left that is not in close proximity to dwellings. Individuals shoot, trap and snare the smaller animals in the confines of their village land. The practice of giving specified shares of the kill to those customarily entitled to it has largely fallen into disuse in many areas. The hunter has not the right to hunt on lands of other villages.

In areas where game is more abundant, many able-bodied men of the village do engage in a mass-hunt armed with cap-guns, dane-guns and sticks, and accompanied by dogs. This practice has greatly reduced wild life because there is no closed season. Everything seen is attacked and no effort is made to

spare the young. The kill is shared according to tradition. If an animal is pursued and killed in the territory of another village, the appropriate share is given to the village head or whoever is entitled to receive it.

Disputes for damages done to crops while pursuing animals are either settled amicably by the elders or in the court.

Mineral Rights

In Nigeria the ownership of all minerals is unreservedly vested in the State. The Government exercises the right of disposing mineral rights to aliens. It is the Government alone that grants licences for the working of minerals. It must be stressed that the owner of the surface rights in the land cannot impose any additional royalties.

The function of the Government is, on the one hand, to facilitate in every possible way the enterprise of the prospector and miner, and on the other hand, to protect the owner or occupier of the land from injury resulting from mining operations, and to ensure fair treatment and reasonable comfort for the labourer. It is also the duty of the Government to protect the interests of the people especially in alluvial or open-cast workings, where the surface rights, including the acquisition of land, and interference with water courses and the supply of water for agricultural and domestic needs are involved. The duty of protecting the country from deforestation must not be neglected.

Ownership right in land in Nigeria whether communal or individual is limited to only a few inches below the surface

and therefore in no way extends to minerals.

The Present Land Tenure Policy or Objective

The present land tenure policy in Nigeria is concerned mainly with the equalitarian concept of giving a piece of land to any member of the community who can make beneficial use of it. Some advantages are claimed for the communal system of tenure. It removes many of the causes of agrarian discontent. By giving to every individual a stake in the most important asset of his community it ensures social stability. It also assigns him a status not inferior to that of any of his neighbours in an ordered society. These advantages may be real and substantial but the assumptions on which communal tenure is based have greatly changed. The underlying assumptions have been abundant supply of land, sparse population and subsistence farming. These assumptions are no longer correct in the present day circumstances of Nigeria. As indicated above both population and commercialization of agriculture have increased substantially. So policy based on sparse population and subsistence farming no longer reflects the true situation in the country.

The Government has recognised the inadequacy of the present communal system and tried to improve it by introducing a "farm settlement scheme." By this scheme the Government intended to attract young, educated people into agriculture so as to increase its productivity. The scheme in general met with much opposition. In Eastern Nigeria where population pressure is more acute than in the rest of the country, the

Government was forced to abandon some of the farm settlements in the face of hostile agitation by the people. Similarly in Western Nigeria the government had to modify the scheme in some areas in order to accommodate the protests of the people. The scheme, though a good one, has not succeeded in achieving its objectives.*

The lack of success on the part of the present land tenure systems and the farm settlement schemes in solving agricultural problems in Nigeria points to the necessity for a radical change in land tenure in the country.

Footnotes to Chapter 1

1. H. A. Oluwasanmi, Agriculture and Nigerian Economic Development (Ibadan: Oxford University Press, 1966), p. 23.
2. Ibid., p. 24.
3. See Henry Maine, Village Communities (London, 1895), pp. 76-8. Sir Henry Maines observations about the tendency of land to evolve from communal to individual ownership were based on the elaborate study of the German Mark by G. L. Von Maurer. Maurer held that in the beginning of organised society land was the property of the community.
4. F. D. Lugard, The Dual Mandate (London, 1922), See footnote (i) on p. 281.
5. M. M. Green, Land Tenure in an Ibo Village (London, 1941), p. 3.
6. "We must note the special case of Benin with respect to lands in which the Crown claimed right of ownership conferred upon itself by the conquest of Benin in 1896.... But when the Oba of Benin was reinstated in 1916, his customary rights of control over Benin lands were restored to him." T. O. Elias, Nigerian Land Law and Customs, pp. 39-40.

* The scheme is discussed in chapter 5

7. Green, Op. Cit., pp. 6-7.
8. Oluwasanmi, Op. Cit., p. 37.
9. See Laws of the Colony & Protectorate of Southern Nigeria (London, 1908), Vol. II, p. 1188.
10. Oluwasanmi, Op. Cit., p. 39.
11. F. H. Ruxton, Maliki Law (London, 1916), p. 78.
12. Oluwasanmi, Op. Cit., p. 33.
13. Lugard, Op. Cit., p. 288.
14. W. N. M. Geary, "Land Tenure & Legislation in British West Africa". Journal of the African Society, Vol. XII, p. 244.
15. J. N. D. Anderson, Islamic Law in Africa (London, 1954), p. 184.
16. Oluwasanmi, Op. Cit., p. 35.
17. The term "Semi-individual" has been used to indicate that in some cases the revisionary rights of the community, if exercised, may limit the right of the individual to this little holding which he has now come to regard as his own. See H. A. Oluwasanmi, Agriculture & Nigerian Economic Development (Ibadan: Oxford University Press, 1966), p; 40.
18. Oluwasanmi, Op. Cit., p. 42.
19. C. W. Rowling Report on Land Tenure in Kano Province (Kaduna, 1949), p. 19.
20. U. N. Land Reform: Defects in Agrarian Structure as Obstacles to Economic Development, p. 11.
21. H. A. Oluwasanmi, Agriculture and Nigerian Economic Development (Ibadan: Oxford University Press, 1966).
22. F. A. O., Agricultural Development in Nigeria 1965-1980, p. 335.
23. "Tree Crop Planting Projects," published in July 1964 by the Western Nigeria Ministry of Agriculture & Natural Resources, p. 7.

Chapter II

Criteria For Agricultural Development

This chapter will set up a theoretical model for the development of agriculture. Attention will be focussed on the forces (or conditions) that generate or impede the essentials for agricultural development.

Agricultural development may be defined as sustained growth in output, increased productivity per worker and per acre and constantly changing technology. In developed agriculture the capital-labour ratio is high. As can be seen from table 2, the productivity of labour in agriculture is high in the developed economies of North America, Oceania and Europe compared with Africa.

Table 2: Labour productivity in agriculture by continents and for the world, prewar and 1947/48.

	Yield per person in agriculture		
	Pre War	1947/48	1947/48 as % of Pre War
	(Metric tons)*		
World average	0.42	0.42	100
North and Central America	1.80	2.57	148
South America	0.58	0.48	83
Europe	1.04	0.88	85
Oceania	1.94	2.38	128
Asia	0.24	0.22	92
Africa	0.12	0.12	100

Source: F. A. O., Monthly Bulletin of F. A. O. Statistics, Vol. 2, No. 9, September 1949.

* The source gives no specification.

Table 2 clearly shows the disparity in the yield per person that exists between the developed and the underdeveloped continents.

Table 3: Proportion of World population in agriculture, 1949.

Area	Total Population (million)	Agricultural Population (million)	Agricultural Population as % of total
North America	163	33	20
Europe	391	129	38
Oceania	12	4	33
South America	107	64	60
Central America	50	33	67
Asia	1255	878	70
Africa	196	146	74
World Total	2177	1285	59

Source: F. A. O., Yearbook of Food and Agriculture, 1950, p. 157.

It is evident from table 3 that the less developed areas of the world have a higher proportion of their population in agriculture. This would not have been of particular concern if the productivity per person had been high.

If development in agriculture is to be realized certain changes must be made. While making almost the same prescriptions different economists have emphasized different things.¹

The fact that no acceptable theory of agricultural development is yet within our grasp² has not prevented discussions or proposals on how to modernize the agricultural sector. Efforts to build a theory of modernization of agriculture has so far proceeded little beyond a cataloguing of relevant inputs, a recognition of important complementarities, and general diagnostic studies indicating which inputs are most likely to be limiting under various circumstances. At its simplest, a theory of modernization of agriculture may be

represented by a production function depicting agricultural output as a function of various inputs—some used in traditional and modern agriculture alike, others used only in modern agriculture, and still others used only in traditional agriculture. The new inputs of modern agriculture are largely of an institutional nature, including research and educational facilities.

Agriculture cannot develop beyond a subsistence stage without appropriate developments in other parts of life of the nation within which it is carried on.³ If agricultural productivity is to rise, each farmer will depend more on resources from outside. For example, he will have to supplement plant food nutrients present in the soil with purchased fertilizers. He will supplement soil moisture with irrigation water, frequently obtained through canals from distant sources. He will sow purchased seeds, and control plant and animal diseases with chemicals and medicines manufactured in far away towns.

It appears from the discussion in the last paragraph that farmers must have certain facilities and services if agriculture is to develop. These facilities and services are called here "essentials for development." Before enumerating and discussing these essentials it may be appropriate to state explicitly the assumptions of our theoretical construct. The two main ones are:

- (i) the individual private farmer will be the main agent of changes in agriculture;
- (ii) he is a profit maximizer.

These assumptions are open to challenge. However, historical experience shows that great changes in agriculture have come under the instrumentality of private individual farmers. The individual farmers were the chief agents in the agrarian revolutions that took place in Britain in the 16th and 18th centuries. In other countries like Denmark and Japan where agriculture has made great strides the role of the farmer as the engine of change and innovation cannot be minimized.⁴

The profit maximizing assumption is a rational one. People are not in business (industry and agriculture) to make a loss. Under the spur of profit people exert their energy, employ new methods, new materials and techniques. All these initiate and perpetuate changes.

We turn now to discuss the "Essentials" for development in the "Individual Farm Organizational structure." Mosher has defined essentials as those facilities and services that must be available to farmers if agriculture is to develop beyond mere subsistence. He maintains that without any one of them, there can be no agricultural development. The essentials are:

- (1) Constantly changing technology
- (2) Production incentives for farmers
- (3) Local availability of supplies and equipment
- (4) Markets for farm products
- (5) Transportation.

Each essential will be discussed briefly.

(1) Constantly Changing Technology

Experience has shown that it is simply not possible to get much increase in agricultural production by using the same old plant and animal materials and the same old soil in the same old ways. It comes from new techniques or methods put into practice on farms. In other words, constantly changing technology is the only way by which increased productivity can be achieved in agriculture.

The "technology" of farming means the "way it is done". It includes the methods by which farmers sow, cultivate, harvest crops and care for livestock. It includes the seeds, the fertilizers, the pesticides, the medicine and the feeds they use, the tools and the implements and the sources of power. It includes enterprise combinations by which farmers seek to make the best use of their labour and land.⁵ These must be constantly changing if agricultural development is to proceed. When they stop changing agriculture becomes stagnant. Production stops increasing and it may even decline due to decreasing soil fertility or to increasing damage by multiplying pests and diseases.⁶

It is essential that strong emphasis be placed upon regionally decentralized adaptive research. Research findings in the applied biological sciences which are successful in one environment can rarely be transferred directly to another. This is particularly true of yield-increasing innovations. Failure to carry research to the point of final application under farm conditions has been responsible to a

great extent for non-acceptance of technology.

For a new technique to be acceptable to most farmers it must promise substantial increases in yield, or reduction in costs. Farmers will be slow, if at all, in adopting a new technique which increases yield slightly, that is, between 10 and 15 percent. To be attractive to farmers its estimated increase in yield must range from 40 to 100 percent.⁷

There is obvious reason for farmers' reluctance in adopting a technique that increases yield slightly. Uncertainty looms as to how effective the new technique will be on each farmer's own fields. He knows for sure what his past practices yield, but he is not sure of the results of the new. He knows how to apply established methods but his ability to handle the new may be deficient.

It is a fact worth reckoning with that research stations cannot develop a different strain of each crop for each field. The best they can do is to develop combinations of practices that work reasonably well over a certain range of soil and climatic conditions. So each farmer takes into account the possibility that the new techniques will not yield as much on his fields as they do on the experimental plots in the research station.

As Mosher rightly points out only promise of large additional returns can overcome the wise conservatism of farmers in the light of these risks and uncertainties.

It can be substantiated from the British experience that constantly changing technology holds the potential for agricultural development. Though British agriculture had

made considerable progress before 1843, when artificial fertilizers were discovered and applied they raised yield beyond the dreams of even the most optimistic Anti-Malthusians.⁸

(2) Production Incentives for Farmers

An obvious precondition to increasing agricultural production is development of an environment in which enough of the proceeds of increased production go to the farmer decision-maker to provide incentive to him. Such incentives are influenced by a wide range of factors, from those of culture and psychology to economic institutions and practices. The system of land tenure may be particularly important in this regard; often a change in land tenure may remove a big obstacle to output-increasing innovations, although it alone will rarely assure an increase in output.⁹ Mellor shows in a convincing way the connection between institutions to provide incentives and technological change. He argues that existing institutions may not depress output and income within a traditional system of agriculture but will seriously impede achieving the different input and output patterns of modern technology. For the farmers to adopt technological changes there must be motivation.

Improved farm practices, availability of supplies and equipment and access to markets for farm products will indeed provide opportunities for the farmers to increase output. But the question to ask is whether they (farmers) will use these opportunities. In order to be able to answer the question we must look more closely on the "nature" of the farmer. We

have to look at him as a person in business. As a person he is naturally anxious for the well being of his family, and wants a place of respect for himself and his family in the community in which he lives. Being a farmer, he must seek to achieve these goals through his farming.¹⁰

In the early stages of the commercialization of agriculture the farmer is interested first in ensuring that his family has enough to eat. To meet the other needs of his family, he wants to sell enough products that he can pay his debts, taxes or rent and buy necessities that he cannot produce for the family. As additional goods and services become available in his locality he wants to obtain some of them for his family. He may want better education for his children, medical services and articles such as a radio, better clothing, bicycles, better household furnishings and better kinds of food.

If the farmer is to achieve these aims through his farm business, he must pay close attention to costs and returns. He must sell his products more than they cost him to produce. The margin between costs and returns, the farmer's net income, must keep increasing if he is to be able to give his family a rising level of living.

It appears most logical to conclude that the incentives which can be most effective in getting farmers to increase their production are primarily economic:

- (a) remunerative price-cost relationships
- (b) a reasonable share of the harvest

- (c) the availability of goods and services that farmers would like to be able to purchase for themselves and their families.¹¹

There are also non-economic incentives. But our discussion in this thesis will be confined to economic incentives only.

(a) Remunerative Price-cost Relationships

We will make some assertions or hypotheses about the price of agricultural product.

- (i) The higher the price, ceteris paribus, the greater the incentive for the individual to increase output.

For the farmer the incentive to increase production will depend on the relationship between the price he will receive for his product and the costs of producing it. These costs of production are influenced by the prices he must pay for purchased inputs. If the supplies and equipment which the farmer needs are available locally and at reasonable prices, his profit margin will be higher given sufficient demand price for his output. On the other hand if they are not available locally or can be obtained only at exorbitant prices, the farmer's profit margin will either be reduced or eliminated. In a situation like this, he will be forced to reduce his output.

The role of markets and transportation in the development of agriculture will be fully discussed in the appropriate sections of this chapter. But suffice it to say now that both efficient market and adequate transportation facilities are necessary for maintaining remunerative price-cost

relationships. Both the level and the dependability of prices for farm products influence the degree to which they provide incentives to the farmers to increase production. As Mosher and others have argued, if other essentials for agricultural development are met, higher prices offered for a particular farm product will induce farmers to produce and bring more of it to the market. Many people do not believe this, and government policies often are based on the assumption that it is not so.¹² Where evidence is cited to prove that prices do not matter, it is almost always found, on examination, that the reason lies in the fact that one or another of the essentials for agricultural development has not been met. A remunerative price for farm products is not the only essential for development but it is an important one.¹³

Jones has argued that price responses in traditional peasant societies are unlike those to which economists from the industrial economies are accustomed:

In general it is asserted that Africans respond to price changes in an unpredictable fashion, that they tend not to respond at all, or that they do so in what seems to be a perverse fashion, when prices rise, less is produced, when wages rise fewer hours are worked.¹⁴

Critics have pointed out that Jones' contention is not borne out by empirical evidence. Though data for testing supply responses are notoriously difficult to acquire, recent

studies cast doubt upon this whole approach to peasant behaviour. "That economic responses may be somewhat muted in peasant societies is not in question; that they do not exist seems more and more unlikely."¹⁵ Peasants in Malaya, India, Pakistan and some African countries have demonstrated clearly considerable supply responses to price variations.¹⁶

It is fairly well established now that farmers in all economies do respond to market prices. It needs to be stressed that both the level and the dependability of prices for farm products are important.

We now discuss the second hypothesis.

(ii) The more stable the prices, over a reasonable time period to facilitate planning, the greater the incentive to increase output, ceteris paribus. Most agricultural product prices fluctuate widely within each year and from year to year. Violently fluctuating prices cannot provide the farmer with a reliable basis for calculating costs and returns. A farmer who plans to increase his production cannot be sure that by the time his plan has materialized price would not have fallen.

Absence of fairly stable and predictable prices presents great uncertainty. Uncertainty can affect the extent the farmer will be prepared to increase production. Mosher pointed out the case in Brazil where farmers shifted large acreages to sugarcane but reverted to growing cereals due to the extreme instability of the price of sugar.¹⁷

Recognising that the level and the dependability of farm product prices are important to agricultural development is

one thing; doing something about them poses complex problems that are not easy to solve. Any program to affect farm product prices will not be effective unless there are efficient marketing facilities. A number of things can be done to ensure that market facilities are adequate. It might be necessary to have regulations to control monopoly, if it exists. Or a government agency may undertake to buy and sell the commodities at reasonable prices.

While direct regulation of prices of farm products can be of value if wisely and effectively done, considerable administrative efforts would be involved. Because of the complications some economists ¹⁸ have suggested that it is best to limit price regulation to only those few commodities of which increased production is most needed. For those commodities the first aim should be to increase the certainty of prices, at levels that will be remunerative to efficient producers.

Cost Side

One of the assumptions made is that our representative farmer is a profit maximizer, so anything that reduces his cost will induce him to produce more. We will state a hypothesis about costs.

(a) Lower costs of supplies and equipment induce production, ceteris paribus. The price the farmer pays for his purchased inputs affects his cost of production. If the price of these inputs falls, all other things remaining unchanged, it would mean a decrease in his cost. Lower cost would mean a higher

profit-margin. So it would pay him to employ additional machinery. The overall effect will be increased agricultural output. When the price of the inputs rises his cost of production will rise. High cost of production cuts into his profit. If he was making little or no profit before, this would involve him in loss. To minimize his loss he would reduce his output thus decreasing agricultural output.

Development of new agricultural techniques is one of the significant ways of lowering the farmer's cost. Dissemination of information on how to use new techniques lowers both cost and uncertainty.

It emerges from our discussion that however patriotic farmers may be, they will not grow more just because the nation needs greater agricultural production. They will only do this to the extent that it is profitable for them to do so, and one of the factors affecting this profitability is the level and the dependability of the prices of farm products.

(b) A Reasonable Share of the Harvest

The farmer who is a share tenant does not consider as income the share of the harvest that goes to the landlord. This has serious implication on production incentives. If constantly changing technology is the main means of realizing increased productivity in agriculture, anything that weakens the incentives to employ new techniques is an obstacle to agricultural development. When considering the introduction of new techniques that promise increase in production the

share tenant will take into account only the value of the harvest that will be his. If he has to pay the full additional cost of the new techniques, his incentive to adopt them is much weaker than if he is either an owner-operator or a cash tenant, with the cash rent remaining the same regardless of the level of production.

The influence of the share of the harvest on the incentives of the farmers to increase production is one of the reasons for encouraging the ownership of farms by their operators. Replacing share rentals by cash rentals will have a beneficial effect on incentives, provided the landlord does not raise the cash rent as productivity increases. Under share rentals it is still possible to influence significantly the incentive of the farm operators by reducing the share of crops going to the landlord.

In some cases the cost of the new techniques is divided between the landlord and the tenant in the same proportion as the harvest is divided. The difficulty in this approach is that it makes decision-making the joint responsibility of the landlord and the tenant. If one of them is less eager for development than the other, the conflict between them slows down the adoption of new practices.

(c) Availability of Consumer Goods and Services that the Farmer Would Like to have

If goods and services that farm family would like to have are on sale nearby, this provides an additional incentive to

the farmer to produce for the market: the more things he wants to buy, the more farm products he must sell in order to get the money to pay for these goods and services. Making goods and services available to farm people presents a problem of market development similar to that of developing the domestic market for farm products. Marketing channels for distributing industrial products in rural areas are likely to be inadequate and inefficient. Those manufacturing such products, or who might do so, are likely to think of selling to urban consumers who are near at hand and readily reached through existing marketing channels.

If consumer goods and services are adequately advertised in rural areas, farmers will want to have them. As soon as some farmers begin to use these goods and services other farmers will also want to "live like the Jones", thus the demand for the goods and services will increase.

In most of the developing countries farm people are a large potential market for consumer goods as well as for agricultural production inputs, and development of consumer goods market is important for industrial development. That making goods and services available to farm people is a spur to agricultural development illustrates the interdependence of agriculture and industry in overall economic development.

(3) Local Availability of Supplies and Equipment

Most of the new methods that will increase agricultural production will require the use of special supplies or equipment by farmers. The supplies and equipment would include

fertilizers, seeds, pesticides, livestock feeds, medicines and tools.

Agricultural development will be seriously impeded unless these supplies and equipment are available at many local points in sufficient quantity to meet the needs of every farmer who may want to use them.

When a new strain of a crop plant has been developed by research, the seeds of it need to be multiplied until there is enough to meet the demand of the farmers who want to purchase it. There are various methods by which availability of the new seeds can be ensured, and one of them is the establishment of seed multiplication farms operated by government. Economic consideration and administrative convenience will influence the method chosen, but in the less developed countries like Nigeria seed farms operated by the government would be more satisfactory in achieving the objective.

If the farmers are to buy the supplies and equipment regularly they must have certain qualities:

- (i) The supplies and equipment must be technically effective.
- (ii) The price must be reasonable.
- (iii) They must be of dependable quality .
- (iv) They must be available locally when farmers need to use them.¹⁹

Each of these qualities will be briefly discussed.

(i) Technical Effectiveness

Technical effectiveness is the first and the most

important quality which a seed, fertilizer or any other item must possess in order to be salable. Farmers would want to know whether the "improved" seed is really better. More often than not, recommendations are based only on the yield per acre at a research station. Unless the seed has been tested locally, local soils and climates can be sufficiently different that the improved seed yields no better than strains already in common use. The farmer will be asking such questions as these: Does the livestock medicine really work? Does the implement do the job it is supposed to do? Is it really better than the one the farmer has now?

If the farmer is satisfied with the technical effectiveness of the new input, he may buy it. If he buys it once he certainly will not buy it again unless it really works.

(ii) Dependable Quality

There is some problem here. It is not possible to identify an improved seed, a pesticide or a fertilizer of precise chemical composition by sight, smell, taste or touch. It is not even easy to detect inferior quality tools in the market place. If there is to be wide-spread and repeated purchase of the new input the farm operator must be assured that there is sufficient and adequate control over its quality and that he can confidently rely on his sources of supply.

Frequently what is sold as "improved" seed turns out to be ordinary grain. Livestock feeds may be adulterated with nearly useless "fillers". What is sold as "fertilizer" the farmer has no way of telling what is in it.

However, while these create difficult problems they are by no means insoluble. Regulations requiring that each package of fertilizer, pesticide and livestock feed carry a label precisely describing its contents can help if these are followed up by inspections and stiff penalties for misrepresentation. Farmers will not continue to buy if they think they were cheated or misled as to the quality of the supplies and equipment offered to them.

(iii) Reasonable Price

The farmer will be primarily interested in knowing how much the new input costs, considering what it will do. He does not normally seek maximum physical production. A substantial margin between the costs of the various inputs he uses and the market value of his products is really what he wants. He will not buy a fertilizer or any other input just because its price is low if it is not technically effective or if the quality is uncertain. He will pay a reasonable price if it does meet those tests. Either way he takes account of price, especially the relationship between prices of inputs and the prices he can get for his products.

Frequently a substantial part of the price a farmer pays for these inputs is the cost of transporting them from the manufacturing plant, seed farm, or seaport to the local market. As a result local price relationships between inputs and outputs differ for farms at different locations. The increase in the cost arising from the difference in location will discourage farmers at the most remote points from using

the new imported inputs.

(iv) Available When Needed

The need for each input is highly seasonal. For example, seeds must be available shortly before planting time and they can rarely be sold at any other time of the year. Since farmers do not have adequate facilities for storing seeds they will buy only the quantity they need for planting. Fertilizers can be applied only at specific times and only few farmers have facilities for storing them satisfactorily. The same is true of pesticides, although small amounts of them can be held for future use.

What this really means is that those who offer supplies and equipment for sale should be intimately acquainted with the seasonality of the need for each separate input and foresighted in having adequate supplies of each on hand ahead of the time so that farmers may get them quickly when they are needed.

(4) Markets for Farm Products

Agricultural development increases the output of farm products. If the development is to be sustained, there must be a market for these products and the price for them must be high enough to repay the farmer for his cash costs and his effort in producing them. This would mean that there must be adequate demand for the products.

The demand for agricultural products may be domestic, international or both. Only very few countries can sustain

agricultural development without growth of a strong market for agricultural products within the country itself.²⁰ In the less developed countries international demand for agricultural products is likely to be more significant than domestic demand. This is due to the fact in these countries the proportion of the population employed in the non-farm sector is small. There is some interdependence between agricultural and industrial development. Industrialization depends upon agricultural development because industries must sell their products and farm people are an important part of potential domestic market for them.. Likewise agricultural development depends upon industrial development because farmers must be able to sell their surplus production to non-farm people and industrialization increases the number of non-farm wage earners.

Any measures taken to increase the domestic market for agricultural products will surely aid the development of agriculture. Building roads and/or bridges to connect remote farms with far away cities and towns would widen the domestic market for farm products.

Equally important for the development of agriculture is the development of a marketing system in which farmers have confidence in its working. Few farmers can sell their own products in large city markets or abroad. An individual farmer does not have the means of transporting his products to these markets. He does not have the know-how or facilities for all the handling, packaging, storing, processing and other operations involved. Moreover, his volume of production

is not large enough to justify his performing those operations, and it would be inefficient for him to do so.

Usually farmers sell their products at the farm or in the local market. Their incentive to produce commodities for sale rather than only their own subsistence depends upon the prices they can get locally. These prices are greatly influenced by the efficiency of the marketing system linking local markets to those in the cities.

So the development of an efficient marketing system is indispensable to the development of agriculture. Such a system performs a variety of functions including transportation, storage, processing and financing. The development of transportation, storage and processing facilities widens the market for farm products. Without them, there is a market only for what can be consumed at the time it is produced and close to the place where it is produced. But with them, farmers have outlets for greater production, and for products that may be well suited for their farms but for which there would otherwise be too small a market to make them profitable.

The storage facility which the marketing system provides is particularly important in checking price fluctuation. Since farmers do not have adequate storage facilities all their crops are brought to the market immediately after the harvest. The immediate effect of the glut of crops in the market is to drag prices down. As harvest time recedes the prices of the farm crops soar higher and higher. Such price fluctuation can be prevented by the marketing system buying and storing the crops at harvest time and selling them as

supplies become scarce.

Financing of marketing is a vitally important function. Farmers want to be paid when they deliver their products to the local buyer. It will take some time before the final consumer pays for the processed products. The marketing system ensures that the operations of grading, transporting, assembling and processing are financed until the final product is sold to the person who is to use it. This contributes to the development of agriculture.

It is also important that farmers have confidence in the marketing system. However, some factors are necessary if the farmers' confidence in the system is to be developed. One is a recognition and understanding of the essential services performed by merchants (private, co-operative or government) and that each of these services has a legitimate cost. Another is the degree of fluctuation of prices for different farm products. The predictability of these prices long enough ahead for farmers to make appropriate production decisions is important. It is at this point that officially guaranteed prices for farm products probably have their most important effect. No matter what the level at which prices for individual farm products are guaranteed, if they are guaranteed for a considerable period into the future, farmers will be in a far better position to plan their production and much more ready to devote a large part of their farms to producing crops for the market.

(5) Transportation

This is the last of the five essentials for development of agriculture. It has been strongly argued by Mosher that without transportation—efficient and low cost—the four other essentials cannot be effectively provided.²¹ The importance of transportation follows from the fact that farmers should spread out over the countryside to use the sunshine, the soil and other climatic conditions that will support crop growth wherever these are found. So there should be widespread transportation network to bring supplies and equipment to each farm and to take products from the farms to consumers in towns and cities. Transportation must be as inexpensive as possible if it is to provide favourable incentives to farmers. Transportation affects both the demand and the supply of farm products. As indicated before, building roads or bridges to connect remote farms with distant towns and cities would widen the market for the farm products. This would mean increased demand for the products. Improvements in transportation system or the construction of shorter routes to the market or to sources of supplies and equipment will lower the farmer's cost of producing the farm products. Both the increased demand and the lower cost of production would induce the farmer to produce more. The cost of an input like fertilizer to the farmer is its price at the factory plus the cost of getting it from there to his farm. In the same way his return for wheat or rice or any other product is determined by subtracting the cost of transporting

it to the central market from his selling price. If the transportation cost is too high, he will find fertilizer too expensive and the return for his wheat or rice too low. If the transportation cost can be reduced, the cost of fertilizer at his farm will be lower, and the return for his wheat or rice will be higher. In other words, the price the farmer receives for his output will vary inversely with transportation cost.

Wharton treats transport infrastructure in a specially interesting way. He holds the view that change in infrastructure can be treated analytically in the same fashion as a change in technology in the traditional theory of the firm. A favourable change in infrastructure constitutes a downward shift in the cost curves of the firm or industry in the same fashion as an improvement in technology. Some infrastructure changes affect solely the cost side, such as improved roads and transport facilities which reduce transport losses and factor input costs at the farm gate.²²

Since there is general agreement among economists and economic historians²³ on the role or importance of adequate transport facilities on agricultural development, then the question to ask is how best can they be achieved. Here we have to distinguish local transport and long-distance transport. For the first type, farmers themselves are capable of doing much of the work required for building or improving local roads. Local farm-to-market roads contribute in many ways to agricultural development. They are an essential part of the agricultural transportation network. The people of a

locality are encouraged to do something for themselves if they receive leadership, some technical guidance, and some financial assistance and above all if enough of them are convinced that the benefits to them will be worth the effort.

Long-distance transportation facilities are an equally essential part of the transportation network. They are beyond the capacity of people in any one rural locality. Although they are essential for agricultural development, they are needed by the whole country for a variety of other reasons as well. As a consequence of this, many considerations have to be taken into account in determining their location. It is important that agricultural needs be not neglected in deciding what highways are to be built and where. Nowadays the formal public sector is increasingly intervening and exercising its decisions and controls.²⁴ Government has come to be regarded in the less developed nations as the primary activating agent for mobilizing investment resources and as the major catalytic agency for change and growth.²⁵ Infrastructure facilities are highly visible and therefore are attractive to political leaders who want concrete evidence of progress to guarantee their continuation in power.

However, it needs to be stressed here that for whatever motives, the Government should step in to provide those transport facilities which individual farmers or groups of farmers cannot adequately provide. This would ensure that local and long-distance transport facilities are all connected and integrated in the transport system. Furthermore, this would

ensure that products can move easily from farms to central markets, and that supplies and equipment and services can reach the farms not just the towns and cities of the country.

It appears from the discussion above that the essentials have been sufficiently identified and their role indicated. There is no doubt that whenever and wherever the five "essentials" are achieved agricultural development will occur.

Footnotes to chapter II

1. Schultz has placed greatest emphasis on "improving the capabilities of farm people." See T. Schultz, Transforming Traditional Agriculture (New Haven & London: Yale University Press, 1964), p. 16.
2. Southworth and Johnston, Agricultural Development and Economic Growth (Ithaca, 1961), p. 4.
3. A. T. Mosher, Getting Agriculture Moving (New York, 1966), p. 60.
4. D. Warriner, Land Reform in Principle & Practice (Oxford 1969) p. 392, and T. Schultz, Transforming Traditional Agriculture (New Haven & London: Yale University Press, 1964), p. 4.
5. A. T. Mosher, Getting Agriculture Moving (New York, 1966), p. 95.
6. Ibid., p. 75.
7. Ibid., p. 78.
8. W. M. Stern, Britain Yesterday and Today, p. 41.
9. Southworth & Johnston, op. cit., p. 48.
10. Mosher's views on the "Nature" of the farmer are quite similar to the ones in this paper. See A. T. Mosher, Getting Agriculture Moving (New York, 1966), p. 99.
11. Ibid., p. 100.
12. Ibid., p. 100.
13. Ibid., p. 100.

14. W. O. Jones, "Economic Man in Africa," Food Research Institute Studies, Vol. I, No. 2 (May, 1960), p. 108.
15. G. K. Helliener, Peasant Agriculture, Government & Economic Growth in Nigeria, p. 58.
16. See R. Krishna, "Farm Supply Response in India-Pakistan," Economic Journal, Vol. LXXIII, No. 29, Sept. 1963 also Peter Ady, "Trends in Cocoa Production," Bulletin of Oxford University Institute of Statistics, Vol. II, Dec. 1949.
17. Mosher, Op. Cit., p. 102.
18. This is mainly the view of Mosher, See A. T. Mosher, Getting Agriculture Moving. (New York, 1966), p. 104.
19. Mosher has an additional quality namely the size or amount in which the supplies are offered for sale.
20. Mosher, Op. Cit., p. 63.
21. Mosher, Op. Cit., p. 111.
22. See C. R. Wharton, Jr. "The Infrastructure for Agricultural Growth" in Southworth & Johnston Agricultural Development and Economic Growth (Ithaca, 1967), p. 114.
23. Ibid., p. 114.
24. Ibid., p. 115.
25. Ibid., p. 115.

Chapter III

The Role of Land Tenure as a Constraint to the Realization of the Key Essentials of Agricultural Development

In this chapter we intend to establish that the existing land tenure is an obstacle to agricultural development in Nigeria. Whatever the system of tenure, it must provide the "decision makers" and all the owners of resources with incentives to employ their resources fully and ingeniously.¹ Any tenure system that does not provide such incentives is by definition an obstacle to agricultural development. In the discussion here, we will show how the tenure systems help or hinder the conditions that are conducive to agricultural development. The traditional tenure (described in chapter one) has resulted in

- (a) divided holdings or fragmentation of holdings
- (b) Insecurity of tenure
- (c) Lack of mortgage collateral

These defective agrarian structures have so blended to constitute:

- (i) barriers to efficient and rational cultivation,
 - (ii) barriers to adoption of new technology,
 - (iii) barriers to capital accumulation,
 - and (iv) barriers to providing market motives.
- Each of these four points will be discussed briefly.

(i) Barriers to Efficient and Rational Cultivation

Table one above indicates that efficient and rational cultivation is not yet possible in Nigeria where fragmentation is a major agrarian defect. At present Nigerian agriculture is characterised by the dominance of many, small, fragmented and uneconomic farm units. The seriousness of the problem will be full understood if we realize that in Northern Nigeria in 1957-58 about 28.4 percent of the farmers were operating farms less than one acre in size and in Western Nigeria it was 27.9 percent in 1958-59. Even as late as 1959-60 about 64.9 percent of the farmers in Eastern Nigeria were operating farms under one acre in size.² This can be compared with the average size in some countries; for example, Japan one hectare,*Italy three hectares and Spain five hectares.³ Fragmentation is the direct result of the present land tenure systems in Nigeria.

The several and very small plots of irregular shape have the effect of hampering cultivation and causing unnecessary waste of land. It is estimated that up to 10 percent of land is wasted on the many border lines.⁴ Time is wasted and extra expense involved in moving workers, animals and implements to and from one plot to another, in carrying seeds and manure to the various fields and in moving crops from the fields to the stockyard or barn.

The supervision of work, animals and crops is rendered more difficult. Expenses on fences, water supplies, buildings

* One hectare is about $2\frac{1}{2}$ acres.

and so on are much greater. Drainage and improvement of the soil or prevention of soil erosion are rendered impossible. Fragmentation limits the choice of crop rotation by compelling the adoption of a system of cropping which allows all to have access to their scattered fields.

Fragmentation makes mechanization difficult if not impossible on Nigerian farms. We can see now how fragmentation prevents efficient and rational cultivation in the country. All the disadvantages of fragmentation have combined to keep the productivity of Nigerian agriculture far below its potential. It needs to be added that fragmentation is not the only factor responsible for the low productivity of agriculture in the country.

Table 4: Yields of seven basic crops in Nigeria, Japan and U. S. A.

	Nigeria lb/acre 1957	Japan lb/acre 1959-60	U. S. A. lb/acre 1958
Millet	963	1320	---
Guinea Corn (Sorghum)	1053	829	2196
Maize	694	1936	3108
Yams/Sweet potatoes	8646	17029	6540
Beans (Cow peas)	134	1104	456
Rice	1165	4237	3137
Groundnuts	672	1956	1205

Source: H. A. Oluwasanmi, Agriculture and Nigerian Economic Development, p. 112.

With the possible exception of yams and guinea corn the per acre yield on Nigerian farms is consistently below the yield per unit of land in both Japan and the United

States of America. In the case of root crops the performance of the Japanese farms is twice as high as on Nigerian farms.⁵

Though international comparison of agricultural yields may not be most appropriate, it does bring to attention the wide differences in productivity. For example if the yield per acre in Egypt for maize in 1960-61 crop year is compared with the yield in Nigeria in 1969/70, it will be seen that Nigeria produces only about half as much as Egypt. If the yield of groundnuts is compared in the two countries mentioned, we will find that Egypt produces more than twice as much per acre than Nigeria.⁶ If we inquire into the cause of these differences in productivity it will be argued that improved land tenure system in Egypt was one of the main causes.

(ii) Barriers to Adoption of New Technology

In farming as a business⁷ the consideration of costs and returns becomes important. The introduction or adoption of any new technology on the farm would involve some costs. The farmer will constantly have these questions in his mind "Will the new technology be worth the costs?" Will there be a margin of returns over costs?" As in any other business venture, the farmer will invest in the new technology if there is prospect that the returns will leave margin over the costs. Will it be profitable for the farmer to employ new technology on his small and scattered plots? The dominance of small and fragmented farm units in Nigeria makes it uneconomic to employ machinery on farms of such size. Since there is no economic incentive to use mechanical equipment or new

technology in the country, the result is that farm mechanization is almost negligible.

Even though there is wide recognition of the importance of fertilizer in increasing crop production, the quantities used in the country are small compared to the quantities used in the advanced countries. Over the period of 1954/5-1962/65 the quantities of fertilizer used in the whole country ranged between 1,000 and 5,000 tons in terms of nutrient content. It is estimated that less than one pound of nutrient was used per acre of cropped land.

In Nigeria there are many obstacles to fertilizer use and until they are effectively dealt with fertilizers cannot be widely, efficiently and profitably used by cultivators through out the country. The main obstacles are.

- (a) Land-holding arrangements and cropping systems that tend to discourage the economic use of fertilizers.
- (b) Insufficient information on the kinds and amounts of fertilizers needed by particular crops under various environmental conditions.
- (c) Inadequate extension services to provide information to cultivators on improved techniques, including fertilizers, and to assist them in applying this information correctly, thereby overcoming their caution in the use of new and more intensive methods, which to them are unproven, in place of the traditional methods used on their crops, especially their food crops.⁸

Similar obstacles hinder the adoption of other new technologies like pesticides, livestock feeds, etc.

All these problems need to be tackled and ultimately resolved before Nigeria can provide conditions that encourage technology. One conclusion that emerges from our discussion in this section is that the present Nigerian agrarian structures, especially fragmentation, are positively against constantly changing technology. As long as these structures exist agricultural development in the country is seriously impeded.

(iii) Barriers to Capital Formation

In this section we will describe briefly the optimum conditions for capital formation in agriculture and then show that the land tenure systems in Nigeria are not favourable to such conditions. The process of economic growth in agriculture follows a distinct pattern. In its early stages slow gains in capital stocks predominate. Investment decisions are typically made in small segments. Spread over many seasons or gestation periods. Impressive amounts of capital are formed, but by many small, plodding steps. Capital formation in farming is rarely concentrated either in space or in time. It accumulates by an incremental process that is best described as accretionary.

For example, let us consider a nation's livestock herd. Increases in numbers and quality, improvements in feeding levels, better disease protection all take time. This was a primary capital-forming process in the early stages of

agricultural development in Europe and North America. It goes on wherever there are shifts from cash crops to animal agriculture. Accretionary processes are also important in the stock of farm capital represented by buildings, fencing, water supply, land clearing, ditching, drainage, soil improvement, and conservation.

This argument can be expressed in two propositions: (1) accretionary forms of agricultural capital formation are the important ones in early development and shifting from a cash-crop economy to a livestock-feed economy; (2) the time spans required for effective operation of these accretionary processes are measured not in years but in decades. Land tenure policy for optimum growth in these phases of development should create patterns of production, consumption and investment that maximize accretionary processes.

How can tenure security contribute to capital formation? It contributes to capital formation by making the use of a productive asset the preclusive right of an individual or a group.⁹ This security of expectation is crucial for biological forms of capital, for slow-maturing enterprises, and for undertakings involving numerous incremental additions made successively over many production cycles. A system of tenure that makes these rights of use and reward specific to the user is a necessary but not a sufficient condition for capital formation. A farm unit must also be large enough to enable the holder to achieve a surplus, and must endure long enough to motivate him to reinvest it in the farm enterprise.

The major impact of land tenure arrangements is upon decisions regarding the allocation of labour time. The cultivator can invest his labour in the farm firm, or in the household. He can invest resulting income in productive assets, or in consumption. He can do this within a short time-horizon, or he can take the long view. With adequate tenure security, the operator has a choice.

The prospects of long and secure tenure create a condition in which maximum incentive is given for the investment of family labour time in productive undertakings. Much agricultural capital formation can be explained in this fashion. Livestock care, repair and maintenance of structures, improvement of water supplies and a variety of other tasks are often accomplished in agriculture in what might otherwise be leisure time. In terms of capital creation, that tenure system is best which creates the maximum likelihood that the farm family will elect to invest its own labour.

The generation of new attitudes toward debt and credit is another major contribution which secure tenure arrangements (land reforms) can make to capital formation. Taboos against debt are characteristic of tradition-bound agrarian societies. The emergence of attitudes that relate debt repayment ability to increased output is an important prerequisite for agricultural development. Here too land reforms can make decisive contributions. Land reform facilitates the development of mortgage credit by establishing a legally defensible title to land.¹⁰

The optimum conditions for capital formation in agriculture have in this section been presented in terms of the owner-operated farm firm, but this is not the only tenure arrangement that can create them. It is possible to devise leasing arrangements that will create security of expectations, specific to the operator, and for a long enough period to encourage long-term investment.

From our discussion in chapter one it becomes evident that the land tenure systems in Nigeria are not conducive to accretionary processes of capital formation in agriculture. There is no security of tenure for the Nigerian peasant farmers. This is due to the traditional land tenure systems which recognise only communal ownership of land. Annual or periodic allocation or reallocation of village lands creates great difficulties under conditions that demand the fullest forms of security. As indicated before, in the native customary law there is absence of any limitation of time within which claims over land can be asserted or enforced.

There is no legislation in Nigeria regulating tenancy agreements or contracts. The few tenants in the country are tenants at will. Their tenancy can be terminated at any time. This type of insecurity has adverse effect on the tenants willingness to improve the land or make long range cultivation plans. Consequently accretionary process of capital formation is impeded.

Since the peasant farmer has no absolute ownership right on any piece of land he cannot raise loans on the

mortgage of land. Inability to establish a legally defensible title to land prevents the development of mortgage credit in Nigeria and this has deprived agriculture of a major source of capital formation.

The opposition of land allocating authorities to tree-crop planting is a good indication that the present tenure systems are a barrier to capital formation. The opposition arises because the land allocating authorities want to ensure that all lands remain "the communal property." This kind of opposition surely deters investment and therefore is an obstacle to the development of agriculture. All these unfavourable conditions constitute a barrier to capital formation in Nigeria.

(iv) Barriers to Providing Market Motives

Nigerian agriculture is mainly a subsistence agriculture. Most of the crops grown are for feeding the farmers and their families. Marketable surpluses are relatively small, never exceeding 25 percent of total production. The surplus crops are brought to the local market in small and unequal quantities by the individual producers. If agricultural productivity in Nigeria had been high, the marketable surplus would have been high too and this would have necessitated the development of marketing system. Since the low agricultural productivity is due to defective agrarian structures so they (defective agrarian structures) indeed are a barrier to the development of marketing system for farm products.

Many of the Nigerian peasant farmers are too remote from the transport network, and so have no easy access to markets for the sale of their products. At present transport facilities in the country are not adequate, and when they are improved they will accelerate the development of marketing system.

There are no marketing boards for the staple food crops and minor cash crops. These form the bulk of agricultural sector in Nigeria.. It is hard to envisage how this large agricultural sector can develop without an efficient marketing system.

It is evident by now from the discussion in this chapter that the barriers to agricultural development in Nigeria arise directly or indirectly from defective agrarian structures and these defective structures are largely the outcome of the traditional land tenure systems. If these defects are rectified (by land reform) agricultural productivity will increase.

This chapter will be concluded with a number of hypotheses which will indicate the various ways land reform can facilitate increase in labour productivity in agriculture.

Hypotheses

- (i) The consolidation of small, fragmented and scattered farms into one plot of land enables more rational cultivation resulting in increased agricultural production because of reduced travel and less land used to mark borders.

- (ii) Security of tenure encourages investing in land improvement because:
- (a) the farmer knows he can keep the land to benefit from the improvements.
 - (b) If he decides to leave the land he can sell the improvements to the land as well as the land itself.
- (iii) Security of land tenure with reference to a particular plot of land encourages long-range planning where the farmer can consider the product from this land for more than the immediate growing season. Production techniques used will be based on future as well as current productivity of the land.
- (iv) The feasibility of investment provided by secure land tenure encourages the employment of new farming techniques which involve investment expenditures.
- (v) The use of new farming techniques which preserve and/or restore soil fertility (eg. use of fertilizers, crop rotation) enables the replacement of shifting cultivation with more productive land use practices.
- (vi) Security of land tenure facilitates investment in agriculture by providing farmers with collateral which can be used to secure loans.

Footnotes to Chapter III

1. This assertion is true only if the "decision makers" and the owners of resources are the same. In modern co-operatives they are not necessarily the same.

2. See table 1 above *
3. F. A. O., European Agriculture Statement of Problems, p. 19 *
4. This figure was given by the experts who studied the problem in European Agriculture. See F. A. O., European Agriculture in 1965, p. 21 *
5. H. A. Oluwasanmi, Agriculture and Nigerian Economic Development (Ibadan: Oxford University Press, 1966), p. 112.
6. See F. A. O. Yearbook of Food and Statistics 1960, 1961, and 1969/70.
7. As Mosher has pointed out many people do not believe that "farming" is a "business," they say it is a "way of life." They argue that business is a matter of buying and selling. See A. T. Mosher, Getting Agriculture Moving (New York, 1966), p. 51 *
8. F. A. O. Report, Agricultural Development in Nigeria 1965-1980, p. 199 *
9. Southworth and Johnston, Agricultural Development and Economic Growth (Ithaca 1967), p. 273.
10. Ibid., p. 279 *

Chapter IV

The Available Evidence of the Effect of Land Tenure Change on Agricultural Development.

In this chapter we will try to provide some empirical evidence of the effect of land tenure change on agricultural development. This will be done by testing the hypotheses formulated in the last chapter. This would involve confronting the predictions with evidence in order to discover if certain events have the consequences predicted by the theories,¹ although as Lipsey has pointed out, as with most other sciences it is never possible to refute or prove any theory in economics with 100 percent certainty.

One of the greatest effects claimed for land reform by many economists² is the great increase in production, and how it comes about will be discussed in some detail here.

- (i) The consolidation of small, fragmented and scattered farms into one plot of land enables more rational farming, resulting in increased agricultural production because of reduced travel, less land used to mark borders and better weed and pest control.

In testing this hypothesis we shall examine evidence or data from Egypt, Japan and Italy. Before land reform programs were carried out in these countries, their agriculture was characterised by small, scattered and uneconomic farm units as is the case in Nigeria today. After the reform

the resulting increase in agricultural production was quite high in each of the three countries.

A number of factors were responsible for the great increase in agricultural productivity. The first was the establishment of farms of optimum size³ where mechanical devices and equipments could be economically employed. The second was the eradication of waste of land on many border lines. As has been indicated before a United Nations report estimated that up to 10 percent of agricultural production potential is wasted on the numerous border lines. On consolidated farms better control of weeds and pests is possible. So it is not surprising therefore that agricultural production in the three countries greatly increased. The agricultural production of these three countries will be compared before and after the reform. If there is any increase in production, we will try to ascertain whether it is due to any other factors other than the reform. The mechanics of the reform will not be discussed here.

Egypt: Agrarian reform was carried out in Egypt in 1952 and the reform law was amended in 1961. Let us have a look at the production tables.

Table 5-10 Production of selected crops in Egypt before and after the reform.

Table 5Wheat

Before the reform

<u>Year</u>	<u>Area in 1,000 hectares</u>	<u>Yield in quintals per hectare</u>	<u>Production in 1000 metric tons</u>
1945	692	17.1	1183
1946	660	17.5	1163
1947	685	15.2	1044
1948	637	17.0	1080
1949	598	19.0	1167
1950	576	17.7	1018
1951	629	19.2	1209

After the reform

1953	572	20.6	1547
1954	754	22.7	1729
1955	640	22.7	1451
1956	660	23.4	1547
1957	636	23.1	1467
1958	599	23.6	1412
1959/60	620	23.3	1448
1960/61	612	24.5	1499

Table 6Maize

Before the reform

1945	789	21.5	1697
1946	721	19.7	1422
1947	675	20.7	1401
1948	652	21.6	1409
1949	628	19.9	1250
1950	610	21.4	1306
1951	695	20.4	1421

After the reform

1953	847	21.9	1853
1954	800	21.9	1568
1955	770	22.2	1714
1956	771	21.4	1652
1957	743	20.2	1498
1958	821	21.4	1758
1959/60	781	19.2	1500
1960/61	765	22.1	1691

Table 7Rice (Paddy)

Before the reform

Year	Area in 1000 hectares	Yield in quintals per hectare	Production in 1000 metric tons
1945	265	32.7	8866
1946	265	35.4	938
1947	326	39.2	1276
1948	330	39.6	1308
1949	295	39.6	1168
1950	294	42.2	1242
1951	205	30.2	620

After the reform

1953	178	36.7	652
1954	256	43.7	1118
1955	252	52.0	1310
1956	290	54.0	1573
1957	307	55.6	1709
1958	218	49.6	1082
1959/60	306	50.2	1535
1960/61	297	50.0	1485

Table 8Cottonseed

Before the reform

1945	413	10.4	430.8
1946	509	9.9	502.8
1947	527	9.8	515.1
1948	606	11.6	704
1949	711	9.8	697
1950	829	8.5	707
1951	832	8.8	676

After the reform

1953	556	10.8	602
1954	663	10.1	673
1955	763	8.5	648
1956	694	9.2	639
1957	764	10.2	777
1958	800	10.6	852
1959/60	739	11.5	850
1960/61	787	11.3	888

Table 9

Groundnuts

Before the reform

Year	Area in 1000 hectares	Yield in quintals per hectare	Production in 1000 metric tons
1945	10	18.8	18.7
1946	10	15.4	15.4
1947	11	18	18.7
1948	10	18.6	18.0*
1949	11	12.7	14
1950	11	...	18
1951	10	...	19

After the reform

1953	13	18.9	24
1954	13	18.4	24
1955	14	19.9	28
1956	15	19.8	29
1957	15	20.7	31
1958	16	20.7	33
1959/60	17	20.3	34
1960/61	17	20.3	35

Table 10

Cotton (Lint)

1945	413	5.7	234.6
1946	509	5.4	272.5
1947	527	5.4	286.2
1948	606	6.6	400
1949	711	5.4	387
1950	829	4.6	382
1951	832	4.4	362

After the reform

1953	556	5.7	318
1954	663	5.2	348
1955	763	4.4	334
1956	694	4.7	325
1957	764	5.3	405
1958	800	5.6	446
1959/60	739	6.2	457
1960/61	787	6.0	478

Source: F. A. O., Yearbook of Food and Agricultural Statistics, 1948, 1949, 1950; 1954 & 1956 & F. A. O. Production Yearbook 1959 & 1962 ... figures not available.

* There is no explanation in the source for this discrepancy.

Most of the economists are unanimous in their opinion that the reform caused a great increase in agricultural production in Egypt. A comparison of the figures in tables 5 to 10 supports this opinion. Since 1952 yields per acre for all crops have risen and the production of all crops, except cotton has increased. The area under cotton has declined as a result of the fall in prices and the overall production decline cannot be attributed to the redistribution. Raup holding the same view puts it this way, "Increases in output since reform have been especially pronounced in food crops. The official index of gross agricultural output (1935-39 = 100) rose from an average of 106 in 1950-52 to 135 in 1962. For food stuffs only, the increase was from 110 to 150. The increase was specially great for vegetables and fruits."⁴

Japan: Land reform was carried out in Japan in 1946. As in the case of Egypt we will look at the production figures before and after the reform.

Table 11-17 Production of Selected Crops in Japan before and after the reform

Year	<u>Rice (Paddy)</u>		
	Before the reform		
	Area (planted) in 1000 hectares	Yield in quintals per hectare	Production in 1000 quintals
1940	3152	35.9	113,282
1941	3156	32.4	102,266
1942	3138	39.6	124,372
1943	3085	38.0	117,196
1944	2963	36.9	109,453
1945	2870	27.9	80,162

Table 11Rice (Paddy)

After the reform

Year	Area (planted) in 1000 hectares	Yield in quintals per hectare	Production in 1000 quintals
1947	3120	36.2	11,298
1948	3125	37.0	11,632
1949	3180	38.4	12,224
1950	2994	41.0	12,064
1951	3004	37.6	11,302
1952	3004	41.3	12,404
1953	2982	34.5	10,298
1954	3038	37.5	11,392
1955	3079	48.1	14,818

Table 12Wheat

Before the reform

1940	819	22.0	17,922
1941	817	17.9	14,598
1942	854	16.2	13,844
1943	801	13.6	10,937
1944	830	16.6	13,840
1945	724	13.1	9,459

After the reform

1947	578	13.3	764
1948	661	15.8	1042
1949	755	17.2	1297
1950	762	17.6	1338
1951	733	20.3	1490
1952	720	21.4	1537
1953	685	20.1	1374
1954	671	22.6	1516
1955	661	22.2	1468

Table 13Maize

Before the reform

1940	...	...	799
1941	...	...	725
1942	...	...	702
1943	...	...	771
1944	...	...	728
1945	...	...	1050

Table 13Maize

After the reform

Year	Area (planted in 1000 hectares	Yield in quintals per hectare	Production in 1000 metric tons
1947	52	10.8	56
1948	53	13.4	71
1949	56	12.7	71
1950	60	15.0	90
1951	65	•••	102
1952	41	17.2	71
1953	47	14.0	66
1954	46	12.2	56
1955	50	20.0	100

Table 14Barley

Before the reform

1940	748	22.6	16,873
1941	819	19.9	16,430
1942	897	18.5	16,564
1943	860	15.2	13,054
1944	928	18.3	16,936
1945	878	14.3	12,550

After the reform

1947	756	15.3	1157
1948	880	17.8	1569
1949	1001	20.0	2074
1950	1018	19.3	1960
1951	976	22.2	2169
1952	927	23.3	2158
1953	915	22.9	2091
1954	1012	25.5	2583
1955	992	24.3	2408

Table 15Potatoes

Before the reform

1940	166	99.1	16,453
1941	180	109.2	19,663
1942	192	102.5	19,671
1943	202	102.3	20,657
1944	204	97.6	20,003
1945	214	82.8	17,720

Table 15Potatoes

After the reform

Year	Area (planted) in 1000 hectares	Yield in quintals per hectare	Production in 1000 metric tons
1947	208	93	1936
1948	219	98	2146
1949	227	104	2352
1950	192	127	2442
1951	197	130	2569
1952	197	128	2515
1953	203	127	2415
1954	212	129	2743
1955	211	138	2908

Table 16Soyabeans

Before the reform

1940	...	...	...
1941	...	...	3007
1942	...	...	...
1943	310	10.0	3096
1944	...	...	2735
1945	...	...	3390

After the reform

1947	233	7.8	181
1948	238	9.4	223
1949	262	9.3	243
1950	413	10.9	447
1951	422	11.3	474
1952	410	12.7	521
1953	421	10.2	429
1954	430	8.7	376
1955	385	13.2	507

Source: F. A. O., Yearbook of Food and Agricultural Statistics, 1947, 1948, 1950, 1952, 1954 & 1956.

... figures not available

Since the land reform the agricultural production record in Japan has become more impressive. The tables 11-16 give such indication. Before World War II Japanese output per acre was already one of the highest in the world. The most significant consequence of the reform was the conversion of tenants into owners, and this is believed to have played a key role in the increased agricultural productivity in Japan. In 1963 farm income per farm household doubled its 1950 level. Japan is traditionally a rice-importing nation, but in 1962 her rice production reached a level where she became self-sufficient in this basic food product for the first time in the history of modern Japan. The overall index of agricultural production (1934-36= 100) rose from 106 in 1940 to 157 in 1964. This was achieved in spite of a decline in the cultivated acreage of 4 percent from 1960 to 1963, and a decrease in the farm labour force at a rate of nearly 4 percent per annum since 1960.⁵

Italy: After the land reform scheme was implemented in Italy in 1951 there was a significant change in the index of agricultural production. Production increases ranged from a minimum of 30 percent in the Po Delta to a maximum average of 100 percent in Calabria.⁶ These figures according to F. A. O. Report underestimates actual production changes. Production figures for 1955, moreover, do not reflect the potential increases from investments such as olive groves and vineyards, which had been carried out on the new farms and which were not yet productive. Let us look at the production

tables.

Tables 17-20 Production of selected crops in Italy before and after the reform.

Table 17

Wheat

Before the reform

Year	Area (planted) 1000 hectares	Yield 100Kg/ hectare	Production 1000 metric tons
1946	5622	13.3	6126
1947	4499	10.4	4679
1948	4664	13.2	6135
1949	4723	14.9	7020

After the reform

1952	4705	15.2	7170
1953	4770	19.2	9056
1954	4770	15.2	7251
1955	4852	19.6	9504
1956	4883	17.8	9681

Table 18

Barley

Before the reform

1946	238	9.7	230
1947	242	7.4	179
1948	251	9.2	230
1949	250	9.1	227

After the reform

1952	251	10.3	258
1953	250	12.5	313
1954	248	11.2	278
1955	244	12.0	292
1956	237	11.6	275

Year	Area (planted) 1000 hectares	Yield 100Kg/ hectare	Production 1000 metric tons
------	------------------------------------	----------------------------	-----------------------------------

Table 19Maize

Before the reform

1946	1259	15.1	1902
1947	1230	15.6	1924
1948	1247	18.1	2254
1949	1230	15.6	1924

After the reform

1952	1253	18.4	2306
1953	1272	25.3	3213
1954	1277	23.2	2963
1955	1237	25.9	3204
1956	1257	27.1	3411

Table 20Potatoes

Before the reform

1946	398	58	2288
1947	419	67	2806
1948	406	74	3014
1949	390	67	2617

After the reform

1952	392	70	3134
1953	393	80	3183
1954	397	81	3202
1955	391	86	3382
1956	387	88	3414

Source: F. A. O. Yearbook of Food & Agricultural
Statistics, 1949, 1950, 1955 & 1957.

A comparison of figures of tables 17+20 will show that there has been great increase in production. Other factors that contributed to the increase in production were capital investment, labour input and technological advances.

Though remarkable achievements were made in Egypt, Japan and Italy, it is nevertheless true that not all reforms lead to increased output. This point is well illustrated by Bolivia and Iraq. Land reform programs were carried out in Bolivia in 1953 and in Iraq in 1958. But in both countries the output declined by about 50 percent in the first three years after the reform.* So land reform per se does not increase output. The increased output achieved by the three countries discussed in this section must have been due to other factors besides land reform. Nevertheless the role of land reform cannot be minimized. In the countries (Egypt, Japan and Italy) the farmers received fresh incentives to intensify their production efforts when they became the "owners" of their land. They received new motivation to make better use of science and technology through education, agricultural research and extension. In order for land reform to be successful, it must be supported by other programs, such as provisions for easy and cheap credit to farmers. In the case of Egypt, the reform was followed by programs of government assistance through co-operatives, community development programs and supervised agricultural credit. Thus the empirical evidence is consistent with the hypothesis.

* See appendix A.

- (ii) Security of tenure encourages investing in land improvements because:
 - (a) the farmer knows he can keep the land to benefit from the improvements.
 - (b) If he decides to leave the land he can sell the improvements to the land as well as the land itself.

Though statistical evidence for this hypothesis is not easy to get, nevertheless it does not detract from the fact that where cultivators have adequate security of tenure their incentive to spend on land improvements is much enhanced. This is consistent with the experience in the advanced countries of Europe and North America where farm operators invest considerably on land improvements.

What happened in the various Italian regions after the land reform scheme lends support to this hypothesis. Immediately after the reform the farm families were entrusted with the tasks of making more improvements, cultivating the land more intensively and extending the areas planted to trees.

Table 21 Planting of Trees*

Districts	Vines	Olives	Citrus fruit trees	Other fruit trees	Mixed	Wind breaks & road side trees	Timber trees	Total
	(Thousands of plants)							
Po Delta	615	---	---	7	---	26	101	749
Maremma	435	181	---	8	793	217	6	1640
Fucino	30	---	---	---	18	375	---	423
Campania								
Puglia-								
Lucania-								
Molise	18914	1536	186	1170	45779	1771	---	69356
Calabria	2309	295	257	61	5310	513	461	9206
Sardinia	10160	204	22	229	1902	4227	11	16755
Sicily	9350	225	6	83	---	---	3	9667
Total	41943	2450	482	1558	53805	7307	582	108127

Source: F. A. O. Report Land Reform in Italy, p. 38.

Table 22 Farm Buildings, Roads, etc. *

Districts	New Works				
	Houses	Stables	Wells	Roads (in Kilometers)	
	Nos.	Nos.	Nos.	Private	Accommodation
Po Delta	4003	2135	335	---	619.5
Maremma	4923	4881	2265	312.6	830.7
Fucino	62	30	16	182.6	356.1
Campania	912	1259	1	---	134.1
Puglia-					
Lucania-					
Molise	10501	8365	2838	---	649
Calabria	4785	4503	279	19.2	702.8
Sardina	2374	2112	---	41	347
Sicily	4301	4301	---	---	227
Total	31861	27586	5734	555.4	866.2

Source: Extractions from table 7 in F. A. O. Report, Land Reform in Italy, p. 39

* The figures refer to 1952-1954 period.

Tables 21 and 22 give an indication of the amount of land improvements undertaken after the reform for the period 1952-1954.

Elkan observed that in African countries people cling to their land with great tenacity. This according to him is due partly to feelings and emotions which go beyond the realm of economics and partly to the forms of land tenure that restrict the opportunities for obtaining and parting with land.⁷ He also maintains that hardly anywhere in Africa can a man obtain real compensation for vacating a farm; either because he has no individual claim to his land, or if he does, there is no market for his farm since land of equal value still lies untilled.

There can be no doubt that any land tenure system which does not enable a man to get compensation for vacating his land, or maintaining his right to it unless he or his family are in actual occupation of it offers no inducement to vacate it. Tenacious clinging to land has serious effect on the development of agriculture.

Ability to capture improvements by sale has highly desirable effects on the development of agriculture. It enables people to migrate elsewhere without losing benefit of past efforts invested in a plot of land. It can also help in having farms of optimum size. More efficient farmers can buy out the less efficient ones. As agriculture develops over time, the size of farm units will continually change. The system should be such to permit such a change.

In Nigeria and other less developed countries the chief obstacle to investing on land improvements is insecurity of tenure and lack of provisions for the recovery of the value of unexhausted improvements made on the land by tenants. So any reform which converts tenants into owners of their land or increases the security of tenants will encourage investing in land improvements.

In the advanced countries land is alienable by sale, mortgage or lease. Well maintained and improved land fetches a higher selling price.

On the basis of practices that obtain in the developed countries there is no ground for rejecting the hypothesis.

(iii) Security of land tenure with reference to a particular plot of land encourages long-range planning where farmers can consider the product from this land for more than the immediate growing season. Production techniques used will be based on future as well as current productivity of the land.

The old standard argument for reform is that the incentive of ownership will increase production and investment. When the occupier of land or tenant becomes owner-operator there is bound to be a change in his plan, motivation and techniques. As owner-operator he will change from short-range to long-range planning. Now he has no fear of eviction or expiration of lease. His production plan will no longer be limited to the immediate growing season.

The great achievement of the Japanese reform was due in the main to the conversion of tenants and other cultivators into owners of the land. The changes in the amount of tenancy in Japanese villages can be seen in Tables 23 & 24. In these tables the 1947 figures represent the pre-land-reform state of affairs and the 1950 figures show the effects of the land reform. Whatever criterion is adopted, the decrease in tenancy is clear.

Table 23 Ownership and Tenancy of Cultivated Land,
1941, 1947, 1950.

Year	<u>I Rice Land</u>					
	Owner-culti- vated land		Tenant- cultivated land		Total	
	,000 cho	%	,000 cho	%	,000 cho	%
1941	1,489	(46.9)	1,686	(53.1)	3,176	(100)
1947	1,594	(55.9)	1,256	(44.1)	2,850	(100)
1950	2,592	(88.9)	319	(10.9)	2,914	(100)
	<u>II Upland</u>					
1941	1,689	(62.7)	1,003	(37.2)	2,693	(100)
1947	1,437	(66.5)	725	(33.5)	2,162	(100)
1950	2,084	(91.2)	195	(8.5)	2,286	(100)

Source: R. P. Dore, Land Reform in Japan, p. 175, table 8

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Table 24 Farm Household by Ownership Status, 1941, 1947, 1950.
(,000 households)

Year	Owner Part- Cultivators		Part-owner cultivators Part- tenants		Part- tenants Part-owner Cultivator		Tenants		Others		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1941	1711	(31.9)	1139	(20.7)	1100	(20.0)	1524	(27.7)	24	(0.4)	5599	(100)
1947	2154	(36.5)	1183	(20.0)	997	(16.9)	1574	(26.6)	1	(0.0)	5909	(100)
1950	3822	(61.8)	1591	(25.8)	411	(6.7)	312	(5.0)	41	(0.7)	6176	(100)

Source: R. P. Dore, Land Reform in Japan, p. 176.

Similarly there was a decrease in tenancy in the other two countries discussed in this chapter.

Though we have no statistical data to back up this assertion, nevertheless, it seems to be a rational explanation of real world behaviour.

When farm operators become owners of their land, they will be able to capture all profits and therefore will have less hesitation in adopting any technique or method which will maximize their profit.

(iv) The feasibility of investment provided by secure land tenure encourages the employment of new farming techniques which involve investment expenditures.

Land reform has a great influence in causing increase in investment in agriculture. Though all economists seem to agree on this, yet it is not easy to get statistical data on agricultural investment to facilitate comparative analysis.

However, we are going to examine cases where investment in agriculture increased after land reform program had been carried out. The first case is Italy.

Land Improvements

Works of land improvement were carried out in Italy with a speed which gradually increased as the phase of expropriation came to an end. There was a problem of augmenting the productive capacity of the land.

Table 25 Value of Land Improvements Between 1951 & 1955

Year	Amount (million lire)
1951-52	5.900
1953	12.500
1954	16.300
1955	21.900
Total	<u>56.600</u>

Source F. A. O. Report, Land Reform in Italy, p. 75.

It is clear from table 25 that there has been continuous increase in investment since land reform took place in 1952.

We will examine consumption of fertilizers in Egypt, India, Japan and Italy.

Tables 26A-C show that consumption of fertilizers increased in all the four countries. Empirical evidence is consistent with the hypothesis.

- (v) The use of new farming techniques which preserve and/or restore soil fertility (eg. use of fertilizers, crop rotation etc.) enables the replacement of shifting cultivation with more productive land use practices.

In the developed economies of Europe, North America and Oceania shifting cultivation is not part of agricultural practice. Rather crop rotation system is adopted in these economies. By this method the same piece of land is under cultivation each year but with different crops. Heavy feeders (crops) interchange with light feeders and

Table 26 A Consumption of Phosphate Fertilizers

	(Thousand metric tons)								
	1952/3 1956/7	1961/2	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9
Egypt	18.6	48.4	41.6	48.0	43.1	54.7	43.7	38.8	50.0
India *	17.6	70.8	86.7	129.9	147.9	134.3	274.6	438.2	296.0
Japan	275.2	452.5	451.9	505.8	509.0	546.0	609.3	665.3	697.0
Italy	393.6	396.9	376.6	365.6	400.5	452.6	462.8	464.5	470.0

Source United Nations, Statistical Yearbook 1969.

Table 26 B Consumption of Nitrogenous Fertilizers

	1948/49 1952/53	1958/9	1959/60	1960/1	1961/2	1962/3	1963/4	1964/5	1965/6
Egypt	98.2	177.1	105.7	176.6	191.9	196.1	227.1	260.	...
India	63.1	179.9	230.2	296.1	310.0	328.7	429.5	510.0	...
Japan	368.0	681.7	584.1	753.1	695.2	689.3	739.3	724.0	775.0
Italy	145.4	298.3	350.8	322.6	347.7	376.5	375.0	403.6	466.2

Table 26 C Consumption of Potash Fertilizers

	1948/9 1952/53	1958/9	1959/60	1960/1	1961/2	1962/3	1963/4	1964/5	1965/6
Egypt	0.6	2.3	...	3.2	...	1.3	1.0	0.9	...
India	3.2	18.8	31.9	27.9	37.0	42.7	49.6	62.8	...
Japan	145.3	437.4	524.7	599.7	592.8	537.8	597.7	479.0	607.0
Italy	23.5	79.2	108.2	103.8	127.3	134.4	130.9	136.1	167.9

* Land reform took place in India in 1956.

Source U. N., Statistical Yearbook, 1966.

this helps in conserving soil fertility.

In these economies there is a high rate of fertilizer consumption. This increases not only the yield per acre but also prevents soil exhaustion.

The writer knows from personal experience that in Nigeria where rotation of crops is not the usual method of cultivation and where fertilizer consumption is not high shifting cultivation is a prominent feature of the agricultural system.

Though we have no statistical evidence yet the hypothesis is consistent with experience in the developed economies of the world.

(vi) Security of land tenure facilitates investment in agriculture by providing the farmer with collateral which can be used to secure loans.

The low level of investment in agriculture in the developing countries is due, not only to the farmer's low income (because he cannot save) but also to his inability to raise loans. Here we will use Nigerian experience. A Nigerian peasant farmer cannot raise a loan because he has no good collateral to offer as security for the loan. As we saw in chapter one he has no absolute right to any plot of land, so he cannot use it as collateral. This inability to raise loan seriously affects the type and variety of implements he uses.

Table 27 Household Expenditure on Farm Implements

Farmer A:

Implements	Expenditure (1950 price)
1 large hoe (galma for self (lasts three years)	S.d. 6.0
1 large hoe for boy aged thirteen	5.0
2 small hoes (obtained in return for two old hoes)	
2 more small hoes at 1 ^s :3 ^d each	2.6
1 magirki (harvesting tool)	1.0
2 axes	2.6
Total cash outlay on farm implements	<hr/> 17.0 <hr/>

Farmer B:

1 large hoe (second-hand)	2.6
1 small hoe	9
1 knife	2
1 lauje (grass cutter)	2
Total cash outlay on farm implements	<hr/> 3.7 <hr/>

Source M. G. Smith, The Economies of Hausa Communities of Zaria (London, 1958), pp. 126 & 130.

Table 27 is an indication that the amount spent on farm implements is rather low.

But if by reform he becomes the "owner" of his land, the situation changes. Then he can raise loan from private individuals or co-operative banks on the mortgage of his land. His ability to raise loan will enhance his ability to invest in agriculture.

The opportunities which farmers in the developed countries have in borrowing money for investment are due in part to the secure title which they have in land and in part to the development in credit facilities.⁸

On the basis of experience of what happens in different countries, there are no grounds for rejecting the hypothesis.

Footnotes to Chapter. IV

1. R. G. Lipsey, An Introduction to Positive Economics (London: 1966), p. 16.
2. Raup holds this view strongly. See Southworth and Johnston, Agricultural Development and Economic Growth (Ithaca, 1967), pp. 283-289.
3. Even today the size of farm unit in Japan is not big - 1 hectare; so other factors must have contributed to the high productivity of her agriculture.
4. Southworth & Johnston, Agricultural Development and Economic Growth (Ithaca, 1967), p. 285.
5. Ibid. p. 287.
6. F. A. O. Report, Land Reform in Italy (Rome, 1961), p. 5.
7. W. Elkan, "Migrant Labour in Africa: An Economists Approach," American Economic Review, Vol. XLIX, No. 2, May, 1959, pp. 194-195.
8. Farmers from developed countries can get loans from any of the following sources: --private savings banks, co-operative bank system, State-sponsored banks and credits from foreign countries with capital surpluses. See K. H. Parsons, R. J. Penn & P. Raup, Land Tenure (- Conference Proceedings, Madison, 1956) p. 502.

Chapter V

Policy Measures

In this chapter we will discuss measures which when implemented should accelerate the development of agriculture in Nigeria. Measures recommended would be directed to correcting the existing defective agrarian structures and the traditional characteristics of Nigerian agriculture. An indication of how each measure would help in the development of agriculture will be given but no attempt will be made to describe the mechanics of the measures. All that needs to be stressed here is that land reform must be treated as an integrated program of agricultural development otherwise it will not achieve its objectives.

As indicated in chapter one, the land legislations in Nigeria were designed primarily to protect the peasants against unlawful transfer of land to foreign concession seekers by ignorant and improvident chieftains or by avaricious members of the land-holding communities; and were not in any way intended to promote agricultural development.

However, since Independence in 1960 some measures have been taken to improve agriculture. The most outstanding of these is the "Farm Settlement Scheme" launched by the Eastern and Western regional governments. The main objectives of the scheme were:

- (a) To test and later demonstrate carefully planned farming systems designed to attract young, educated persons to take up farming as a satisfying and lucrative means of obtaining their livelihood.
- (b) To demonstrate that by careful planning farms can be established and operated by young, educated farmers, with reasonable assistance in the form of advice and loans from the Government and other sources, which will provide comfortable standard of living for the owners, comparable with or higher than that gained by persons of their status in other forms of employment.
- (c) To attempt to reverse the trend of migration from the rural to urban areas by making rural life more attractive and more congenial than it has been hitherto.¹
- (d) To increase and maintain the output of food and agricultural products by making rural areas more productive....²

In the light of the performance of the farm settlements, there can be no doubt that the objectives of the scheme are far from being achieved. The scheme has been severely criticised for its "expensiveness" which will touch only a small proportion of the potential young farmers in the regions concerned.³ The capital cost is over £2,500 per settler, and in the circumstances of

Nigeria this amount is really substantial. There is some truth in this criticism, and this can be seen from the recommendations made by the F. A. O. Mission for Eastern Nigerian Government that "there is need for a careful review of the cost and return estimates for the various types of holdings in the light of actual performance with regard to investment, labour requirements, prices and quantities of inputs (seedlings, fertilizer, spraying chemicals etc.), yields of various tree and arable crops as well as producer prices."⁴

It is not easy to point out a single reason why the scheme did not succeed in both Eastern and Western regions. It can be argued that it was not well planned and/or not well executed. The regional governments relied entirely on young school leavers who had no previous experience in farming to operate the scheme, and this was a big mistake. The young and inexperienced farmers ought to have been given an extended period of tutelage in running such a venture. Lack of adequate supervision which was due to acute shortage of extension service workers in Nigeria contributed to the failure of the whole scheme. The opposition of the local people which in some cases compelled the regional governments to abandon or drastically reduce it, was responsible to some extent for the lack of success.⁵ The opposition rose from the fear that the establishment of farm settlement on their land would mean a permanent loss

of their communal right to the land.

It seems evident from our discussion in chapter three and the failure of the farm settlement scheme that fundamental changes will be needed to develop Nigerian agriculture. The changes will require bold initiative by the Government. In effect this would mean that Nigerian Government will have to adopt a well defined land reform policy designed primarily to accelerate agricultural development.

If an improved system of tenure is to be established in Nigeria, there must be legislation making land reform mandatory in all the regions (now states). The land reform envisaged for Nigeria should include the following: compulsory acquisition of lands by the Government, consolidation of small holdings, redistribution of land, defining landlord-tenant relations and the establishment of marketing boards for agricultural products. Each of these measures will be discussed briefly.

1. Compulsory Acquisition of
 Lands by the Government

The reform legislation should set the maximum acreage which each peasant farmer and industrial companies would be allowed to hold, providing that lands owned by industrial companies be exempted from expropriation for a period of about thirty years--after the legislation comes into force. This exemption is necessary to permit orderly and efficient take-over of these properties, thus

preventing serious dislocations in the economy. What the maximum will be and how it could vary in the different regions according to differences in population density, soil fertility etc. would be fully worked out by the National Commission on land policy which would be set up. As soon as the reform legislation comes into force any land in excess of the maximum should be compulsorily sold to the Government. Steps should be taken to ensure that lands in excess of the official limit are not transferred to other members of the family, or concealed in any other way.

Compulsory acquisition of lands (fragmented and expropriated) by Government will aid and facilitate consolidation and in the circumstances of Nigeria consolidation is vital to land reform program.⁶ By this measure the Government would be providing a kind of land bank, and this could have some economic impact. Enterprising farmers who need more land for expansion of their farms will no longer be frustrated. All they will do is to apply to the Government for purchase of more land, and on the basis of their production record and the amount of investment they have on their farms, they will be favourably considered. On the other hand farmers who find that they have more land than they can most efficiently utilize can sell part of it to the Government. This will introduce greater flexibility in the whole system.

2. Consolidation of Small Holdings

Consolidation of farm holdings is a necessary and important step in any land reform program in Nigeria and therefore the reform law must allow for it. The necessity arises from the fact previously indicated that peasant farmers have many, small and scattered parcels of land. It would be most desirable if the procedure for consolidation or reallocation is made as simple as possible. Consolidation can be brought about in the country by agreement or by law. Because of sentimental attachment to land it seems doubtful that consolidation by agreement can take place on a scale large enough to bring about the desired development in agriculture in Nigeria. Reallocation by agreement has the advantage of facilitating a consolidation program. The rights to the reallocated land would be acquired by registration of the deed of reallocation.

By the process of consolidation it will be possible to have farms of optimum size in the country. We know from economic theory that the size of production unit is important. For various technological considerations, in order to realize maximum output from given amounts of resources the production unit has to be of an optimum size. Farms of optimum size will make the introduction of machinery both feasible and economic. In other words farms of optimum size will aid and encourage technological changes. As indicated in chapter two above,

constantly changing technology is an essential for agricultural development in any country, and Nigeria is no exception. By eradicating the evils of fragmentation, consolidation can surely help Nigerian agriculture on the road to progress.

Consolidation can also cause a great increase in agricultural output in Nigeria. Experts have stated that "fragmentation reduces output because part of the land (up to 10% in some cases) is wasted on the many border lines and because weed control and improved seed are hampered. Output per hectare sometimes increases 20% to 30% when land is redistributed and consolidated. Output per man may even increase 50 percent or more."⁷ Empirical evidence confirms this. The experiences of Japan, Egypt and Italy confirmed that there was great increase in agricultural production after land reform programs had been executed.* It is a fact that increased productivity per acre and per worker is one of the characteristics of a developed agriculture. Then it goes without saying that consolidation by stimulating and encouraging technological changes, permitting rational cultivation and thereby increasing agricultural output surely accelerates development of agriculture. It is the contention of this section of the thesis that consolidation of small holdings needs to be carefully planned and carried out in Nigeria as a necessary and important step in any land reform program intended to accelerate agricultural development.

*See chapter 4 above.

3. Redistribution of Land

Redistribution of land will probably be the most controversial of all the reform measures in the country. The ultimate purpose will be to establish the cultivators as owner-occupiers, rather than, as mentioned before, what the peasants have now "communal right" in land. The inauguration of such a program of redistribution can be a tacit admission that inequalities and maladjustments do exist in the economy. As a matter of fact, they do exist because some families or groups have more adult males than others, and this means smaller portions of land for the members of such large families or groups. The equality to be achieved by the program can only be a matter of degree, a levelling out of the grosser disparities in income between members in different land-holding groups.

The extent to which the program equalizes incomes depends among other things on the proportion of agricultural area expropriated, and this proportion varies considerably.

The Terms of Ownership

The recipients should be granted land holdings on condition that they must not subdivide or sell them to private individuals. The prohibition of subdivision is essential if fragmentation is to be avoided in future. They should be required to pay the purchase price for their holdings and the justification for this derives

from the fact that in a village community only a lucky minority can receive land. Moreover, payment makes the recipients more secure in their rights of ownership.

In any redistribution programme in Nigeria top priority needs be given to the former tenants, share-croppers and labourers on the expropriated estate. These priorities are necessary because, as indicated before, the country is densely populated especially in the south, and therefore the demand for land is high.

The Size of Holdings to be Allocated to the Recipients

It seems clear from the differences (population density, soil fertility) that exist in different regions that this cannot be stated in a single figure for the whole country. Moreover much will depend on the type of farming contemplated - farming meant to support the farm family or commercial farming? However suffice it to state now that the farm ought to be of optimum size if there is to be full and efficient utilization of resources. Although from an agricultural standpoint, the question of farm size is of great importance, it must be noted that it is not size per se that matters. The importance of size depends on the types of crops grown and machinery used. This statement is fully supported by the Japanese experience. The average farm holding in Japan is about 2 acres and yet she has high labour productivity. What is deemed adequate farm size today will change over time, so it is vitally important that the whole system should

be flexible enough to permit the necessary changes.

This point can be discussed a little more. If we accept Professor Schultz's premises that traditional agriculture can be transformed into a highly productive sector and thus into an inexpensive source of economic growth by means of investment, then it becomes evident that the types of investment that are essential in transforming it are not dependent, for example, upon the establishment of large farms. The size of farms may change as a consequence of the transformation--they may become either larger or smaller--but changes in size are not the source of the economic growth to be had from this modernization process.⁹

Since Nigeria is densely populated it goes without saying that a redistribution program will displace about one half of the present farmers. In other words, they will have no holdings of land. Unless the displaced farmers can find employment in the other sectors of the economy, the social and economic dislocations will be great in the country. It is the fear of mass unemployment, that prevents politicians from taking positive measures to reform the present system. There is no doubt that some people in Nigeria will question the wisdom of accelerating the unemployment problem just to reform or change the present systems. However, these people do not question the necessity for improved tenure system in the country, rather their argument is that such a reform should be deferred until other sectors of the economy have

sufficiently developed to absorb those farmers who will be displaced.

Redistribution would affect security of tenure, enhance the willingness to invest and increase production incentives. It would convert many of the peasants into "owners" of land they cultivate. To put it in another way, it will give them absolute security of tenure, and this is necessary to induce improvements on the land. Correspondingly there will be reduction in tenancy in the country. Dore claimed that after land reform there was reduction in tenancy in Japan from 46% in 1947 to 12% in 1959¹⁰ and as has been stated before "owner-farmers" increased from 30 to 85% in the same period. Classical theorizing supports the argument that the incentive of ownership increases production and investment. The Japanese experience supports this. Raup agrees that the reform increased investment in Japan and he puts it this way, "By converting tenants into owner-farmers, one of the major barriers to further increases in levels of fertilizer use was removed."¹¹

As owner-occupier the farmer has no fear or threat of eviction, and as pointed out before, lack of security of tenure was, and is, a great obstacle to investment in Nigerian agriculture. The removal of this obstacle is a noteworthy contribution to the development of the industry. As owner-occupier the Nigerian farmer will be in a position to make a long-term production plan. He will be more willing to invest on land improvement because he is now

the owner and not a tenant or share-cropper.

Most technological change requires some investment. It may be investing in a new kind of fertilizers, pesticides, medicines, tools etc. Now the farmer has the capability to raise loans on the mortgage of his "own farm". This would encourage constantly changing technology in agriculture, and as has been pointed out before, this is an essential for the development of agriculture.

The Nigerian farmer's production incentives would be greatly influenced by redistribution program. As the owner-occupier he does not have to give out a portion of his product as rent.¹² We saw above the discouraging effect which the giving of a part of farm product as rent has on introducing yield increasing innovations. So an obstacle to increased agricultural output would be removed.

It has been shown in this section that the redistribution envisaged for Nigeria would ensure absolute ownership right (or security of tenure) thus increasing farm operator's willingness to invest on land improvements, stimulating farmer's production incentives and increasing agricultural output. It seems then that a strong case has been made for it as a policy measure.

4. Landlord-Tenant Relations

It has been pointed out in chapter one that tenancy in itself is not an unsatisfactory form of tenure if adequate safeguards are provided. Even after the reform measures discussed above have been adopted some form of

tenancy would still exist in Nigeria. So what is necessary is to provide conditions in which tenancy will play an important role as it has in the industrialized countries of Great Britain and Western Europe.

If the reform measures suggested in this paper are adopted in Nigeria it would be the Government or an agency appointed by it that would be the landlord. The landlord-tenant relations should be smooth and cordial if there are well defined rules and regulations about them. These will deal essentially with rent and security of tenure. Each of these two points will be discussed briefly.

Regulation of Rent:

The reform law would most probably stipulate that there be a fixed rent between the landlord and each tenant. It may be a fixed sum of money or a fixed percentage of the produce. In the interest of agricultural development, rent should not be high. A landlord who contemplates change (increase) in rent would be required to give six months notice in writing. If the tenant thinks that the increase is unwarranted or unfair, he should have the right to appeal against it to the rental control board in his area. No increase in rent would be operative while the matter is under appeal or if disallowed by the control board.

Security of Tenure:

Tenancy arrangements need to be such as to give the tenants security of expectations concerning occupancy.

Similarly landlords need to be protected against careless husbandry and destruction of property. Tenancy agreements should provide that one year's notice be given of the intention of either side to terminate the agreement.

Good landlord-tenant relations will contribute to the development of agriculture in Nigeria. Fair rent charges will stimulate the tenants' production incentives if tenants were guaranteed their rent will not increase with increase in their production or output. And as has been noted before, anything that stimulates farmers' production incentive surely contributes to the development of agriculture. Security of tenure will encourage tenants to make heavy investment on farm improvements and/or on agricultural materials. They will be encouraged by the new better relations to make technological changes. They can make long-term production plans and this will increase not only their output but also their production efficiency. All these should accelerate agricultural development in Nigeria.

5. Marketing Boards for Agricultural Products

In the interest of agricultural development there should be marketing boards for most of the crops that are left out now. At present there are no marketing boards for the staple food crops and minor cash crops. This is a serious omission because these crops form the bulk of the agricultural sector in Nigeria.

The annual production of the major staple food crops is estimated at 2.9 million tons of millet, 3.4 million tons of sorghum, 0.9 million tons of maize, about 0.5 million tons of other cereals, 13.0 million tons of yams, 1.0 million tons of cocoa-yams and 0.6 million tons of cow-peas.¹³

There are however marketing boards for the cash crops like cocoa, palm produce, groundnuts and cotton. The establishment of marketing boards for the other crops could make a contribution to the development of agriculture in the country by ensuring stability and remunerative price relationships. As we discussed above, remunerative price relationships stimulate farmers' production incentives. So the establishment of marketing boards for most of the crops now left out would eventually lead to increased agricultural production in Nigeria. Increased agricultural production is one of the characteristics of a "developed agriculture."

If the reform measures suggested in this thesis are implemented Nigerian agriculture will be freed of many of the obstacles that have persistently thwarted its development.

Concluding Remarks

After a careful examination of the agrarian structures in Nigeria, the doubt expressed in the last sentence of the Introduction of this thesis is confirmed. Nigerian agriculture is operating within defective structures.

Many of the essentials for the development of agriculture are either sadly lacking or those that do exist are in their most rudimentary stages. All these adverse conditions have combined to imprint "undeveloped" on Nigerian agriculture. It is a traditional agriculture characterised by total absence of modern agricultural technology, uneconomic farm units, low level of investment and poor productivity of both labour and land. All these point to the necessity for fundamental change in the traditional system. And in the present circumstances of Nigeria land reform suggests itself as "the" solution.

For such a reform to be successful it must include measures that would eradicate uneconomic farm units, accelerate technological changes, induce investment on farm improvements, stimulate production incentives and make Nigerian farmers the "owners" of the land they cultivate.

Although land tenure adjustments appear essential to facilitate the development of the economy, yet it must be recognised that land reform is not a cure-all and that it can be productive of social and economic benefits only as a part of comprehensive program of development. This point cannot be over emphasized.

If land reform is carried out as suggested in this thesis, a great obstacle to agricultural development will be overcome and then agriculture will be in a better position to play the leading role in the general development of Nigeria.

Footnotes to Chapter V

1. This objective is more important in Eastern Nigeria where population problem is more acute.
2. F. A. O., Agricultural Development in Nigeria 1965-1980, p. 339.
3. H. A. Oluwasanmi, Agriculture and Nigerian Economic Development (Ibadan: Oxford University Press, 1966), p. 191.
4. F. A. O., Agricultural Development in Nigeria 1965-1980, p. 347.
5. This was particularly true in Eastern Nigeria where the government had to abandon some settlement centres.
6. See table 1 above for size of farms in Nigeria.
7. F. O. A., European Agriculture a Statement of Problems, p. 21.
8. Parsons & Others, Land Tenure and Related Problems in World Agriculture (Wisconsin, 1951), p. 558.
9. T. W. Schultz, Transforming Traditional Agriculture (New Haven: Yale University Press, 1967), pp. 110-111.
10. R. P. Dore, Land Reform in Japan (London: Oxford University Press, 1959).
11. Southworth & Johnston, Op. Cit., p. 288.
12. But he must still give out part of his product as interest. Whether rent or interest has more disincentive effect on production is still an open question.
13. F. A. O., Agricultural Development in Nigeria 1965-1980, p. 352.

Appendix A

While there are many reasons for this poor showing in Bolivia and Iraq, it is generally agreed that failure to follow through with credit, supervision, and education were primary causes of the disastrous effects on production. Land titles were distributed, but no credit was available to the new owners, and very few trained people were available for other supporting programs.

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