THE DISTRIBUTION OF EARNINGS IN THE COCOA ECONOMY OF WESTERN NIGERIA: IMPLICATIONS FOR DEVELOPMENT

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Major professor

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ABSTRACT

THE DISTRIBUTION OF EARNINGS IN THE COCOA ECONOMY OF WESTERN NIGERIA: IMPLICATIONS FOR DEVELOPMENT

By

Sunday M. Essang

In recent years an increasingly important aspect of development problems in many less developed countries is how to devise a strategy which strikes a reasonable balance between attention to the technical factors geared to increased output and modification of the economic and institutional framework within which development proceeds to ensure a more equitable distribution of the benefits of development. However, public efforts to deal with this problem are often frustrated by the virtual lack of information on the pattern of income distribution and how it is related to various development programs and institutions.

The present study provides information on the distribution of earnings among the cocoa farmers and domestic intermediaries (Licensed buying agents) in Western Nigeria, 1967-69. The data from the study indicate that the distribution of earnings from cocoa and other sources is unequal. The distribution of access to formal sources of

credit as well as inputs embodying new technology is also unequal and correlates positively and significantly not only with the distribution of earnings but also with the distribution of political positions. Unlike the larger farmers and the licensed buying agents who have access to the commercial banks and the agricultural credit corporations, the small producers depend for credit overwhelmingly on the produce-buyers and the money-lenders who tend to charge considerably higher rates of interest than the banks and the agricultural credit corporation. The study also indicates that the marketing board influences, to a considerable degree, not merely the level of cocoa farmers' earnings but also the distribution of the earnings among the farmers and the licensed buying agents themselves. Furthermore, the data from the study suggest that policies which raised the aggregate earnings of the farmers and made the distribution less uneven would have much potential for raising food expenditures, stimulating food production, and internal trade in foodstuffs with significant employment and income increasing possibilities.

These findings suggest a policy mix which not only increase the aggregate earnings of the cocoa farmers but also makes the distribution less uneven. Accordingly, we propose that in the short run, the government should appreciably step up the flow of funds to the farmers through much higher producer prices for cocoa, outright grants to

the small producers to buy inputs, and easier access to the formal sources of credit. In addition, the increased earnings resulting from price policy should be made less unevenly distributed through taxes on land, property and the monopoly 'profits' of the licensed agents. In the long run, we suggest that agricultural policy should evolve along two broad strategies. One strategy should strengthen Nigeria's comparative advantage in cocoa production by increased dissemination of new technology, higher prices, adequate infra structure and extension services. The other strategy, directed towards the smaller-marginal producers, should concentrate on increasing the alternative employment opportunities of this group in addition to improving their capacity to earn income. Our long run proposals also include a reorganization of the existing produce marketing system with a view to eliminating the licensed agents monopoly 'gains', providing for the producers' representation on the marketing board and strengthening the competitive position of the marketing co-operatives. Finally, we urge the small producers to form an organization not only to provide a countervailing power against the larger producers and the licensed agents but also as a means of pressing for representation in the policy making bodies of the various institutional arrangements serving the cocoa industry.

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Sunday M. Essang

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CHAPTER I

INTRODUCTION

The Significance of the Distribution of Development Benefits

Among the most urgent issues of development policy in most LDCs today is how to devise a strategy which, while taking full advantage of modern technology and international economic cooperation, at the same time ensures a fairly equitable distribution of the benefits of economic progress. Until recently, however, economists and policy makers accorded a very low ranking to considerations of income distribution in the list of their priorities. Furthermore, despite the recent awareness of the significance of equitable distribution of the fruits of economic progress, several factors still prevent adequate attention from being paid to the problem.

1. Obstacles to a serious consideration of the distribution of development Benefits

A. The hypothesis that income inequality promotes rapid economic development, the overriding policy objective in every developing country, represents, in our view, the single most important obstacle to serious consideration of the equitable distribution of the benefits of economic progress.

This hypothesis is undergirded by several assumptions. (1) the greater the inequality of income distribution, the higher the ratio of savings to Gross National Product in view of the higher marginal propensity to save characteristic of high income earners; (2) given the shortage of capital in an underdeveloped economy and associated high rates of return, a high savings/GNP ratio implies a high investment/GNP ratio and a high rate of economic growth. Arthur Lewis even asserts that once a country can save up to 15 per cent of its GNP, it is bound to achieve a take off;[1] (3) the greater the inequality of income distribution, the greater the incentives to harder work; (4) the greater the inequality of income distribution the greater the probability that scarce resources will be allocated to where they can be more productively used.

B. Another obstacle to consideration of income distribution is the lack of political power by the majority of the poor peasants in underdeveloped countries. Unlike the farmers in the advanced industrial countries of U.S.A., Britain, France, and Germany, the small producers in most LDCs are largely unorganized. As a result, they are unable to make their influence felt in policy making circles. Yet the experiences of advanced industrial nations as well as of many developing countries point to the fact that it is difficult to implement economic measures which largely benefit

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[1]W. A. Lewis, The Theory of Economic Development (London: George Allen & Unwin, Ltd., 1955).

the poor in the absence of organization and pressure from the poor themselves.

The reluctance of the ruling elites in the LDCs to implement redistribution policies is due to the fear that such policies will, by broadening the base of economic power, inevitably broaden the base of political power. Such a broadening of political power will not merely upset the present politico-economic balance, but might generate a chain of events in which the elite lose their power. These considerations primarily explain opposition to land reform in Latin America and Asia. It is a factor in the failure to share the benefits of oil production equitably in much of the Middle East countries and in the denial of educational opportunities to talakawas (common people) by the once all powerful Emirs of the former Northern Nigeria.

C. From a practical standpoint, the absence of the knowledge of the distributional effects of development programs is a major obstacle to effective redistribution policy. Even in a country like the United States with an impressive array of data on almost all aspects of life, Bonnen[2] regards this as the greatest obstacle to effective program analysis and measurement of benefits. In underdeveloped countries, census data and national income figures rarely contain information on income distribution nationally or sectorally. There is scarcely any information on the current distribution

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[2] J. T. Bonnen, "The Absence of a Knowledge of the Distributional Impacts: An Obstacle to Effective Public Program Analysis and Measurement," Paper presented to the Joint Economic Committee of U.S. Congress, March, 1969.

of assets even by export crop producers. An important reason for this absence of information on the distributional aspect of an underdeveloped economy is the positivism of influential indigenous and foreign economic advisers who tend to look down on problems of distribution as normative and therefore unfit for "scientific" analysis.

2. Implications of the failure to pay adequate attention to the distribution of benefits of development

Whatever the causes, the relative neglect of the distribution of the benefits of development has unfortunate implications for the development strategy of underdeveloped countries.

First, inadequate weight for income distribution is found in the numerous project appraisals in many less developed countries.

Second, it fosters the single target approach to development, an approach which singles out growth in per capita income as the overriding measure of development. The result is that such equally important consideration as employment is neglected.

Thirdly, it encourages policy makers to concentrate on the urban sector at the expense of the rural sector though the latter is the mainstay of the economy of most LDCs.

Fourth, it explains why development efforts are concentrated in a few favored geographic areas while the rest of the economy grovels in stagnation and squalor.

Finally, the neglect of income distribution is primarily responsible for the observed preference for large scale, capital intensive projects like dams, farm settlements, which benefit a few well-to-do farmers even when a smaller amount spent on labor intensive projects would be much more productive.

3. The case for a more serious attention to the distribution of development benefits

A. The process of economic development generates forces which lead to unequal distribution of benefits. There are several reasons for this.

In the first place, the scarcity of resources compels policy makers to concentrate these in areas and sectors which promise the highest returns. Individuals and areas with the greatest capacity to use resources most productively increase their share of benefits while those who are incapable lag behind. Initial differences in regional factor endowments usually make for compounded differences in the distribution of benefits.

In the case of individuals, initial differences in asset ownership, educational levels and access to decision making authorities account for unequal distribution of benefits arising from technological progress, price and subsidy policies. The implication is that the transition from subsistence to commercial agriculture in the course of economic development, unless influenced by appropriate

public policies, leads to a situation where command over resources, output and income becomes increasingly concentrated. It should be noted that the western democracies have long recognized the implication mentioned above. Accordingly, countries like Sweden, Britain, U.S.A. have used progressive taxation, subsidies to small farmers, direct income transfers, publicly supported education and other measures to reduce income inequality. On the other hand, certain centrally planned economies and the less developed countries have largely neglected the problem.[3]

B. The hypothesis that unequal distribution of benefits fosters rapid economic growth is supported neither by *a priori* reasoning nor empirical evidence from present day LDCs.

Professor Kunetz has shown that income inequality is greater in today's LDCs than in the advanced industrial democracies.[4] Yet no one would contend that on the whole, the LDCs exhibit a higher growth rate than these advanced countries.

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[3]Professor Kunetz has shown that the centrally planned economies and the LDCs have higher Gini ratios than the Western democracies. "The Size Distribution of Income", in Part II of "Quantitative Aspect of the Economic Growth of Nations", *Economic Development and Cultural Change*, Vol. XI, No. 2, January, 1963.

[4]*Ibid*.

Unequal distribution of earnings cannot foster rapid economic growth if, as in the case of much of the LDCs, it leads to a narrow domestic market which impedes agricultural and industrial expansion. In such economies, the opportunities do not exist for realizing external economies which balanced growth theorists[5] see in a simultaneous establishment of complementary consumer goods industries.

One of the reasons for the end of the "easy phase" of import substitution in Latin America, which has never been adequately considered in development literature, is the inability of Latin American industries to produce for a mass domestic market. While cost considerations and commercial policies have been stressed as the culprits by economists such as Hirschman,[6] it is our suggestion that the inability of Latin American industries to produce for a mass market is in part the consequence of a highly unequal income distribution which dampens the demand for consumer goods capable of being produced in large low-cost quantities.

There is no conclusive evidence that the top 5 or 10 per cent in the income bracket of the LDCs have savings or investment propensities usually attributed to their counterparts in the advanced industrial countries. According to

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[5]Marcus Fleming, "External Economies and the Doctrine of Balanced Growth," The Economic Journal, Vol. No. 1955, pp. 241-55.

[6]O. A. Hirschman, "The Political Economy of Import Substitution Industrialization of Latin America," Quarterly Journal of Economics, February, 1968. pp. 1-33.

informed observers, in some countries, rich people either spend heavily on conspicuous consumption or else find a place for their funds in foreign banks. If they invest at all, such investments often take the form of estates or buildings which, however prestigious and profitable from an individual point of view, do little to raise the economy's productive capacity. In any case, whether or not those in the top income brackets invest productively depends on a number of factors such as political stability, the integrity and efficiency of government bureaucrats and policy makers, and the existence of favorable economic opportunities which vary from country to country.

Contrary to the views of economists like Arthur Lewis, a high savings/GNP ratio does not mean a high investment/GNP ratio if profitable investment opportunities are absent. Many LDCs of the Middle East and West Africa have, as a result of the post World War II exports, mobilized savings reasonably above the Lewisian target of 15 per cent of GNP but have not achieved the promised take off. Both Schatz and Stolper have shown that in the case of Nigeria, the lack of profitable investment opportunities, rather than capital shortage, constitutes the major obstacle to investment and growth.[7]

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[7]Sayre P. Schatz, "The Capital Shortage Illusion: Government Lending in Nigeria." Oxford Economic Papers, Vol. 17, July, 1965, pp. 309-317.

C. It might be argued that government efforts to redistribute income in favor of the low income group will increase inefficiency of resource allocation and so impede growth. Such argument, however, ignores the fact that one cannot reasonably speak of allocative efficiency as though it were independent of the pattern of income distribution. On the contrary, the optimum level and, indeed, the meaning of output in any economy is a function of prices and consumer preferences which themselves are governed by the character of income distribution. If one changes income distribution, a different pattern of consumer preferences, prices and optimum output level emerges. In other words, "a pareto optimum or an ideal output is but one of a large number of conceivable summit positions distinguishable from each other by a different pattern of welfare distribution,"[8] There is no logical reason for presuming that a summit position based on a skewed distribution is superior to one based on a more equitable distribution. Indeed, some logic in theoretical welfare economics suggests that the latter is superior.

Moreover, where institutional barriers such as monopoly, land tenure arrangements and "elitist" educational system keep down the earnings of some resource categories while enhancing that of others, the resulting distribution

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[8] E. J. Mishan, "A Survey of Welfare Economics," The Economic Journal, June, 1960, pp. 197-266.

is not merely inequitable but also inefficient in the sense that it reflects inefficient utilization of resources.[9] In this situation, public policy which removes these institutional restraints in an effort to redistribute income may turn out to be conducive to allocative efficiency. Thirdly, when an economy suffers from underutilization and underemployment of resources, the gains to be obtained from policies which seek fuller utilization of resources and which push production towards the boundary of the production possibility curve of the economy are several times larger than the losses which result from possible inefficient allocation.[10] If redistribution policy raises the earnings level of the small farmers and increases their productive capacity and incentives, more output is likely to result in the long run.

D. Even if the analytical and empirical validity of the hypotheses were established beyond question, they would still constitute a weak case for neglecting the problem of distributing the benefits of economic development. For the issue of distribution transcends the simple question of who gets what. It involves the whole purpose of development and

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[9]Burton A. Weisbrod, "Collective Action and the Distribution of Income: A Conceptual Approach," Paper presented to the Joint Economic Committee of the U.S. Congress, March, 1969.

[10]Harvey Leibenstein, "Allocative Efficiency vs. X Efficiency," American Economic Review, June, 1966, pp. 392-415.

the relationship between efforts and rewards. In most LDCs, the peasants have shouldered the main burden of capital formation in their role as food and export crop producers. But they have rarely observed any correlation between their efforts and the fruits of economic progress. Yet policy makers in these countries unremittingly exhort these peasants to further sacrifices. Irrespective of the type of political set up, the magnitude and quality of peasant sacrifices will depend crucially on how current benefits of economic development are distributed.

Moreover, the circumstances of income inequality in the LDCs are such that any level of inequality imposes greater hardship than comparable inequality in advanced industrial economies. Unlike the latter, many LDCs are characterized by a scarcity of necessities owing to protectionist policies. The resulting high prices bear most heavily on the peasants and other low income groups. Some of these (LDCs) countries actually use inflation as a vehicle for mobilizing savings with unfortunate effect on the economic position of the low income groups and lenders. In many cases, the social structure impedes vertical mobility which has, in the advanced industrial countries, contributed greatly to the reduction in income inequality. Above all, there appears to be much less correlation of wealth with merit in the LDCs than in advanced industrial countries. Finally, the fact that the average per capita income in the LDCs is already very low means that failure to reach this

average spells much greater material misery than failure to reach the much higher average in the advanced industrial countries. For all these reasons, despite the obvious weakness of the peasants, continued neglect of distribution is likely to produce grievances which are capable of exploitation for political ends some of which are not commendable.

E. Relevance to Nigeria.--The case for a serious consideration of distribution problems presented above has much relevance to Nigeria for several reasons.

First, it is now generally evident that capital shortage is not the central bottleneck in the development of the Nigerian economy.

Second, with the discovery of petroleum in substantial amount, it is reasonable to expect that a policy which "squeezes" the peasants should be relaxed.

Thirdly, the tax riots by Western Nigeria farmers illustrate the political problem of developing without consideration for the distribution of benefits of development.[11]

Fourthly, in Nigeria, the corruption, wealth and ostentation of some public officials erode their moral authority to urge greater sacrifices on the poor in the name of economic growth.[12]

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[11]The farmers' tax riots in 1968 show how essentially economic grievances of peasants can be exploited by politicians to achieve political ends.

[12]Revelations from the current probes of public officials in Western Nigeria indicate a shocking degree of official corruption.

At this stage of Nigeria's development, with existing conflict between sectors, regions, and states regarding the distribution of the "national cake," economists ought to help improve decision making by clarifying the impact on the distribution of benefits regionally, sectorally and statewide of various development programs. Such a clarification is likely to enable policy makers to pay more attention to problems of distribution. For the economists, it is very likely that interest in the distribution of benefits and work to clarify the problems involved will enhance their role as advisers on policy.

Summary and Conclusions

Despite increasing awareness that how to ensure a more equitable distribution of development benefits constitutes an important aspect of development problems, many obstacles still prevent adequate attention to the problem of distribution. These include the erroneous association of income inequality with rapid economic growth, the poor's lack of political power, the reluctance of the ruling elite to broaden the base of economic power and the virtual absence of knowledge regarding the distributional implications of development programs in the LDCs. Whatever the causes, the relative neglect of distribution has unfortunate consequences for the development policy of the LDCs and the income position of the peasants. The case for more serious attention to problems of distribution rests, not only on the analytical

and empirical invalidity of the hypothesis that income inequality promotes economic growth, but also on the practical considerations that the distribution of benefits of development involves the whole question of the purpose of development, the relationship between efforts and reward and the ever present possibility that peasant grievances on distribution might be used for undesirable political ends as the 1968 farmers' tax riots in Western Nigeria illustrate. If the economist is to be useful in policy making, he must make efforts to clarify the distributional implications of government programs--a task which not only helps decision makers but also enhances his professional role.

CHAPTER II

OBJECTIVES, HYPOTHESES, METHODOLOGICAL AND CONCEPTUAL ISSUES OF THE STUDY

Objectives

The overall objectives are (1) to study the pattern of earnings distribution among farmers and the licensed buying agents[1] in the cocoa growing area of Western Nigeria during the period 1967-1969; (2) to attempt a quantitative measure of the degree of concentration of earnings; (3) to analyze the various factors-- institutional, economic, and technological associated with the observed distribution of earnings; (4) to study the relationship between the observed distribution of earnings and the degree of self sufficiency in food consumption among cocoa producers and buyers; (5) to study the possible effects on food expenditure and the degree of self sufficiency in food consumption of a redistribution in favor of the small producers and buyers, and (6) to discuss the implications of the findings of the study for the strategy of rural development in the state in particular and Nigeria in general.

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[1]Licensed buying agents are intermediaries who are licensed to buy and grade cocoa on behalf of the Western Nigeria Marketing Board. See Kriesel, H. C., "Cocoa Marketing in Nigeria," CSNRD-21, East Lansing, Michigan, January, 1969.

Justification for the Study

Various development strategies have significant impacts on the distribution of the benefits of economic development. Economists have a part to play, not only in providing much needed information on the distributional implications of development programs but, more importantly, in devising alternative measures to deal with the problem. We are of the opinion that this study has a contribution to make in this respect.

This study will provide a basis for further evaluation of the present price and marketing policy of the Western Nigeria marketing board and its licensed agents and it will throw light on the possible consequences in terms of rural welfare, of a successful implementation of the recommendations embodied in the F.A.O. and C.S.N.R.D. reports.[2]

By spotlighting the nature of the distribution of cocoa earnings, the factors associated with such earnings and the implications for rural welfare and development strategy, it is hoped to draw the attention of policy makers and professional economists in advisory positions more forcibly and intelligently to this and similar problems in other parts of the country. It is our view that Nigeria has reached a state at which attention to distribution problems can no longer

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[2]FAO Report, Agricultural Development in Nigeria, (Rome, January, 1966).

G. L. Johnson, G. Dike, Carl Eicher, O. J. Scoville, Strategies and Recommendations for Nigerian Rural Development, 1969-1985 (East Lansing, Mich., 1969).

be shrugged off as "premature" or "misguided." Indeed, given her abundant natural resources, the undoubted resilience of her economy, the increasing dominance of the Federal Authority and the awareness (at least from their utterances and actions so far) by the present rulers of the necessity to ensure equal opportunity to all, it might be positively beneficial if Nigeria were to learn from the mistakes of Asian and Latin American nations and earnestly start grappling with the "third generation" problem of income distribution before it becomes too complex and unmanageable.

Hypotheses

That the distribution of earnings among export crop producers in less developed countries is unequal has been observed by several economists.[3] With reference to the cocoa economy of Western Nigeria, it is hypothesized that: (1) the observed inequality in the distribution of earnings is related to (a) unequal distribution of cocoa holdings; (b) unequal distribution of access to inputs embodying new

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[3] S. Barraclough, "Employment Problems Affecting Latin American Agricultural Development", The Monthly Bulletin of Agricultural Economics and Statistics, Vol. 18, July/August, 1969, pp. 1-11.

Poly Hill, Studies in Rural Capitalism in West Africa, (Cambridge University Press, 1970) pp. 154-156.

D. K. Freebairn, "The Dichotomy of Prosperity and Poverty in Mexican Agriculture," Land Economics, Vol. XLV, February, 1969, pp. 31-43.

C. R. Wharton, Jr., "The Green Revolution: Cornucopia or Pandora's Box?", Foreign Affairs, Vol. 47, April, 1969.

Ladejinsky Wolf, "Ironies in India's Green Revolution", Foreign Affairs, July, 1970, pp. 758-69.

technology such as hybrids, fertilizer, spraying chemicals and extension services; (c) unequal access to the sources of loanable funds; (2) the unequal distribution of the variables mentioned in (1) above are associated with the unequal distribution of political position and status among the producers and the LBA's themselves. However, this does not imply a causal relationship running unidirectionally from political position and status to these economic, technological and institutional variables. The real world situation is too dynamic, complex and interrelated for such a simplistic view. (3) Policies which make the distribution of earnings less uneven can considerably increase effective demand and improve nutritional levels of the cocoa producers especially if they are combined with a strategy which raises the aggregate earnings of the producers as a whole.

The Significance of the Hypotheses

The validity of the hypotheses above has important implications. First, it raises some questions regarding the belief that the problem of income distribution in LDCs is essentially the problem of narrowing the urban-rural income gap and that significant increases in agricultural prices, by reducing this gap, reduces the income distribution problem.

Second, it creates doubt about the effectiveness of current policies aimed at transforming the rural economy of Western Nigeria via a combination of dissemination of new technology with price and subsidy policies since those who

benefit from these policies are few and relatively well-to-do. To prevent rural development from benefitting only a few well placed producers, economic and technical measures designed to raise cocoa output should be combined with policies and institutional arrangements which will ensure a more equitable distribution of cocoa earnings and raise the productive capacity of the marginal cocoa producers.

Third, if the distribution of land and other resources reflects, in part the distribution of political status and influence, the following are implications for agricultural policy.

(a) As long as small farmers remain too individualistic to form a strong organization, agricultural policy will continue to be framed and implemented with little consideration for the welfare of the small producer living on the margin of poverty.

(b) Even if the current government sponsored attempt at the formation of a strong farmers' organization should succeed, there is no guarantee that the small and really needy farmers will reap significant benefits given the current trend of control and direction of these unions by the traditional rulers and the large scale farmers and cocoa buyers.

(c) The mere presence of such institutions as the Agricultural Credit Corporation, the Research Institute, and Agricultural Extension which are financed by the tax payers for the benefit of the cocoa industry does not guarantee

that a majority of the farmers will benefit from them. This implies that agricultural development strategy should include rules and procedures specifically designed to make the small producer's access to these institutions less difficult.

Why Western Nigeria Cocoa Farmers were chosen: The choice of Western Nigeria cocoa farmers and buyers was governed by practical considerations.

Of all aspects of agricultural production in Nigeria, cocoa farming appears to be the most heavily and closely documented. Since the present study calls for a considerable background information, the researcher had little alternative but to choose cocoa farmers in Western Nigeria.

In addition, cocoa farmers in Western Nigeria have been exposed to interviews and probings of their economic activities much more frequently than other export or domestic crop producers. While this does not automatically guarantee cooperation, it at least tends to reduce apprehension or suspicion.[4]

The organization of the "Cocoa Survey Division" of the Western State Ministry of Agriculture and Natural Resources makes the task of selecting samples and actual interviewing much less difficult.[5]

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[4]It is interesting to observe that while the field interviews for this study were in progress, (February to May, 1970) farmers in the same areas were also being interviewed by two students from Canada and Britain in addition to consultants from the World Bank and U.S.A.I.D.

[5]See the section "Selection of Sample."

The presence of the University of Ibadan with its NISER and library facilities and the advantage of discussion with former colleagues in the Agricultural Economics Department also influenced the choice of Western Nigeria cocoa farmers.

Quite apart from the purely practical considerations pointed out above, the Western State was considered an ideal place to study the determinants and implications of the distribution of cocoa earnings for important theoretical reasons:

(a) cocoa has been and will continue to be the mainstay of the agricultural economy of the state;

(b) because of the overwhelming importance of cocoa in the economy, the control and allocation of cocoa revenue is of major political consequence. This is evident from the Action Group Crisis, the Coker Report, and the Farmers' Riot in 1968.[6]

(c) until the military take over in January 1966, Western Nigeria had a strong two-party system characterized

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[6]In 1962, following an intra-party strife in the Action Group, the party which until then had governed Western Nigeria, a chain of events took place culminating in the trial and imprisonment of the Action Group leaders and the demise of Action Group as a political force. It is the view of some political scientists and economists that the AG struggle centered around the control of marketing board funds.

"The Coker Report" is the direct consequence of the Action Group Crisis. It seeks to establish the fact that the Action Group leaders had bankrupted the Western Region by diverting marketing board funds to party and individual use.

In the fall of 1968, Farmers in Western Nigeria rioted in protest against high taxation and unduly depressed producer prices for cocoa.

by intense party rivalry and struggle for the control of the state. As such, it offers an interesting area for studying the scope and methods of recruiting supporters through the use of governmental agricultural institutions and projects.

(d) since, like the Northern States, the influence of traditional power is still considerable in the Western state, the study is likely to yield useful information regarding the relationship between traditional political power and performance of a producer or a licensed buyer.

Location of the Study

The field interviews for the study were conducted in Ondo, Ife, Owo, Ilesha, and Akure Divisions in what the Agricultural Ministry designates as the "Ondo Circle." "Ondo Circle" was chosen for several reasons.

It accounts for a larger proportion of total cocoa production in the Western state than the other two circles, Ibadan and Abeokuta, combined.

Second, unlike the other two circles, "Ondo Circle" has a larger amount of uncultivated fertile land. It thus offers the greatest scope for future expansion of cocoa production and attendant problems of cocoa earnings distribution.

Thirdly, because cocoa trees in Ibadan and Abeokuta Circles have been greatly damaged by Capsid and Black Pod diseases, these Circles have been declared "areas of mass infection." Accordingly, much of government extension efforts are directed to cocoa farmers in Ondo Circle.

Selection of the Sample

The licensed buying agents: These were randomly selected from a list of licensed buying agents operating in each of the Divisions which make up the "Ondo Circle." The Divisional distribution of the sample which is shown below, reflects the density of the LBAs in each of the Divisions.

Table 1: Divisional Distribution of Sampled LBAs, 1970, Ondo Circle, Western Nigeria

Division	LBAs
	Number
Ondo	15
Akure	6
Owo	10
Ilesha	15
Ife	14

Producers: Stratified-random sampling was employed in selecting cocoa producers. This technique was found the most convenient for dealing with an essentially stratified administrative setup of the "Cocoa Survey" division of the Ministry of Agriculture and Natural Resources.

For the purpose of extension and allied functions, each "Circle" is divided into divisions, geographic units in which extension and other government programs are administered. Each division is in turn subdivided into "zones" each of which comprises twenty or more contiguous villages.

The procedure adopted in this study was to select five "zones" from each of the five divisions of Ondo, Ife, Akure, Owo and Ilesha. These "zones" were selected from

north, south, east, west and center of the division. In this way, account was taken of the variability of economic and ecological conditions within a division. Straightforward random sampling procedure ignores this.

From each of the "zones" selected, villages were chosen at random in such a way that the number of villages selected varied proportionately with the size of the zones. With the help of the agricultural officers and their assistants, a complete and up-to-date list of farmers was obtained for each of the villages chosen. From this list, a random selection of cocoa farmers was made in such a way that the number of farmers chosen varied proportionately with the number of cocoa producers. The table below shows the divisional distribution of the sample.

Table 2: Divisional Distribution of Sampled Cocoa Producers, Ondo Circle, Western Nigeria, 1970.

Division	Zones	Villages/Towns	Producers
	Number		
Ondo	5	17	40
Akure	5	12	30
Owo	5	10	25
Ilesha	5	14	30
Ife	5	15	35

Steps taken to ensure the collection of reasonably reliable and representative data

(1) By selecting "zones" from east, west, north, south, and center, it was hoped that a sample representative of various ecological conditions in the division would be obtained.

(2) In each of the "zones" selected it turns out that there are villages of widely varying sizes and distances from

the divisional headquarters or tarred roads.

(3) The number of the villages selected varied with the size of the zones while the number of producers from each village varied proportionately with the number of cocoa producers in the village.

(4) In order to enlist the cooperation of the producers, the selection of the sample was preceeded by a tour of the selected group of villages in company with the Agricultural Assistants located in the areas. During this tour, the researcher's identity, mission, and objectives were explained and a great deal of stress was laid on the non-governmental nature of the research.

(5) Once the villages were selected, the researcher, along with the extension personnel of the Ministry, located farmers in the very remote areas.

(6) The selection and training of interviewers, a majority of whom were extension personnel of the Ministry, lasted two weeks with three training sessions for interviewers in each of the divisions.

(7) Throughout the duration of actual interviewing, the researcher remained in Ondo Circle and, accompanied by some officials of the Ministry, went to the villages to check whether or not interviewers had actually done their work. Neither the Agricultural officials nor this researcher came up with an instance of malingering on the part of the interviewers.

(8) Full scale interviewing was preceeded by pretesting of the questionnaires in the five divisions. The final questionnaires embodied the suggestions obtained during the pretesting and the discussions with Ministry officials and the researcher's colleagues in the Department of Agricultural Economics of the University of Ibadan.

(9) Efforts were made to check the reliability of the answers to questionnaires by consulting records of cooperatives in the case of farmers who are members--though this admittedly has limited effectiveness. Further, attention was paid to consistency in the answer given in the questionnaires. Glaring inconsistencies were prima facie evidence of unreliability of the answer and the need to reject the questionnaires concerned. Similarly, excessive deviation of cocoa yield from what is generally regarded as "normal" average for that division led to rejection of the questionnaires.

Secondary Sources of Data

Supporting information was obtained from documents in the following institutions:

The Cocoa Research Institute of Nigeria was the source of data on the production of F_3 Amazon Varieties, the number of cocoa farmers trained in the handling of capsid and black pod diseases, and expenditures on cocoa research.

The Western State Ministry of Agriculture and Natural Resources served as the source of information on various government cocoa improvement schemes.

The Western State marketing board was the source of information on the licensed buying agents and the tonnage marketed during the period covered by the study.

The records of LBAs, Marketing Cooperatives and of the Agricultural Credit Corporation provided information on the distribution of credit.

Finally, much valuable theoretical and statistical information was obtained from journals, documents and government records. In particular, the various publications of the Consortium for Nigerian Rural Development (CSNRD) provided a large amount of data otherwise unavailable or inaccessible.

Tools of Analysis

Much of the analysis in this study makes use of tables, graphs, and simple correlation. In order to see the interrelationship among the variables affecting the distribution of cocoa earnings, a matrix correlation table was constructed (Appendix A-1).

Conceptual Issues

Concepts to which many references will be made in the study call for definition. These are "Technological Factors", "Political Influence and Status", "Cocoa Earnings", and "Large Producers."

"Technological Factors".--These refer specifically to new inputs like hybrids, fertilizer, and chemical sprays which embody the fruits of research and technical innovation. Since intelligent and successful adoption of innovations rests,

primarily, on acquisition of knowledge regarding their use, this definition of technological factors also embraces extension services directed towards a better knowledge and use of the new inputs.

"Political Influence and Status."--There are, analytically, two sources of political status and influence in Western Nigeria. First, political status and influence flows from a person's position in the traditional political system. The power and influence attendant on such position varies with the title, size, population, level of sophistication of the people under a person's control and the degree of religious "aura" surrounding his title. Generally, such power and influence increases in importance from the village head through the clan head and the chiefs to the Oba (king) who rules over large territory and thousands of subjects.

Until the military rule, membership in the modern western-type political party was the second source of political influence. The magnitude of such influence varies with the office, the relationship with important party officials, the electoral importance of the area and membership of Federal, Regional, and local legislatures.

In practice, the two sources of political status and influence tend to reinforce each other. Thus, membership of and influence within a modern party facilitates access to traditional titles. Similarly, except in rare cases, a person's position in the traditional political system is

more or less shaky unless it is strengthened by membership in or sympathy for the governing party.[7]

"Cocoa Earnings"--In this study, "cocoa earnings" refers to the cash amount which cocoa producers and buyers earn as a result of direct activity in the cocoa industry. In computing the earnings, the following were excluded:

(1) the payments to labor and other owners of production factors

(2) income transfers within and among families

(3) income to cocoa producers from the agencies of the Western[8] Nigeria marketing board.

"Large Producers"--In this study, the term "large producers" is used only in the context of farm size in Nigeria and should be understood as such. In a country where the average size of holdings is less than 3 acres, any producer with a farm size above 15 acres is considered "a large farmer."

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[7](a) Before the military take over in 1966, the governing political parties in Western Nigeria were often accused by their opponents of stripping traditional rulers of their titles as a punishment for the latter's failure to support the government. In 1965, it was widely reported in Nigerian papers that, at the instance of the Minister of local government, a local council in Ijebu Remo division took the unprecendented step of reducing the salary of an Ijebu Remo Oba to one penny a month because the Oba failed to support the ruling party, NNDP. Since the military rule, many traditional rulers whose titles had been removed for political reasons, have gotten them back.

(b) the methods by which politicians seek to control traditional rulers are graphically discussed in Sklar's "The Politics of Chieftaincy Control," R. L. Sklar, "Nigerian Political Parties," Princeton University Press, 1963, pp. 235-240.

[8]The computation of producers' earnings from all sources takes care of possible earnings from this source. (Table 7)

CHAPTER III

THE DISTRIBUTION OF COCOA EARNINGS

In this chapter, it will be shown that (1) the operations of the cocoa marketing board and the export taxes have resulted in an enormous transfer of earnings from the producers as a group to the Western State government; (2) the licensed buying agents have also received a substantial proportion of the earnings transferred from the producers; (3) the distribution of the earnings received by the licensed buying agents is unequal; (4) the distribution of the portion which goes to the cocoa farmers is more unequal, and (5) when account is taken of the earnings from all sources, the pattern of distribution in respect of both the licensed buying agents and the producers exhibits greater inequality than is indicated by the distribution of cocoa earnings.

The Share of Government and Its Agents in Cocoa Earnings

The data in Table 3 show the percentage of cocoa earnings transferred from cocoa producers to the Government and its Agents between 1955 and 1965. During this period yearly cocoa earnings (F.O.B.) averaged ₦30 million. Of this amount approximately 30 percent was transferred to the Government and the Marketing Board by way of export duties, (15.1%),

produce sales tax (2.1%), Marketing Board "surpluses"* (6.0%) and Licensed Buying Agent's allowances (6.9%). These transfers make up about 43.3% of what the cocoa farmers actually received during the period. If allowance is made for the various other forms of taxes such as income and poll taxes, it is reasonable to suggest that, on the whole, about 50% of farmer's receipts goes to the government and its agents.

Table 3: Percentage of Cocoa Earnings Transferred to Government and Marketing Board, Nigeria, 1955-1965

		*Percentage Transferred to Govt. & Mktg. Board				
		Government		Marketing Board		Transfers
YEAR	Cocoa Earnings	Export Duty	Sales Tax	"Surpluses"	LBA's Allowance	as % of f.o.b. value
	£ million	Per cent				
1955	28	20.0	1.1	17.9	4.5	43.5
1956	23	16.5	2.0	-18.3	7.4	7.6
1957	24	13.3	2.1	- 6.3	7.5	16.6
1958	21	20.0	1.4	22.9	5.3	49.6
1959	37	20.3	1.4	21.0	5.1	47.8
1960	32	17.2	1.8	2.8	6.0	27.8
1961	31	12.6	2.4	4.5	6.9	26.4
1962	29	11.0	2.6	10.3	8.3	32.2
1963	27	10.7	2.6	10.7	8.3	32.3
1964	37	14.3	2.3	14.9	6.8	38.3
1965	36	11.1	3.0	-15.8	9.4	7.7
	30	15.1	2.2	6.0	6.9	30.2

*The percentages are the proportion of total cocoa earnings.

Source: Computed from Kriesel, H. C., "Cocoa Marketing in Nigeria," CSNRD, 21, January, 1969, East Lansing, p. 47.

*The so-called surpluses arise from a practice which fixes producer prices well below f.o.b. prices for cocoa.

The Marketing Board as a Vehicle of Cocoa Earnings Transfer to the Government

The Marketing Board, a post World War II institution charged with the sole responsibility for the marketing of cocoa and other export crops, is an important vehicle for these transfers.

Though the literature abounds with discussions and controversies regarding the rationale for the creation of the Board, this researcher agrees with the position taken by Professor Bauer who argues that the marketing boards are an outgrowth of war time government's predilection for control over export marketing and official lack of sympathy for the chaotic marketing system which prevailed on the eve of World War II.[1] In subsequent years, though economists have debated the rationale of the Board in terms of price stabilization, the primary role of that institution and the one which explains its retention by African leaders long after the end of colonialism is what Helleiner calls "the fiscal role."[2]

Several arguments are advanced by economists and policy makers to justify the retention by the board of an unduly

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[1]Professor Bauer's, The Study of West African Trade (Cambridge University Press, 1954) is the most comprehensive and penetrating study of the Marketing Board known to this writer.

[2]G. K. Helleiner, "The Fiscal Role of the Marketing Boards in Nigerian Economic Development," The Economic Journal, Vol. LXXIV, Sept., 1964, pp. 582-611.

large proportion of cocoa earnings which, between 1955 and 1965, amounted to 13 per cent if allowances to LBAs are included. It is argued that in an underdeveloped economy like Nigeria, agriculture, as the largest sector, must make maximum contribution to capital formation. However, because of crude administrative machinery, shortage of honest manpower, lack of records on the part of farmers, evasions and political considerations in tax assessment, it is very difficult to mobilize agricultural capital for development through the taxation of farmers' incomes. The use of the marketing board as a vehicle for mobilization agricultural earnings has the advantage of getting over some of these problems.

Further, it is widely believed (though never empirically validated) that farmers in Nigeria are incapable of investing their funds in a way which increases the productive capacity of the economy. This implies that if a part of the earnings were taken from them, this earning would be much more productively invested.

The third line of argument is couched in equity terms. According to those who hold this view, grave injustice would have been done to the non-cocoa growing areas if the government were to allow the farmers to get the full market price of their cocoa since only cocoa areas would have been developed. The result would have been a pull of resources to the cocoa growing areas with attendant political tensions. At present, it is argued that use of the cocoa "surpluses"

for general economic development enables the benefits of export crop production to be shared by all sections of the country, to the advantage of balanced development.

Now, there can be no doubt that as a result of the use of marketing board surpluses, considerable infrastructure has been built.[3] Nevertheless, experience has shown that the use of marketing board surpluses has not vindicated the stand of those who advance the arguments outlined above.

On the contrary, the fiscal role of the marketing board has resulted in the replacement of private investment with public investment, which as several studies have shown, are grossly inefficient and wasteful.[4]

Further, much of the investments by the agencies of the marketing board have benefited largely non-cocoa growers, professionals in urban areas, and businessmen. One can hardly regard such a situation as equitable or as evident of "balanced" development.

Despite the large reserves accumulated by the Western marketing board, the Western State government has been unable to finance cocoa improvements without recourse to expensive foreign borrowings.[5]

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[3]This includes universities, roads, agricultural and credit institutions.

[4]O. Teriba, "Development Strategy, Investment Decision and Expenditure Patterns of a Public Development Institution: The Case of Western Nigeria Development Corporation, 1949-1962," Nigerian Journal of Economic and Social Studies, Vol. VIII, No. 2, July, 1966, pp. 235-258.

[5]The latest case is a loan from the World Bank for Rehabilitation schemes.

Despite these reserves, the funds allocated for credit to cocoa and other farmers are very inadequate, relative to need. In consequence, a majority of farmers either have to do without credit or resort to non-institutional sources such as money lenders or licensed agents who charge very high interest rates. Yet, while the producers face acute shortage of funds and borrow from money lenders and LBAs at high interest rates, politicians have largely used marketing board funds for the finance of investments of dubious productivity.[6]

Moreover, the depressed producer prices which result from marketing board's withholdings of cocoa earnings have contributed to depressed land and labor prices in the rural area,[7] and the urban-rural income gap which contributes to the large influx of labor to urban areas and consequent increasingly serious urban unemployment problems. These problems have been aggravated by the fact that, as this study shows, the small marginal producers are even more deprived.

Export Taxes and Transfers to Government

Even though the literature on cocoa marketing has been dominated by the activities of the marketing board, yet in

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[6]The Report of the Coker Commission of Inquiry into the Affairs of certain Statutory Corporations in Western Nigeria, Sessional Paper, No. 4, 1962.

[7]G. L. Johnson, "Factor Markets and Economic Development," Chapter 6, Economic Development of Tropical Agriculture, W. W. McPherson (ed.) University of Florida Press, 1968.

terms of the magnitude of transfers from farmers, export duties and sales tax account for larger amounts than the marketing board. As Table 3 shows, between 1955 and 1965, these taxes made up about 17 per cent of F.O.B. cocoa earnings, compared to 13 per cent due to marketing board and licensed agents. Moreover, while in some years, 1956, 1957, and 1965, marketing board "surpluses" were negative, export taxes were high and positive throughout the period. In fact, the combined values of export duties and sales taxes usually overcompensated the government for the "losses" sustained by the marketing board during the period.

Government officials claim a number of advantages for the relatively high dependence on export taxes in developing countries.[8]

Compared to direct income tax, export taxes are administratively less costly and much more efficiently collected.

In typical mono-export economies like Ghana, or Malaya, the collection of export taxes if far less costly than the collection of import taxes. Even in Nigeria, with a highly diversified export structure, it is believed that export taxes are much more easily administered than import taxes since the latter involve greater number of firms and greater variety of products.

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[8]In 1959, Malaya, Ghana and Ceylon respectively derived 25%, 38% and 27% of government revenue from taxes on commodity exports cf, U.N. Statistical Year Book, 1959.

Moreover, it is held that if a country is a large producer of the export commodity, she might use her monopoly power to pass on the export tax to foreign consumers. In the case of Nigeria, this argument is untenable for two reasons. First, Nigerian cocoa faces a considerably elastic foreign offer curve which largely prevents our producers from influencing the terms of trade through tax policy. Second, the supply of cocoa during any one season is relatively inelastic, a circumstance which results in the incidence of the export tax falling heavily on the producers.

There are those who contend that export taxes, when imposed during periods of export boom such as prevailed in the Korean War era, are taxes on windfalls which should not affect resource allocation or incentives. The weakness of this argument in the case of Nigeria is that these taxes are imposed every year and bear no relationship to conditions in the world commodity market. As Table 3 indicates, although slumps in world cocoa market compelled the marketing board to pay the farmers more than the equivalent of f.o.b. prices so that it sustained "losses" in 1956, 1957, and 1965, yet export duties during these years averaged 14 per cent of cocoa earnings. It is possible that the combined burden of export taxes and marketing board "surpluses" is an important factor in the wide spread practice of

smuggling cocoa and other export commodities to neighboring French speaking African countries like Cameroons, Dahomey, Niger, and Togo.[9]

The Distribution of Cocoa Earnings Among Buyers and Producers

Distribution among Licensed Buying Agents (LBAs)

The cocoa buyers whose earnings were investigated for the purpose of this study are the indigenous, essentially one-man business type of licensed buying agents. The main reason for concentrating on this group of buyers is that they not only account for over two-thirds of the total purchase of cocoa in recent years but also display a phenomenal rate of growth both in terms of tonnage and number. Between 1955 and 1967 the market share of this group rose from 7 per cent to 68 per cent as against an insignificant increase in the share of Marketing Cooperatives which rose from 13 per cent to 16 percent during the same period. Conversely, the share of expatriate LBAs fell dramatically from a height of 81 per cent in 1955 to a low of 16 per cent in 1967.[10]

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[9] cf S. M. Essang, The Marketing of Palm Oil in a Rural Community, Unpublished MSc thesis, University of Ibadan, 1967, Chapters III and IV where the pricing policy of the Eastern Nigeria marketing board is shown as the most important variable explaining the Palm Oil smuggling.

[10] Kokun, "Statistical Information on Western Nigeria Controlled Produce," Western Nigeria Marketing Board, 1969 (mimeographed paper).

Further, in view of the pressure currently being brought to bear on the marketing board to Nigerianize completely the produce buying business, it is very likely that the remaining expatriates will abandon the field to the indigenous LBAs, given the current inability of the Cooperatives to enlarge their share of the market.

Procedure in Estimating the Earnings of LBAs

Records of the quantity of cocoa marketed during the period 1967-1969 were obtained from the Western Nigeria marketing board. The average yearly quantity marketed by each previously selected LBA was computed. With the help of data obtained from the records of the LBAs themselves, the average cost of marketing a ton of cocoa (including transportation) was computed. This was subtracted from the average yearly allowances due to LBA per ton of cocoa, including transportation. The product of the difference and the average number of tons marketed gives the average yearly net cocoa earnings of each LBA. Since it is generally true that most LBAs have other sources of earnings such as transportation, cocoa farming and rents from buildings, a rough estimate of total earnings of LBAs was obtained by asking each of them what fraction of his total earnings came from cocoa marketing.[11]

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[11] If an LBA has a net earning of ₦900 from cocoa sales and regards this as one-half of his total earnings, then his total earnings is ₦1800.

Table 4: Distribution Of LBAs By Size Of Average Net Cocoa Earnings, Ondo Circle, Western Nigeria, 1967-1969

Earnings Bracket (₦)	Licensed Agents			Earnings	
			Cumulative		Cumulative
	Number	Per cent			
0- 500	5	8.33	8.33	0.83	0.83
600-1000	14	23.33	31.66	8.11	8.94
1100-1500	16	26.66	58.32	14.10	23.04
1600-2000	4	6.66	64.98	4.92	27.96
2100-2500	2	3.33	68.31	2.98	30.94
2600-3000	5	8.33	76.64	10.00	40.94
3100-3500	4	6.66	83.30	8.73	49.67
3600-4000	2	3.33	86.63	5.39	55.06
4100-4500	1	1.66	88.29	2.91	57.97
4600-5000	1	1.66	89.95	3.47	61.44
5100-5500	-	--	--	--	--
5600-6000	2	3.33	93.28	8.05	69.49
6100-6500	-	--	--	--	--
6600-7000	-	--	--	--	--
7100-over	4	6.66	100.00	30.51	100.00

The Gini Ratio, computed from the above data, is 0.70.

Source: Computed from information supplied by LBAs and the Western State Marketing Board, February to May, 1970.

The table shows that the distribution of net earnings from cocoa marketing is highly uneven. While the percentage of LBAs in the 0-1000 ₦ earnings bracket is 31.66, their share of aggregate earnings is 8.94%. On the other hand, the percentage of LBAs in the over ₦7100 earnings bracket is 6.6. Yet their share of aggregate earnings is 30.5

Table 5: Distribution Of LBAs By Size Of Average Yearly Total Earnings From All Sources, Ondo Circle, Western Nigeria, 1967-1969

Earnings Bracket (₦)	Licensed Agents			Earnings	
		Cumulative			Cumulative
	Number	Per cent			
0- 500	4	6.66	6.66	0.30	0.30
600-1000	9	15.00	21.66	2.85	3.15
1100-1500	10	16.66	38.32	4.92	8.07
1600-2000	4	6.66	44.98	2.55	10.62
2100-2500	5	8.33	53.31	4.22	14.84
2600-3000	6	10.00	63.31	6.48	21.32
3100-3500	1	1.66	64.97	1.30	22.62
3600-4000	1	1.66	66.63	1.48	24.10
4100-4500	2	3.33	69.96	3.18	27.28
4600-5000	2	3.33	73.29	3.60	30.88
5100-5500	1	1.66	74.95	1.89	32.77
5600-6000	2	3.33	78.28	4.22	36.99
6100-6500	2	3.33	81.61	4.70	41.69
6600-7000	1	1.66	83.27	2.03	43.72
7100-over	10	16.00	100.00	56.20	100.00

The Gini Ratio computed from the data above is 0.72.

Source: Same as for Table 4.

Table 5 portrays a slightly more uneven distribution of total earnings than Table 4. The share of the LBAs in the 0-1000₦ bracket is 3.15% although they make up about 22% of the sample. Conversely, the LBAs in the ₦7100 and over bracket account for 56% of aggregate earnings in spite of the fact that they constitute only 16.6% of the sample.

Procedure in Estimating the Earnings of Producers

The computation of the earnings of producers is based completely on the data obtained during the interviews with the selected producers. Each producer was asked how much cocoa he actually sold in each of the 1967/68 and 1968/69 seasons. The producer's gross earnings were then computed for each season by multiplying the quantity sold by the price per unit weight in which the sale was transacted. After deducting the labor and other costs given by the producer, the net earnings for both of the seasons were obtained and averaged. Just as the case with the LBAs, each producer was asked what proportion of his total earnings came from his production and sale of cocoa.

The answer to this question was the basis for computing the average total earnings.

The data in Table 6, once again, show that there is a high degree of inequality in the distribution of cocoa earnings among the producers themselves. Whereas the producers in the 0-₵200 earnings bracket make up about 63% of the entire sample, they account for 21% of cocoa earnings. At the same time, producers in the earnings bracket of ₵1201 and over get approximately 29% of aggregate earnings though they make up only 5% of the sample.

The fact that total earnings from all sources is more unequally distributed than net cocoa earnings is evident from the tables. Producers in the earnings bracket 0-₵200 make up 51% of the sample but account for 9.45% of aggregate earnings.

On the other hand, those in the bracket £1301 and over make up 9.35% of the sample and yet account for about 58% of aggregate earnings.

Table 6: The Distribution Of Producers By Size Of Net Earnings From Cocoa Sales, Ondo Circle, Western Nigeria, 1967-1969

Earnings Bracket (£)	Cocoa Producers			Earnings	
			Cumulative		Cumulative
	Number	Per cent			
0- 100	61	38.12	38.12	7.86	7.86
101- 200	40	25.00	63.12	12.67	20.53
201- 300	25	15.62	78.74	13.16	33.69
301- 400	6	3.75	82.49	4.54	38.23
401- 500	4	2.50	84.99	3.94	42.17
501- 600	2	1.25	86.24	2.54	44.71
601- 700	2	1.25	87.49	2.85	47.56
701- 800	6	3.75	91.24	9.97	57.53
801- 900	2	1.25	92.49	3.76	61.29
901-1000	1	0.63	93.12	2.17	63.46
1001-1100	2	1.25	94.37	4.71	68.17
1101-1200	1	0.63	95.00	2.63	70.80
1201-1300	4	2.50	97.50	11.07	81.87
1301-over	4	2.50	100.00	18.13	100.00

The Gini Ratio computed from the data above is 0.72 approximately.

Source: Computed from data provided by selected cocoa farmers in Ondo Circle, February-May, 1970.

Table 7: The Distribution Of Cocoa Producers By Size Of Average Yearly Total Earnings From All Sources, Ondo Circle, Western Nigeria 1967-1969

Earnings Bracket (£)	Cocoa Producers			Earnings	
			Cumulative		Cumulative
	Number	Per cent			
0- 100	44	27.50	27.50	3.25	3.25
101- 200	38	23.75	51.25	6.20	9.45
201- 300	27	16.88	68.13	7.45	16.90
301- 400	9	5.63	73.76	3.56	20.46
401- 500	9	5.62	79.38	4.71	25.17
501- 600	5	3.12	82.50	3.16	28.33
601- 700	3	1.88	84.38	2.23	20.56
701- 800	1	0.63	35.01	0.86	31.42
801- 900	1	0.63	85.64	1.03	32.45
901-1000	2	1.25	86.89	2.24	34.69
1001-1100	3	1.88	88.77	3.59	38.28
1101-1200	2	1.25	90.02	2.70	40.98
1201-1300	1	0.63	90.65	1.50	42.48
1301-over	15	9.35	100.00	57.52	100.00

The Gini Ratio computed from the data above is 0.78.

Source: The same as for Table 6.

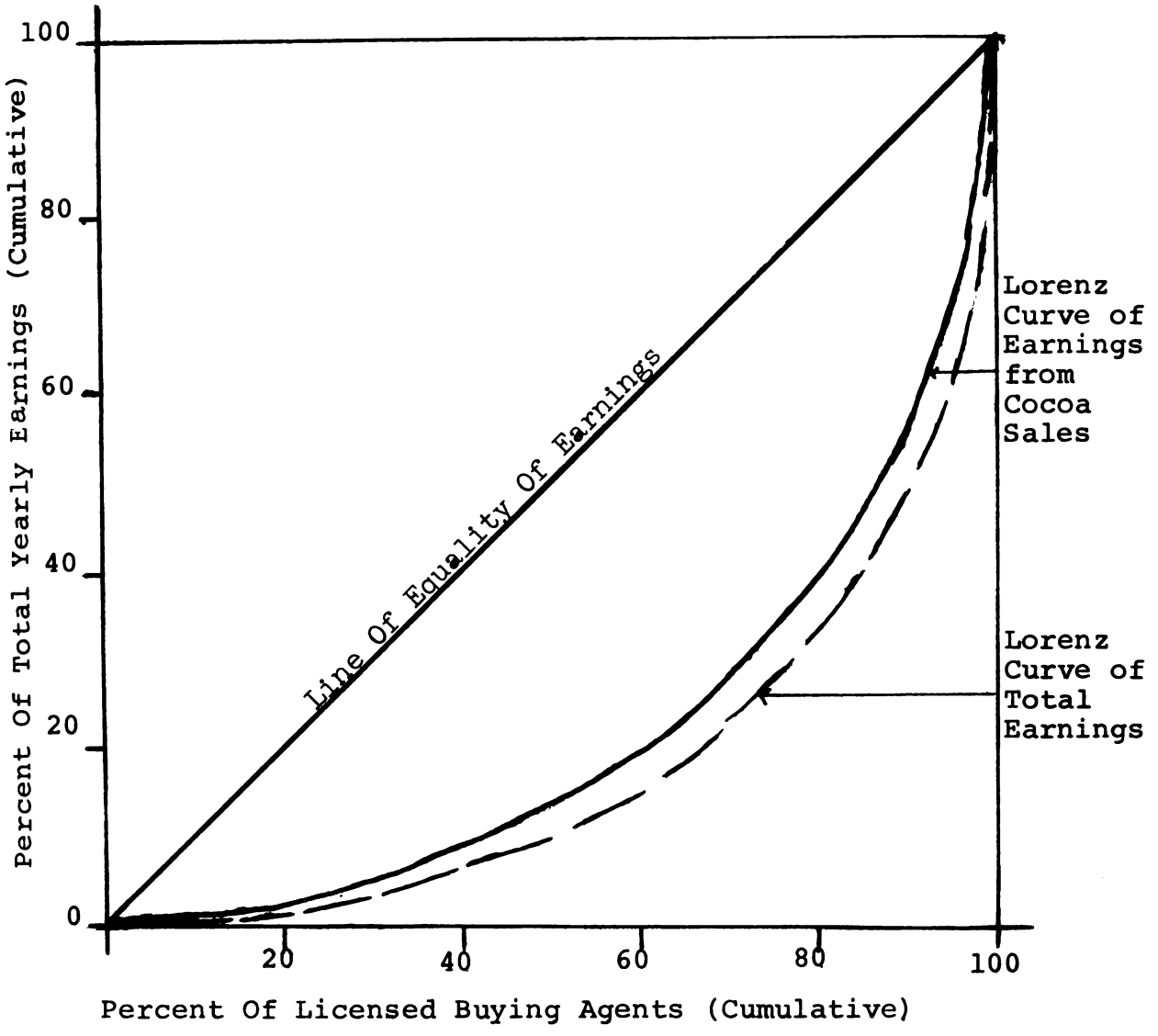

Fig.1. The Lorenz Curves Of LBAs' Earnings

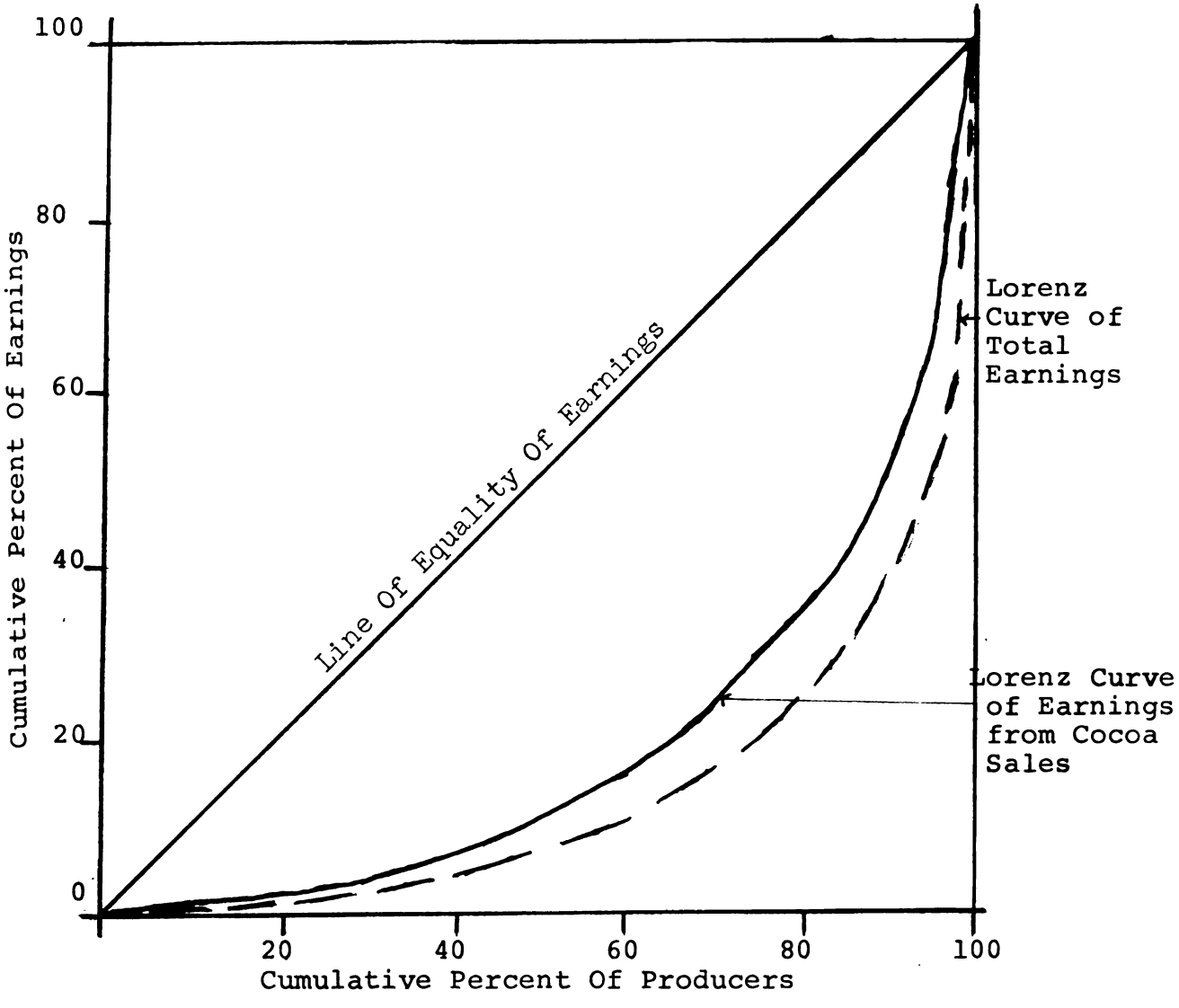

Fig. 2: Lorenz Curves Of Producers' Earnings

Measurement of the Degree of Concentration of Earnings

The two measures of earnings inequality used in this study are the Lorenz Curve and the Gini Ratio, the latter being derived from the Lorenz Curve.

The Lorenz Curve is obtained, as the Figures 1 and 2 show, by plotting the cumulative percentage of units arrayed in order from the smallest to the largest against the cumulative percentage of the earnings received by these units. In this study, the cumulative percentage of LBAs and cocoa producers is plotted against the cumulative percentage of aggregate earnings. If all LBAs and producers were to have equal earnings, we would have a case of perfect equality with the points on the Lorenz Curve lying along the diagonal OP. On the other hand, if only one LBA or producer were to receive all the earnings, the Lorenz curve would be represented by the lines OZ and PQ. In practice, as can be seen from Figures 1 and 2, the Lorenz Curve lies between these extremes. The degree of inequality is measured by the area between the diagonal and the Lorenz Curve. The larger this area, the greater is the degree of inequality. In Figures 1 and 2, the areas between the diagonals and the Lorenz Curves are larger for the Lorenz Curves of total earnings than for those of net cocoa earnings, thus indicating greater inequality in the distribution of the former than the latter.

Although a quick picture of the degree of inequality can be obtained by looking at the Lorenz Curve, it is not a

precise measure. The more precise measure, and the one which is increasingly used for international comparisons of inequality of incomes, is the Gini (concentration) ratio. This statistic is the proportion of the area under the diagonal that lies between the diagonal and the Lorenz Curve[11]. It ranges from 0 to I. A Gini ratio of 0 implies perfect equality while a ratio of I means that one person or group gets all the earnings--a case of perfect inequality. The closer the ratio to unity, the greater is the degree of inequality.

Table 8: Gini Ratios Of Net And Total Earnings Of LBAs And Cocoa Producers, Ondo Circle, Western Nigeria, 1967-1969

Type of Earnings	LBAs	Producers
	Gini Ratios	
Net Earnings	0.70	0.72
Total Earnings	0.72	0.78

From the same data used in plotting the Lorenz Curves, the Gini ratios were calculated for the earnings of LBAs and the producers as shown in the table above.

[11]For a concise summary of the mathematical derivation of the Gini ratio cf H. N. Morgan, "Anatomy of Income Distribution," The Review of Economics and Statistics, Vol. XLIX, February 1962, p. 281.

Limitations of the Gini Ratio as a Measure of the Degree of Earnings Inequality

Despite the widespread use of the Gini ratio in many studies of income and wealth distribution, economists have cautioned against drawing sweeping conclusions from the size of the Gini coefficients.

First, it is pointed out that the Gini ratio is purely a descriptive measure and, as such, does not convey normative meaning. Whatever presumptive conclusions flow from the size of the coefficients, therefore, are also due to the normative knowledge and convictions of readers regarding the value of equality.

Further, several writers[12] have argued that the Gini ratio measures absolute rather than relative inequality. As such, it is less sensitive to small income differentials which are better handled by the standard deviation of the logarithm of income.

In a more recent publication, Benson warns that interpreting Gini coefficients on a cardinal basis may lead to erroneous conclusions and that even conclusions drawn from ordinal ranking may be misleading. The computed coefficients, he points out, are affected not merely by the number of groups

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[12] (a) S. Kuznet, "Economic Growth and Income Inequality," American Economic Review, Vol. XLV, March, 1955, pp. 1-29.
(b) George Garry, "Inequality of Income: Causes and Measurement," Studies in Income and Wealth, Vol. 15, 1952, pp. 25-27.
(c) K. R. Ranadive, "The Equality of Income in India," Bulletin of Oxford Institute of Economics and Statistics, Vol. 27, May, 1965, pp. 119-125.

or cells involved but also by the proportion of total units in each cell. An increase in the former leads to an upward bias in the coefficients while an increase in the latter causes a downward bias.[13] However, with respect to this study, it is possible that the two tendencies just balance each other leaving the coefficients unbiased either way. This is because while there are many cells (14) which would tend to increase the size of the ratio, one or two cells contain a high proportion of the units which would tend to reduce the size of the coefficient.

Why the Gini Coefficients in this Study are Believed to Understate the Actual Degree of Concentration of Cocoa Earnings

The study does not include the earnings of executives in government plantations and farm settlements since they are technically not cocoa producers or buyers. Inclusion of this class of people would appreciably increase the size of the concentration ratio.

Either as a display of modesty or fear of taxation, the LBAs and producers tended to overstate the fraction of their total earnings which comes from the cocoa industry. Since total earnings from all sources is computed as a product of the reciprocal of the fraction and earnings from

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[13] R. A. Benson, "Gini Ratios: Some Considerations Affecting Their Interpretation," American Journal of Agricultural Economics, Vol. 52, No. 3, August, 1970, pp. 444-448.

cocoa, overstatement of the fraction tends to reduce total earnings.[14]

No allowance is made for the effects of tax burdens on the distribution of earnings. In the Western State the absence of property taxes, the heavy reliance on export taxes, the arbitrary nature of tax assessment and the evasion of taxes by powerful groups all tend to make tax burden heavy for the low income group.[15] The tax revolt by the farmers in 1968 and the recent abolition of poll tax testify to the validity of this statement.

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[14] Suppose a producer gets ₦200 from cocoa. It makes a big difference to the size of his total earnings whether he regards this as 1/3 or 1/5. If it is 1/3 of his total earnings, then total earnings would be ₦600. But if it is 1/5, then total earnings would be ₦1000.

[15] G. O. Orewa, Taxation in Western Nigeria, Oxford University Press, 1962, pp. 16-40.

CHAPTER IV

FACTORS ASSOCIATED WITH THE DISTRIBUTION OF EARNINGS AMONG PRODUCERS AND LBAs

Before discussing the factors associated with the distribution of cocoa earnings in the Western state of Nigeria, it is worthwhile reviewing the contribution of economic theory to see what light, if any, it can shed on the problem at hand.

Economic Theory and Causes of Earnings Inequality

Among the distribution theories found in economic literature, marginal productivity theory is the most important and comprehensive. Concerned, primarily, with the functional distribution of income among resource categories and their owners, the theory states that the earnings of a variable resource is equal to the marginal value product (mvp) of that resource. Since the total income of resource owners is the product of the mvps and the quantity of resources employed, it follows that, under free market conditions, the more resources a person owns the larger the size of his income. Furthermore, wherever the pattern of resource ownership is unequal, the free operation of market forces leads to inequality in the distribution of earnings. Thus marginal productivity theory not only recognizes differences in the size and quality of resource ownership as

the cause of unequal distribution of earnings, it is also capable of predicting changes in income distribution as the pattern of resource ownership changes over time. Of course, it is true that because of its essentially static character, the theory cannot explain technological change or changes in institutional arrangements. However, this does not mean that it cannot predict the consequences, in terms of income distribution, when a new labor saving technology is introduced into the economy of an underdeveloped country. Similarly, one would expect the theory to predict the income distribution consequences of a land reform which gives land to the tiller.

According to Becker, differences in the quality of investment in human capital is an important factor in the observed inequality of earnings.[1] Using a supply and demand framework, he relates investment demand to the marginal rate of return to education, while the supply curve is related to the availability and cost of funds. The intersection of the two curves indicates the level of investment. His analysis implies that environmental conditions or opportunities including resources owned by the individuals or the family concerned rather than "natural ability" determine the magnitude of investment in human capital and hence the size of earnings.

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[1]G. S. Becker, "Education and the Distribution of Earnings." American Economic Review, May, 1966, pp. 358-370.

For some class of people, the marginal rate of return on investment is low because of job discrimination, and limited economic opportunities which limit the demand for their services. The investment demand curve facing this group lies further to the left of that for the more advantageously placed who face no job discrimination or limited opportunities. The supply curve of the former also lies further to the left of that for the latter. The intersection of these curves takes place where more funds are invested on the education of the latter than on that of the former--a circumstance which largely explains the greater earnings of the latter.[2]

Becker's model is not only consistent with the marginal productivity theory, but could be regarded as an aspect of that theory itself. For the essence of his model is that unequal pattern of resource ownership explains differences in the amount of resources invested in the education of different individuals. The resulting differences in the quality of human skills explain differences in the marginal

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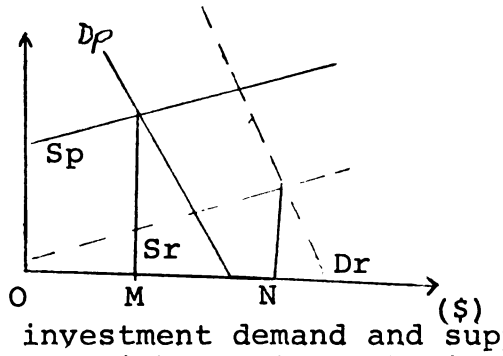
[2]Marginal Rate of Return



The diagram shows the investment demand and supply curves for education of poor and rich people. The intersection of Dp and Sp, the demand and supply curves of poor people, takes place at a point where Om, the amount invested in the education of the poor, is smaller than ON, the amount invested for the education of the rich whose demand and supply curves lie further right.

productivities of human beings and hence differences in the size of earnings.

Some distribution theories tend to show that the size of earnings reflects immutable natural laws governing the distribution of ability rather than institutional arrangements. The implication of such theories is that any efforts to change the pattern of earnings distribution by modifying or changing existing economic and social institutions is doomed to failure, given the fact that the same level of inequality will inevitably be restored by the operations of inexorable law of nature. For example, Pareto asserts that there exists in a capitalist society "a natural constant degree of inequality."[3] Professor Davis goes to great length to show mathematically in his "Law of Distribution of Special Ability" that a correspondence exists between the distribution of ability and earnings.[4] For Ammon, observed higher incomes "correspond roughly and in large categories with higher gifts and the lower incomes with lower abilities."[5] Snyder observed that the distribution of natural ability follows "a sharply

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[3]A. C. Pigou, Economics of Welfare, (Macmillan, London, 1932.

[4]P. Davis, "The Significance of the Curve of Income," Cowles Commission Paper, (Colorado Springs, 1938, p. 20.

[5]S. Ammon, "Some Social Applications of the Doctrine of Probability," Journal of Political Economy, March, 1969.

skewed curve"--a fact which he believed explains the skewed distribution of earnings.[6]

Although ability is undoubtedly an important factor in the income position of many people, there are practical problems involved in the hypothesized linear relationship between ability and earnings. How, for instance, does one measure "ability" so as to arrive at a curve of distribution? Granted the possibility of measurement, some questions would still arise regarding whether the relationship is necessarily linear. In an underdeveloped economy, where land ownership and access to other resources are partly inherited and partly associated with political position, one cannot be certain that the relationship is linear. Even in advanced economy such as Britain or the United States, the presence of inherited wealth destroys the validity of the hypothesis.

Friedman[7] regards inequality of earnings partially as a reflection of differences in the riskiness of investments. Assuming that the level of profits is positively related to the magnitude of risks and that people differ with respect to risk preferences, he maintains that those with a higher propensity to take risk tend to choose more risky ventures, make larger profits and so have larger

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[6]Carl Snyder, Capitalism, the Creator (Macmillan, London, 1940.

[7]Milton Friedman, "Choice, Chance and the Personal Distribution of Income," Journal of Political Economy, August, 1953, pp. 277-290.

earnings. On the other hand, those with a relatively high degree of risk aversion prefer less risky and less profitable investments and consequently get lower earnings. This theory does not, however, explain why farmers who produce the same commodity under the same market and natural conditions should get different size of earnings. In any case where firms devise numerous strategies and institutions to reduce risk, it is difficult to see the general validity of the Friedman hypothesis.

On the whole, the theories reviewed above offer some insight into the factors behind earnings inequality. However, they largely ignore the role of technological and institutional changes and arrangements. With the possible exception of Becker's they also fail to consider the role of investment in human capital.

In this study, the role of technological and institutional factors is considered. Specifically, it is shown that institutionally determined distribution of cocoa holdings, new technology, access to credit, marketing board, and political position are variables which are strongly associated with the distribution of earnings among the cocoa farmers and buyers in Western Nigeria.

Unequal Distribution of Cocoa Holdings as a Variable in the Unequal Distribution of Cocoa Earnings

There are several reasons for regarding the distribution of cocoa holdings as the most strategic variable in the unequal distribution of cocoa earnings. The size of

cocoa holdings, for instance, is closely related to the degree of political influence which, as will be shown later, has a significant role in determining access to credit, new technology, extension services, and control of cocoa marketing. In particular, the size of cocoa holdings influences, to a considerable extent, the magnitude and intensity of input use among cocoa producers. Most important, the study reveals a very high correlation between the size of cocoa holdings and the size of earnings from cocoa sales as Table 9 shows.

Table 9: Correlation Of The Size of Cocoa Holdings Of Sampled Producers With Strategic Variables, Ondo Circle, Western Nigeria 1967-69

Strategic Variables	Correlation Coefficient*
1. Net Earnings From Cocoa Sales	0.97
2. Expenditure on Hybrids	0.92
3. Expenditure/Acre on Chemical Sprays	0.93
4. Expenditure on Fertilizer	0.91
5. Extension Man Hours/Acre	0.94
6. Proportion of Producers Who Are Non-Farm Professionals	0.77
7. Proportion of Producers Who Have Political Position	0.89

*All significant at 0.05 level
Size of Sample = 160

Source: Same as for Tables 6, 7, and 8

The Distribution of Cocoa Holdings

Data on the distribution of cocoa holdings were obtained during interviews with selected producers. They were asked to state how many acres of their land were planted with cocoa. To get more details, they were also required to state the number of acres they acquired individually, the number they inherited and the number they held by pledging or renting. Table 10 is based on this set of information.

Table 10: The Distribution of Sampled Cocoa Producers By Size Of Cocoa Holdings, Ondo Circle, Western Nigeria, 1967-1969

Size of Holdings	Cocoa Producers			Acres	
			Cumulative		Cumulative
Acres	Number	----------Per cent----------			
0- 5	62	38.75	38.75	9.49	9.49
6-10	38	23.75	62.50	16.37	25.86
11-15	20	12.50	75.00	14.21	40.07
16-20	17	10.63	85.63	16.59	56.66
21-25	7	4.37	90.00	8.77	65.43
26-30	9	5.62	95.62	14.10	79.53
31-35	3	1.88	97.50	5.71	85.24
36-over	4	2.50	100.00	14.76	100.00

Source: As for Table 9

From the data shown in Table 10, the Lorenz Curve in Figure 3 was plotted. The Gini ratio was also calculated from the same data and found to be 0.68. These three aspects of information indicate a high concentration of cocoa holdings. In the table, the producers in the acreage range, "0-5 acres" make up 38.5% of the sample while accounting for just 9.49% of total acres. On the other hand, producers in

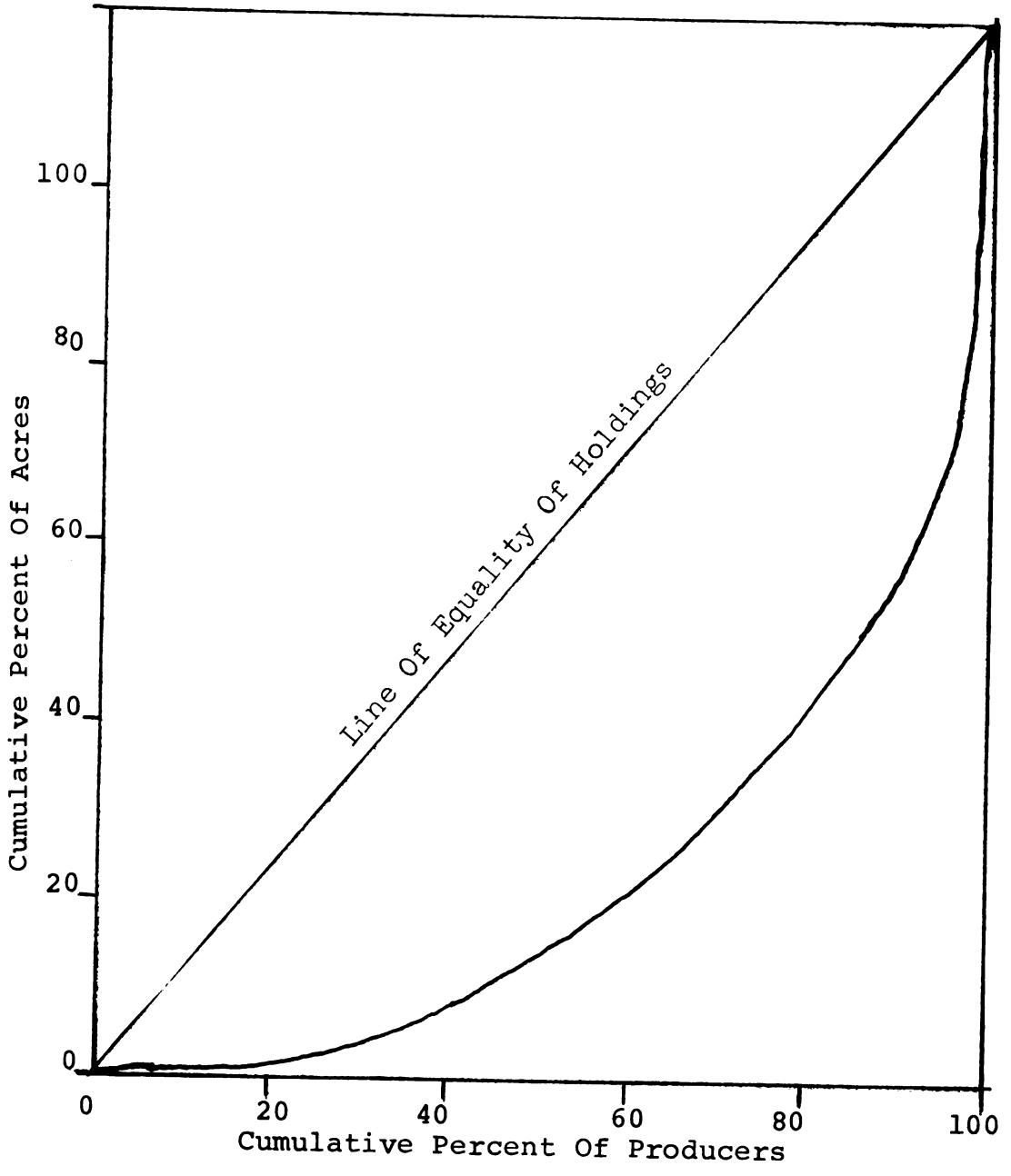

Fig. 3. Lorenz Curve Of Cocoa Holdings

the range, "36 acres and above," constitute only 2.5% of the sample, yet they account for 15% of total acres. Even so, there are three reasons for suggesting that the concentration ratio or Lorenz Curve shown above may have understated the degree of actual inequality in the distribution of cocoa holdings. As already pointed out in Chapter III, this study did not include Government plantations in the sample since earnings from such plantations is public and since workers on these plantations are legally not owners of the farms on which they work. Because these plantations have sizes numbering several hundred acres, their inclusion would have increased the size of the Gini ratio considerably. Moreover, it is possible that private large scale cocoa farmers understated the number of cocoa holdings they have, especially if these are situated in other divisions, because of the relative unpopularity of absentee ownership in the state. Thirdly, it is highly probable that the traditional rulers, by giving only the number of acres of cocoa on their farm land, understated the actual number of acres from which they derive their earnings since, as the custodians of village land, they can grow cocoa on land which may not, strictly speaking, belong to their families.[13]

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[13]This is put in much greater detail in the section of this chapter dealing with "Political Position as a Variable in the Distribution of Cocoa Earnings."

The high concentration of cocoa holdings evident from this study is supported by two previous studies in the Western State. According to Baldwin[14], who conducted a survey of the cocoa growing areas of the State in the early fifties, 55% of the farmers owned 19% of all acres planted with cocoa trees while 10.5% accounted for 41% of the total acres. In a more ambitious study, Galleti and others[15] pointed out that over 50% of cocoa producers in his sample had cocoa holdings averaging less than 0.2 acres.[16]

The significance of the data from this study and those from the Baldwin and Galleti Studies regarding the concentration of cocoa holdings is that they render invalid,

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[14]K. S. Baldwin, "A Survey of Cocoa Holdings in Western Nigeria," 1952. This paper, which is in mimeographed form, is in one of the NISER boxes containing the publications on Western State of Nigeria.

[15]R. Galleti, K. S. D. Baldwin, and Dina, Nigerian Cocoa Farmers: An Economic Survey of Yoruba Farming Families, (Oxford University Press, 1956) p. 149.

[16]The data presented in the Galleti study show a much higher degree of cocoa holdings concentration than the data in this study. While 50% of his sample had holdings whose size averaged less than 0.2 acres, the lower 50% of the sample in the present study have holdings whose size averages over 3.5 acres. The wide difference is due to two reasons. First, and more important, this study, unlike that of Galleti which embraced the whole of the Western and Midwest States, is confined to Ondo Circle where average size of farm is much higher than the state average. (Western Nigeria Statistical Bulletin, Vols. 8-9, 1966-1967, p. 141). It is possible, moreover, that in the Western State as a whole, the average size of cocoa holdings has increased since 1954, the period of the Galleti Study. This may be the result of migration from the farm into urban areas and the bringing into cocoa cultivation previously uncultivated land.

at least in the context of Western Nigeria, the hypothesis that in tropical Africa, agricultural export production rests on numerous small farmers rather than on large scale producers.[17] This hypothesis is based on several assumptions which are not valid in the cocoa economy of Western Nigeria. These are (1) that under peasant production there are no feudal or entrepreneurial classes; (2) that production calls for little capital investment because technically, it is not different from subsistence traditional production, and (3) that fragmentation of holdings precludes existence of large holdings.

It is true that there are no latifundias such as we have in much of Latin America. But this does not mean that there are no groups who can use their position to enlarge their cocoa holdings. Though they are by no means feudal, it is generally held that Obas (kings) and other high ranking traditional rulers have a great hold over land allocation as will be shown in the later part of this study. As for the absence of entrepreneurial class, the presence of some licensed buying agents who themselves are large scale cocoa farmers makes this assumption ridiculous. Nor is it true

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[17]This study, and those of Baldwin and Galleti referred to above, make clear that it is one thing for small farmers to be preponderant in numerical terms, but an entirely different thing for them to account for a significant proportion of export products. However, it is important to point out that while a farm size of "15 acres and above" is "large" in the Nigerian context, it is very small in the context of countries such as the U.S. or Latin America.

that cocoa production does not depart from traditional production. On the contrary, as Sara Berry[18] rightly argues, "cocoa development in Western Nigeria is an economic innovation in the Schumpetarian sense of the term." Not only is cocoa a new product introduced by entrepreneurs who ran grave risks, but the very process of production makes heavy demand on the knowledge of new inputs and new ways of combining the old ones which are increasingly marketable. Most important, it is produced for a world market which must be courted by constantly improving quality. Finally, it should be obvious that the mere fact that a cocoa farmer has plots scattered all over different locations does not mean that on the aggregate, he is not a large scale farmer.

Reasons for Inequality in the Distribution of Cocoa Holdings

Inequality in the distribution of cocoa holdings among the sampled producers reflects inequality in land distribution among and within the divisions from which the producers were selected.

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[18]Sara Sweezy Berry, "Cocoa in Western Nigeria, 1890-1940: A Study of Innovation in a Developing Economy," Unpublished Ph.D. Thesis, University of Michigan, 1967.

Table 11: Average Size Of Cocoa Holdings Of Sampled Producers And Population Density By Divisions* In Ondo Circle, Western Nigeria, 1970

Division	Average Size of Holdings	Population
	(acres)	(persons/sq. mile)
Ondo	12	203
Akure	10	203
Ilesha	6	507
Owo	5	267
Ife	3.5	630

*Only those in which the interviews were conducted for this study.

Sources: (1) Interviews of producers, (2) The data on population comes from The Western Nigeria Statistical Bulletin, Vol. 9, 1967, p. 6.

With the exception of Owo, Table 11 shows an inverse relationship between the density of population and the average size of cocoa holdings in the divisions from which the samples were selected. In Ondo and Akure, where the density is least, the average size of cocoa holdings is the largest. On the other hand, in Ife and Ilesha with relatively high density, the average size of holdings is the smallest. The low density in Ondo and Akure is an important factor in the presence of large scale private and public cocoa plantations in these divisions. Another factor which explains the relatively small average size in Ife division is the "Tenancy System" which discourages expansion of holdings as the terms are insecure and the landlords appropriate a high

proportion of cocoa revenue without contributing to land improvements.[20]

Within the division, unequal distribution of holdings is the consequence of several factors among which the following are the most important: (1) unequal distribution of family population; (2) unequal availability of nonfarm occupations which reflects unequal availability of educational opportunities to members of the extended family, and (3) differences in command over capital and political resources.

Political Position and Influence as a Variable in the Unequal Distribution of Cocoa Earnings

Despite the usual tendency of many economists to regard political issues as "sensitive" and as something better avoided in an analysis of economic problems, the fact remains that any study which seeks to explain the forces underlying the distribution of earnings from agricultural exports and the implications for policy, without considering the role of political factors, hardly touches the fundamentals. This is particularly true of studies dealing with an underdeveloped country such as Nigeria where attempts are being made to control and direct the development process by the government and its ubiquitous officials. In such economies, decisions on

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[20] R. O. Adegboye, "The Need for Land Reform in Nigeria," The Nigerian Journal of Economics and Social Studies, Vol. IX, No. 3, Nov., 1967. The study points out that Ife division not only has the largest percentage of tenant farmers, but also abounds in instances where the landlord takes the lion's share of output. The consequent low earnings and lack of incentive prevent the tenants from expanding cocoa holdings.

the type, magnitude, complexity, location, and implementation of various programs which affect the distribution of earnings are, for all practical purposes, political. Even a decision to accept, modify, or reject the recommendations based on the most rigorous and elegant economic study is political. In Nigeria many Commissions of Inquiry and the current probes of the assets of public officials have established beyond any doubt the existence of a very strong relationship among political position, the wealth of public officials, and the widespread use of economic resources as a means of recruiting and retaining party supporters.[21] Hence there is nothing

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[21]There are very many of these Commissions of Inquiry. To the point raised above, the following are most pertinent:
(1) "The Report of the Foster Sutton Tribunal of Inquiry into the Allegation of Improper Conduct by the Premier of Eastern Nigeria in connection with the African Continental Bank and other Relevant Matters," Lagos, 1957. The essence of the report is that the premier used his position to divert government funds into a Bank which, at that time was his property and was managed by his party supporters.
(2) "The Report of the Coker Commission of Inquiry into the Affairs of Certain Statutory Corporations in Western Nigeria's Sessional Paper, No. 4, 1962. The point which this report sought to establish is that the leaders of the Action Group, the party which, until 1962, had governed Western Nigeria, had bankrupted the region by diverting marketing board funds into companies owned and managed by the party leadership and supporters.
(3) "The Report of Inquiry into the Affairs of the Northern Nigeria Development Corporation. Government Printer, Kaduna, 1967. In this report widespread misappropriation of funds by the managers of the Corporation and others who were party functionaries, is spotlighted."
(4) Nigerian Political Parties, Princeton University Press, pp. 447-452) points out the following: (a) that though licenses for produce buying were issued for ostensibly commercial reasons, yet all the parties in the regional governments used this as a device for rewarding supporters; (b) that in the Western region, the Loan Board, an agricultural credit institution, was dominated by Action Group supporters; (c) that in all the regions, the principal business associations supported the government party, and (d) that it was generally regarded as "good business" to have the right political connections.

unscientific in trying to see whether political factors have played a part in the distribution of cocoa earnings, the mainstay of the Western Nigeria economy.

Quantifying the Relationship Between Political Position and the Distribution of Cocoa Earnings

Each selected producer was asked whether or not he had ever held any of the following positions in the last ten years: (1) traditional ruler; (2) councillor; (3) membership of Federal or Western Legislature; (4) official in the ruling party, (5) the leader of farmers' organization. With the help of informants, the answers given to the question above were cross checked with information from such sources as Government Gazette, Local Council records and former local functionaries of the government parties. If a producer was identified with one or more of the above positions, he was regarded as having had political position/influence. To calculate the correlation coefficient between political position and earnings from cocoa sales, the percentage of cocoa producers within each earnings bracket identified with political position was computed. This was related to the average cocoa earnings within each bracket as shown in Table 12.

Using the same procedure, the percentage of producers identified with political position was correlated with the mean size of holdings, mean expenditure on chemicals, hybrids, and mean extension man-hours per acre. The result of these calculations are summarized in Table 13.

These two tables illustrate the high correlation[22] of political position not merely with the distribution of cocoa earnings, but also with other variables which are important determinants of earnings from cocoa production.

Table 12: The Relationship Between Earnings From Cocoa Sales And The Percentage Of Sampled Producers (In Each Earnings Bracket) With Political Positions, Ondo Circle, Western Nigeria, 1970

Earnings Bracket	Average Earnings	Total Sampled Producers	Producers With Political Position	
(₦)	(₦)	(Number)	(Number)	(Percent)
0-100	59	61	11	18
101-200	145	40	14	35
201-300	241	25	14	56
301-400	390	6	3	50
401-500	446	4	3	75
501-600	579	2	2	100
601-700	650	2	2	100
701-800	759	6	4	67
801-900	-	-	-	-
901-1000	962	1	1	100
1001-1100	1025	2	2	100
1101-1200	1200	1	1	100
1201-1300	1265	4	3	75
1301-over	2068	4	4	100

The correlation coefficient between column 2 and column 5 is 0.76 and is significant at 0.05 level, with N=160.

Source: Computed the same as Table 10.

[22]These high correlation coefficients do not imply a unidirectional causal relationship proceeding from political factors to these technological and economic variables.

Table 13: Correlation Of The Percentage Of Sampled Producers With Political Positions And Strategic Variables, Ondo Circle, Western Nigeria, 1970

Strategic Variable	Correlation* Coefficient
1. Mean Size of Cocoa Holdings	0.89
2. Mean Expenditure/Acre on Chemical Spray	0.83
3. Mean Expenditure on Hybrids	0.80
4. Mean Expenditure on Fertilizer/Acre	0.78
5. Proportion of Producers Who Are Mainly Engaged in Off-Farm Occupations	0.74

Source: Same as Table 12.

*All are significant at 0.05 level.

Reasons for the High Correlation Between Political Position and Important Variables of the Study

The high correlation of political position with cocoa holdings is explained largely by the character of land tenure conditions. Under customary law[23] in an economy in which most of the cocoa land belongs to a community, (lineage, clan, villages) a person's position as a traditional ruler confers privileges which often smooth the path to expansion of cocoa holdings. As a custodian of communal land, the chief has general supervisory functions over communal land and authority to allocate this land to new families and strangers.[24]

[23] T. O. Elias, Nigerian Land Law and Custom, (London, 1951, pp. 106-139.

[24] The word "strangers" is used to designate any person, Nigerian or foreign, who is not a native of the community which he resides by birth.

Moreover, customary law gives the chief reversionary rights over virgin land, fallow land, forest and all other land not currently in active use in his domain. If, as is invariably the case, he is also a family head, he has additional rights to appropriate unused family land. The position of a traditional ruler also gives him advantage over others as regards the supply of labor. He obtains labor services from grateful strangers to whom land is allotted and from grateful subjects--a form of non-monetary rent.

Councillors use their influence in local government to ensure a favorable allocation of land. In a society where land disputes are perennial the political influence of a legislator or party official can turn the balance and increase the supply of land available for cocoa. Even where customary tenure places restrictions on purchase, these restrictions have less effect if a politically prominent person is involved.

Table 14 gives an idea of how political position is related to the size of cocoa holdings of cocoa producers. In this table, the average size of holdings by producers occupying various political positions is compared to the mean size of holdings for the sample as a whole.[25]

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[25]While the averages are not unduly large, they, nevertheless, indicate that producers with political position typically are "large" farmers by Nigerian standard.

Table 14: Mean Size Of Cocoa Holdings Owned By Producers With Political Positions As Percentage Of Sample Mean, (4.5 acres) Ondo Circle, Western Nigeria, 1970

Types of Political Position	Mean Size of Holdings	
	Acres	Per cent of Sample Mean
Former Legislator	27	600
Leader of Farmers Union	20	444
Traditional Ruler	17	377
Councillor	17	377
Former Party Official	16	355

Source: Same as for Table 13 or 14.

The table makes clear that the average size of holdings for producers in various political positions is many times the average for the sample as a whole.

Quite apart from its association with the size of holdings, political position influences access to credit from those institutions which are directly controlled by the government. These institutions include the Agricultural Credit Corporation, the Loans Board and the National Bank of Nigeria. The validity of this assertion is indicated by the data in Table 15 which show how sampled producers rank various requirements for getting Government loans.

A glance at the table shows that the possession of political position is regarded by the producers as the most important requirement. Twenty-eight per cent regard political position as the first requirement, 19% as the second and 18% as the third. In all, 65% of the producers rank possession of political position among the three most

important requirements. Noteworthy is the fact that possession of acceptable security and good maintainance of cocoa plots, variables often emphasized in farm management studies, are ranked below the possession of political position.

Table 15: Percentage Of Sampled Producers And The Ranks Assigned to 3 Most Important Requirements For Obtaining Government Loans, Ondo Circle, Western Nigeria, 1970.

	Ranks in Descending Order			
	1st	2nd	3rd	Total
	Per cent of Producers			
Largeness of Cocoa Holdings	23	22	6	51
Possession of Acceptable Security	18	24	7	59
Possession of Political Position	28	19	18	65
Familiarity with Government Personalities	5	12	26	43
Good Maintainance of Cocoa Plots	3	6	13	22
Familiarity with Loan Officials	14	9	23	46

* The columns do not add up to 100 because not all the producers in the sample answered the question from which the data were tabulated.

Source: Same as for Table 14.

The possession of political position affects access to new technology in two ways: (1) through its effect on the size of holdings and access to credit discussed above, and (2) through ability to contact and influence the officials in the Ministry of Agriculture who are responsible

for disseminating new technology.

The advantages conferred on producers in terms of access to land, capital and new technology is reflected in the size of earnings from cocoa sales as evident from Table 16.

Table 16: Mean Cocoa Earnings Of Producers With Political Positions As Percentage Of The Sample Mean (Ł285), Ondo Circle, Western Nigeria, 1967-1969

Type of Political Position	Mean Earnings	
	(Ł)	Per cent of Sample Mean
Former Legislator	889	311
Leader of Farmer Organization	628	220
Traditional Ruler	476	167
Former Party Official	458	161
Councillor	291	102

Source: The same as for Table 15.

It would, however, be erroneous to infer from the data presented in Tables 12-16 that the possession of political position (influence) is the cause and the size of cocoa earnings and other variables the consequence. While it cannot be doubted that traditional rulers, party functionaries and some local councillors benefit in economic terms from their political positions, the relationship between the economic performance of cocoa producers and their political positions is much more subtle and complex. In the first

place, under dynamic conditions, one would expect a two-way simultaneous interaction between political position and economic status each strengthening and reinforcing the other. It is possible that the observed high correlation between the size of cocoa earnings and political position may be due, in part, to this two-way interaction. Secondly, circumstances are conceivable in which the ownership of valuable assets smooths the path to political position. It could be that some of the cocoa producers identified in the study with political position actually came into politics after making their mark in the community as "large" land owners, transport owners, traders or government officials. Thirdly, though the size of cocoa holdings, the central variable in the size of cocoa earnings, is highly and positively correlated with the distribution of political position, yet it also reflects, as shown in Table 11, the population density of the divisions surveyed for the study. Essentially, what these data suggest is that in considering the forces associated with the distribution of cocoa earnings, the distribution of political position cannot be ignored. For despite the fact that no definitive and unambiguous causal relationship is implied, the data suggests that policies to redistribute earnings should be combined with institutional changes aimed at widening the participation of the small producers not only in production but also in the policy decisions from which they are excluded at present.

CHAPTER V

FACTORS ASSOCIATED WITH THE DISTRIBUTION OF EARNINGS --II

Unequal Access to New Technology as a Variable in the Unequal Distribution of Cocoa Earnings

Judged by the standards of underdeveloped countries, the efforts of the Western State Government in financing and disseminating new technology for the benefits of the cocoa industry are impressive;[1] however, the distribution of access to this technology among cocoa farmers is very unequal.

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[1]The total expenditure on chemicals spray and fertilizer subsidy is over £4 million. This subsidy represents about 40% of retail price of spraying chemicals (see Appendix A.VI). Between 1957 and 1968, expenditure on "Cocoa Improvements" rose from £35,000 to £199,000. This amount does not include the salaries and other emoluments of the people engaged in extension and other projects directly related to cocoa improvements.

The Western State government accounts for 50% of the expenditure on the maintenance of the Cocoa Research Institute of Nigeria which, by April 1970, stood at £2.4 million. Finally, in the last five years, the government has embarked upon an ambitious program of rehabilitation and replanting of cocoa trees with the help of foreign assistance.

The Distribution of Access to Hybrids and Spraying Chemicals

In recent years the most important sources of productivity increases[2] in the cocoa industry have been hybrids and spraying chemicals used in fighting black pod and capsid diseases. Aware of the contribution of these inputs, cocoa farmers have responded with significant outlays on their purchase. Thus between 1957 and 1961, the number of seedlings distributed to farmers rose from 1.8 to 6.5 million while the number of acres planted is estimated to have risen from 2.1 to 7.5 million. Further, between 1955 and 1960 farmers trained in black pod control measures rose from 11,000 to 108,000.

To estimate the degree of inequality of access to these inputs, each selected cocoa producer was asked to state his actual expenditure on these inputs in a year, between 1967 and 1969. For each producer the average yearly expenditure was calculated and used as the basis for the following tables and Lorenz Curves.

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[2]Helleiner puts the productivity increases between the years 1954 and 1964 at over 50% (Helleiner, G. K., "Peasant Agriculture, Government and Economic Growth in Nigeria,"(Homewood, Illinois, Richard Irwin, 1966, p. 183).

Table 17: The Distribution Of Sampled Producers By Size Of Average Yearly Expenditure On Cocoa Hybrids, Ondo Circle, Western Nigeria, 1967-1969

Size of Holdings	Cocoa Producers			Expenditure on Hybrids	
			Cumulative		Cumulative
(Acres)	Number	----------Per cent----------			
0- 5	62	38.75	38.75	4.11	4.11
6-10	38	23.75	62.50	3.76	7.87
11-15	20	12.50	75.00	4.42	12.29
16-20	17	10.63	85.63	7.84	20.13
21-25	7	4.37	90.00	7.76	27.89
26-30	9	5.62	95.62	30.32	58.21
31-35	3	1.88	97.50	15.47	73.68
36-over	4	2.50	100.00	26.32	100.00

The Gini ratio from these data is 0.85.

The data on Tables 17 and 18, the Lorenz Curves in Figures 4 and 5 and the Gini ratios computed from the data support the proposition of a highly unequal distribution of access to government financed and disseminated technology in the cocoa growing areas. In Table 17 approximately 39% of the producers in the lowest acreage range account for 4% of the expenditure on hybrids while the top 2.5% account for 26% of the aggregate expenditure. The Gini coefficient (0.85), reflects this high concentration. Turning to Table 18, it is easily observed that while about 36% of the producers spent 4.4% of the total outlay on chemicals, 14% account for 56% of this outlay. The Gini ratio (0.74),

once again, is evident of the concentration of expenditure on spraying chemicals.

Among the reasons for the unequal access to these inputs are unequal distribution of cocoa holdings, unequal access to extension services and funds.

Table 18: The Distribution of Sampled Producers By Size Of Average Yearly Expenditure On Spraying Chemicals, Ondo Circle, Western Nigeria, 1967-1969

Expenditure Bracket	Cocoa Producers			Expenditure on Chemicals	
			Cumulative		Cumulative
£	Number	Per Cent			
0- 5	48	35.82	35.82	4.44	4.44
6-10	26	19.40	55.22	5.93	10.37
11-15	13	9.70	64.92	5.26	15.63
16-20	7	5.22	70.14	3.93	19.56
21-25	2	1.50	71.64	1.44	21.00
26-30	5	3.73	75.37	4.32	25.32
31-35	4	3.00	78.37	4.26	29.58
36-40	7	5.22	83.59	8.37	37.96
41-45	3	2.23	85.82	3.98	41.94
46-over	19	14.18	100.00	58.06	100.00

The Gini ratio from these data is 0.74.

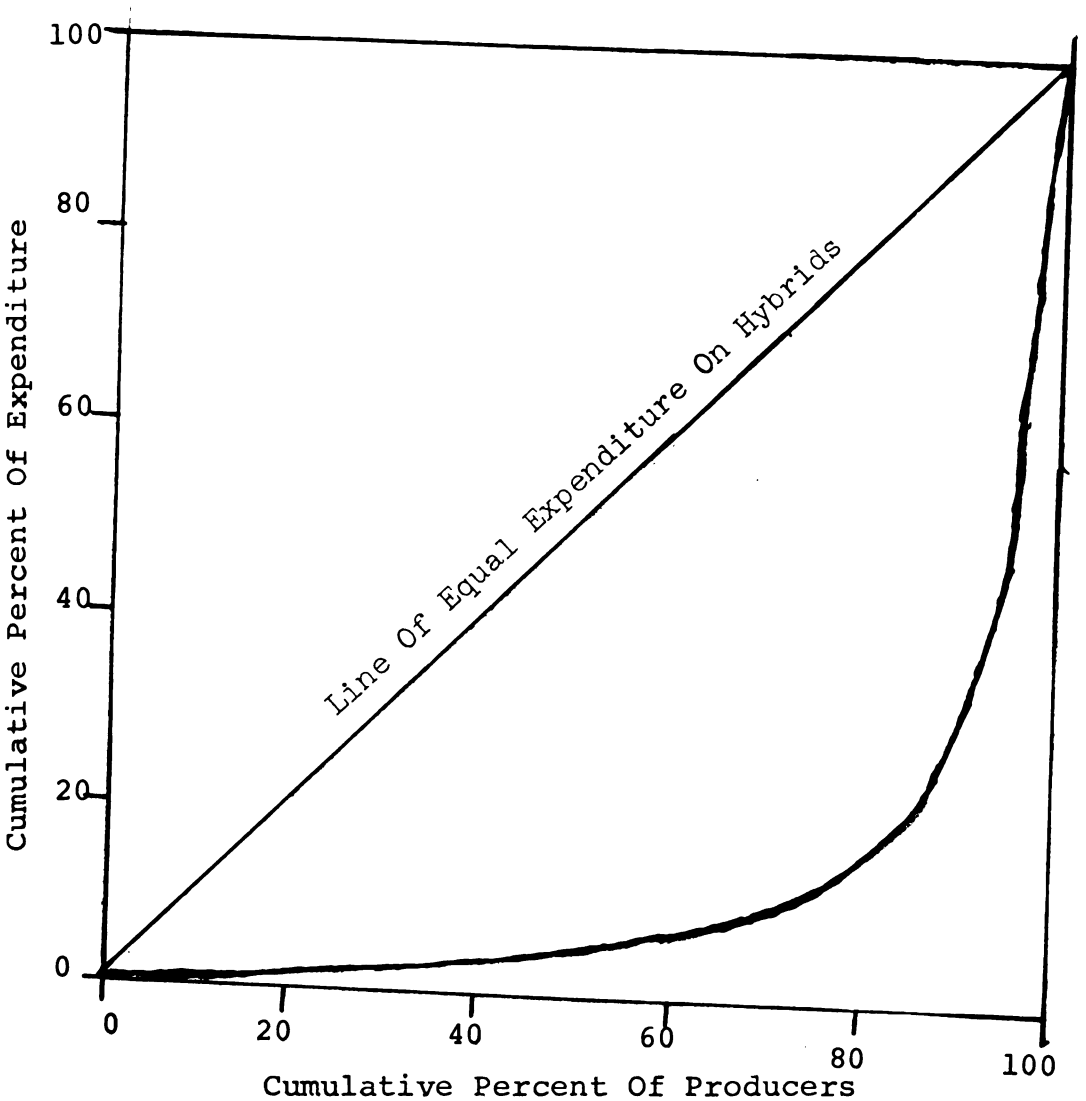

Fig. 4. Lorenz Curve Of Expenditures On Hybrids

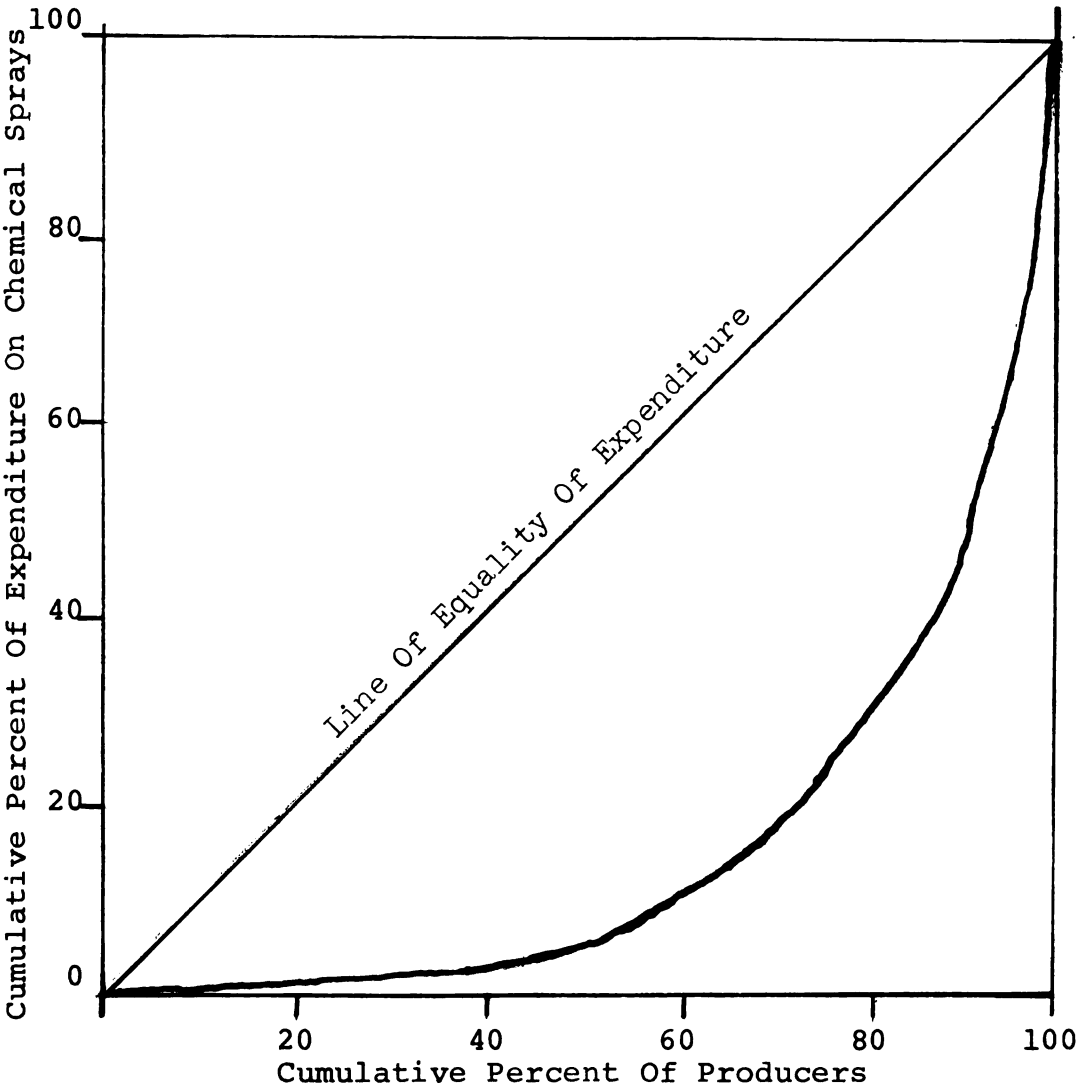

Fig. 5. Lorenz Curve Of Expenditures On Spraying Chemicals

That the distribution of cocoa holdings is an important explanation for the distribution of access to spraying chemicals is evident from the data in Table 19 and the high correlation (0.89) between size of cocoa holdings and expenditure per acre on spraying chemicals. This high correlation is due not merely to absolute increase in the expenditure on chemicals with increase in the size of holdings, but also to the greater intensity with which larger cocoa farmers use this input as against smaller farmers.

Table 19: The Relationship Between The Size Of Cocoa Holdings Of Samples Producers And Expenditure/Acre On Spraying Chemicals, Ondo Circle, Western Nigeria, 1967-1969

Average Size of Holdings	Expenditure on Spraying Chemicals
(Acres)	(Ł/Acre)
2.7	1.09
7.7	1.08
12.8	1.26
17.0	1.82
22.0	2.61
28.2	2.48
34.3	3.56
66.0	3.74

Expenditures on hybrids and spraying chemicals are also highly correlated with the number of man hours of extension services available to the producers. The data coefficients for both inputs are 0.88 and 0.94 respectively.

These high coefficients reflect the fact that in order to use these inputs profitably, cocoa farmers must be taught and advised by extension personnel. Indeed, it is the view of the producers as well as of ministry officials that an important obstacle to the widespread use of the new inputs is inadequate extension advice.

Availability of operating capital is also an important explanation for the highly unequal distribution of expenditure on hybrids and spraying chemicals. The large scale farmers, many of whom are licensed buying agents and those engaged mainly in nonfarm occupations, have greater access to sources of loanable funds such as banks and Agricultural Credit Corporation than the small farmers. Moreover, since a majority of the large cocoa farmers get income from nonfarm sources, their liquidity position is infinitely stronger than that of the small farmers who tend to get all their income from the farm. In the circumstances, irrespective of what happens to returns to cocoa production, they are more able to finance the purchase of these inputs than the small farmers.

The Distribution of Access to Extension Services

Access to extension services was determined by estimating for each sampled producer the number of man hours of extension work done on his cocoa plots in a year, on the

average.[4] Table 20 shows the distribution of extension man hours based on this estimate.

Table 20: The Distribution Of Sampled Producers By Average Yearly Extension Man Hours Spent on Cocoa Holdings, Ondo Circle, Western Nigeria, 1967-1969

Size of Holdings	Cocoa Producers			Extension Man Hours	
			Cumulative		Cumulative
(Acres)	Number	Per Cent			
0- 5	62	38.75	38.75	1.88	1.88
6-10	38	23.75	62.50	2.92	4.80
11-15	20	12.50	75.00	7.33	12.13
16-20	17	10.63	85.63	13.28	25.41
21-25	7	4.37	90.00	11.21	36.62
26-30	9	5.62	95.62	19.86	56.48
31-35	3	1.88	97.50	9.32	65.80
36-over	4	2.50	100.00	34.20	100.00

The Gini Ratio from these data is 0.86.

The information from Table 20, the Lorenz Curve in Figure 6 and the Gini ratio (0.86) lead to the conclusion that compared to hybrids and spraying chemicals, the distribution of access to extension services is more unequal. While 39% of the sample in Table 20 account for only 1.88% of the aggregate man hours of extension services on cocoa plots, the top 2.5% of the farmers account for 34% of man

[4]Since an extension agent is believed to spend at least 3 hours per visit, the number of man hours of extension was obtained by multiplying the average yearly number of visits by 3.

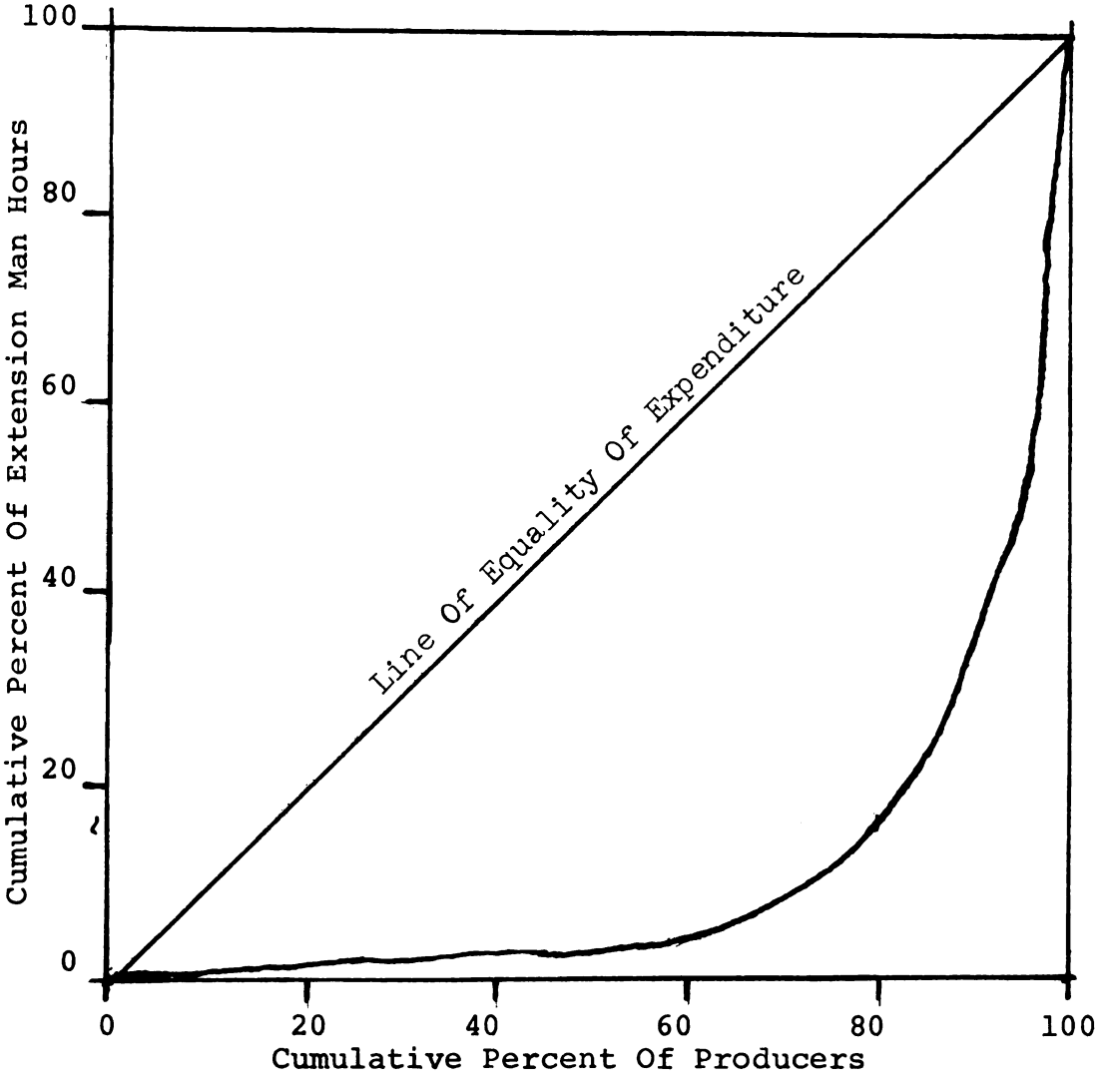

Fig. 6. Lorenz Curve Of Extension Man Hours

hours of extension services.

Several explanations are suggested for this highly unequal distribution of extension man hours among the producers.

First, it must be noted that because of lack of funds, shortage of staff and the emphasis on government directed schemes and projects, the number of agricultural assistants available for extension work on private cocoa farms is grossly inadequate. When this is combined with the relative inaccessibility of small cocoa farms in the villages because of poor roads, it is hardly surprising that of the 160 producers interviewed for this study, only 77 (48%) indicated having been visited by extension agents. About 52% of the sample, mostly within the acreage range of 0-5 acres, denied ever seeing any extension personnel. This explains why the farmers in this range account for only 1.88% of aggregate extension man hours although they make up 39% of the sample.

The emphasis on "farm leaders" who, as have been shown, (Chapter IV) are large scale farmers with political influence, is another explanation for the observed inequality in the distribution of extension services. In the ministry of Agriculture Bulletin, extension agents were directed to seek out farm leaders and concentrate extension efforts on these.[5] Among the advantages claimed for this approach are

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[5]"Background to Extension in Western Nigeria" Bulletin No. 3, Ministry of Agriculture and Natural Resources, Ibadan, Western Nigeria, p. 15, Feb., 1964.

the alleged ready acceptance of a new practice by farmers once their leaders have shown the way; the facilities offered by village leaders to extension agents, the fact that prior contact with farm leaders ensures cooperation and the fact that once a leader is won over to a new farm practice, he will ensure the continuation of this practice even when the extension officials are no longer present.

Closely related to the strategy of seeking out farm leaders is the strategy of seeking out "progressive" farmers and concentrating extension efforts on them. Usually these "progressive" farmers have relatively large holdings, reasonable access to sources of funds, and greater demand for extension services because they use spraying chemicals and other inputs more intensively. Moreover, the "progressive" farmers tend to live in urban areas and near the divisional headquarters of the Ministry of Agriculture and Natural Resources. Because they are generally literate, a high proportion of them get most of their income from nonfarm jobs such as teaching and trading. The strategy is defended on the ground that optimum use of scarce extension resources necessitates the concentration of these on farmers who can use them most productively. However, apart from the purely farm management reason above, one other consideration predisposes the extension agents to concentrate on "progressive" farmers. Cocoa plots belonging to "progressive" farmers are also show pieces to be displayed before visiting foreign experts and high ranking government officials as evidence of successful extension work.

There are, however, several reasons why caution is advisable in drawing conclusions regarding the role of new technology in the unequal distribution of cocoa earnings. In the first place, the primacy of land as a factor of production is still unchallenged in the cocoa growing areas. Secondly, despite heavy government subsidies, the use of fertilizer, an input with great productivity potential, is confined to very few large scale farmers. In fact, only 16 people (10% of the sample) said they applied fertilizer on their farms. The excuses for lack of widespread fertilizer use include the high cost, the inability of extension agents ignorant of Agronomy to give reliable advice, the disincentive pricing, and the belief that so long as black pod disease can be controlled by spraying, it does not matter whether fertilizer is used or not. Thirdly, even the quality of extension advice is relatively poor because of the low motivation and technical qualifications of the extension agents who deal directly with cocoa farmers and the weak link between the extension division of the Ministry of Agriculture and the Cocoa REsearch Institute. Most of the extension personnel working directly with the cocoa farmers attain a level of education rarely higher than the junior high school. As such, they lack the knowledge of the basic sciences essential to intelligent extension advice. Besides, according to the study conducted for the Consortium for the Study of Nigerian

Rural Development,[6] only 30% of the extension staff in Western Nigeria had received formal agricultural training, which, however, often stresses technical rather than economic aspects of agriculture. Even among those with formal agricultural training, the study observes a tendency to perceive their duties as administrative and supervisory. In an earlier related study,[7] the following were noted as obstacles to productive extension service: (a) staff insecurity; (b) lack of feedback from farmers to extension agents, and (c) an attitude of mind which regards the farmers as resistant to change without trying to appreciate or understand the economic, technical and socio-psychological problems inherent in the adoption of innovations.

Finally, despite the efforts of the scientists in the Cocoa Research Institute, the conquest of black pod and capsid diseases is far from complete. Still, the differential access to new inputs is a variable whose impact on the distribution of cocoa earnings must not be overlooked. This is because this impact is likely to assume greater proportions (a) if the CSNRD recommendations are implemented; (b) if black pod and capsid diseases are brought under control; and (c) if more favorable price policy encourages widespread use of new inputs.

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[6] David W. Kidd, "Factors Affecting Farmers' Response to Extension in Western Nigeria," CSNRD-30 (East Lansing, 1968) pp. 34-35.

[7] J. M. Kincaid, Jr., R. O. Butler, David W. Kidd, "Extension Priorities: A Critical Analysis of Selected Extension Questions and Issues for Nigeria," CSNRD-11 (East Lansing, 1968) pp. 75-76.

Unequal Access to Sources of Loanable Funds as a Factor in the Unequal Distribution of Cocoa Earnings

Increasingly, profits and income in the industry whether as a buyer or a cocoa producer, depend upon the availability of funds at the proper time and in reasonably adequate amount. Among the reasons for the high premium placed on availability of funds are the increasing importance of hired labor, the need for capital to buy or rent land, and the need for capital to purchase new inputs such as spraying chemicals, hybrids and implements for harvesting and processing cocoa. One reason for the inability of the small cocoa farmers to make much use of new seeds or expand their holdings is that they generally have little access to the formal sources of loanable funds--the commercial banks, the Agricultural Credit Corporation and the cooperatives. In consequence, these small farmers either have to go without loans or resort to the informal sources--the money lenders, the buying agents, relatives and individual savings which are hardly adequate. In contrast, the large-scale farmers have access to commercial banks if they are licensed buying agents or traditional rulers. Loans from the Agricultural Credit Corporation are also heavily weighted in favor of large farmers.[8]

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[8]This situation is not peculiar to Nigeria. In Chile, Nisbet reports that the greater the wealth, capital, and income of farm proprietors, the greater the likelihood of their borrowing from institutional credit sources. C. T. Nisbet, "The Relationship Between Institutional and Informal Credit Markets in Rural Chile," Land Economics, May 1969, p. 162-74.

Why the Small Farmers Have Little Access to Formal Credit Institutions

The first point to emphasize in connection with the credit issue is that the supply of funds from the formal institutions to agriculture in general is very small. In Western Nigeria, the section of the country with the highest concentration of the banking system, it is estimated that one branch bank serves about 201,539 persons or 590 square miles.[9] Besides, despite the fact that the Western State has over 85% of the population in the rural areas, almost all the banks are located in urban areas and divisional headquarters where they concentrate on services to nonfarm businesses and a few cocoa producers who often happen to be licensed buying agents. Nor is the situation better with respect to the Agricultural Credit Corporation, an institution created to cater exclusively for the credit needs of agriculture. Not only are its branch offices located in urban areas like those of the banks, but, it is so short of funds that between 1967 and 1969, the institution could advance credit to no more than 900 farmers in Ondo Circle, where there are over a half a million farmers in need of loans. The table below shows that apart from the cooperatives, most of the producers interviewed for this

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[9]Michael D. Toluhi, "The Role of Savings Banks in the Mobilization of Domestic Savings in Nigeria," The Nigerian Journal of Economic and Social Studies, Vol. 8, No. 2, July, 1966, pp. 209-219.

study get loans from informal sources which are regarded as the most important by 65% of the sample. This contrasts with the bank and the Agricultural Credit Corporation, either of which is regarded as the most important source by only 5% of the sample.

Table 21: Percent of Sampled Producers Indicating Their Single Most Important Source of Funds, Ondo Circle, Western Nigeria, 1970

Source of Funds	Producers	
	Number	Per Cent
Commercial Banks	8	5.00
Cooperative Association	39	24.38
Agricultural Credit Corporation	8	5.00
Buying Agents	51	32.00
Money Lenders	17	10.62
Relatives/Individual Savings	37	23.00

Compared to competitors from urban areas and large cocoa farms, the small producer faces several problems in his search for loans from the formal institutions. Whereas the former has acceptable security in the form of buildings or plots in urban areas, the small producer has only his farm house and cocoa plots to which, in most cases, he has no title deed.[10] In fact, the inability of the small producer to secure valid title deed was the main reason given

[10]Possession of title deeds recognized by the law courts is the only way of avoiding costly disputes and litigation regarding the ownership of land on which cocoa is grown.

by Agricultural Credit Corporation officials for their failure to make long term or medium term loans to most producers. It also explains why the average size of cocoa holdings of producers granted loans by this institution in Akure and Ondo is 25 acres whereas the average sizes of holdings in these divisions are 10 and 12 acres respectively. Unlike the urban businessman or produce buyer, the small producer usually lives in the village and, as such, is not personally known to the managers of the banks or other formal institutions. Given the small size of his loans, administrative costs are high. Besides, he is associated in the minds of most managers with inefficiency and diversion of loans to unproductive uses such as marriages or funerals. Even when he is finally considered for loans, he must undergo lengthy and vexatious[11] administrative details which he sometimes tries to circumvent by bribing the officials in government credit institutions. Further, despite the military regime, the idea persists among the small cocoa producers that without political influence, it is futile to expect loans from the Agricultural Credit Corporation.

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[11]The excessively time-consuming and rigid bureaucratic procedures for dealing with loan applications have been rightly criticised in one of the studies conducted for the Consortium. According to the authors, these procedures account, in some instances, for a lag of two years between the time loan applications are received and the time loans are given out to farmers! (See Ted Jones, et al., "A Proposed Agricultural Credit Program for Nigeria," CSNRD-4, (East Lansing, 1966), p. 25.)

Although about 24% of the sample (Table 21) regard the cooperatives as their single most important source of funds, the effectiveness of this institution from the viewpoint of the small producers is limited by several factors. By relating the size of loans to the value of produce marketed through the cooperatives in such a way that the proportion of loans to sales increases with the size of sales, the larger producers are automatically favored. Secondly, all the loans made by the twenty primary societies visited during the field work for this study are on short term (a year). They cannot, therefore, be used for long term improvements. Third, the size of loans is very small. The average for the societies visited is ₵6.5--too small to make any significant impact on output or earning capacity of the recipients. Further, in order to ensure that loans are used for the purpose of improving cocoa production, most cooperatives make loans in the form of spraying chemicals. Thus a member who is looking for funds to hire labor or purchase new seeds or processing equipment has to look elsewhere. Compared to banks or Agricultural Credit Corporation, interest rates on cooperative loans which averaged 15%[12], are relatively high.

Given their relative inaccessibility to the formal institutions, small farmers are heavily dependent on buying agents, money lenders, relatives or their own savings.

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[12]The Commercial bank rate was 8.5% while that of the Agricultural Credit Corporation was 7.5% for short-term.

This is evident from Table 22 which shows that producers in the acreage range 0-5 and 6-10 acres, (who number 100 out of a total of 160) virtually have no access to either the commercial banks or the Agricultural Credit Corporation. While none of them regard the banks as their most important source of funds and only two get loans mainly from the Agricultural Credit Corporation, over 48 and 29% respectively regard the licensed buying agents as their most important source. For the same two groups, money lenders are important source as indicated by 16% and 13% respectively. The remaining proportion of farmers in these groups depend heavily on family or their own savings. On the whole, therefore, 82% and 65% of the two groups of small producers get loans mainly outside the formal channels.

The heavy dependence on the licensed agents and money lenders is due to the complete absence of red tape and delay in lending to farmers and the fact that the licensed agents use loans as a means of attracting customers and enlarging their share of sales to the marketing board. In contrast to dealing with the commercial banks, the borrower from the licensed agent or money lender is not required to produce foolproof title deeds or security. Though the interest rates are reportedly considerably higher than those prevailing in the formal channels, payments are conveniently arranged to coincide with the sale of produce. Consequently the borrower is in a better position to pay back the loans. Still, the small producers are not pleased with their heavy

dependence on these two sources partly because of the high interest rate, partly because the size of loan is usually small and the duration short and partly because ruthless measures such as foreclosure may be taken against defaulters by money lenders.[13]

Table 22: Percentage of Sampled Producers Indicating Their Single Most Important Source Of Funds By Size Of Cocoa Holdings, Ondo Circle, Western Nigeria,1970

Size of Holdings	Producers	Source of Funds					
		Commercial Banks	Agric.Credit Corporation	Cooperative Association	Buying Agent	Money Lender	Relative or Individual Savings
(Acres)	Number	Per Cent					
0- 5	62	-	1.67	16.00	48.39	16.00	17.90
6-10	38	-	2.64	28.95	29.95	13.15	26.31
11-15	20	5.00	5.00	30.00	25.00	-	35.00
16-20	17	5.88	11.76	29.41	17.64	11.76	23.54
21-25	7	14.29	14.29	42.84	14.29	-	14.29
26-30	9	11.11	22.22	33.33	11.11	-	22.22
31-35	3	33.33	-	33.33	-	-	33.33
36-over	4	75.00	25.00	-	-	-	-

[13] In practice, the borrower can default and has been accused of defaulting on loans by simply selling his cocoa to another buyer. Many licensed agents interviewed during the field investigation reported losing large sums of money in this way.

Foreclosure of a farmer's cocoa plot usually leads to litigation and involves the defaulter in expenses several times larger than the original amount.

The Marketing Board as a Factor in the Unequal Distribution of Cocoa Earnings

While it is reasonably easy to determine the effects of marketing board policies on the distribution of cocoa earnings between the producers as a group and the Government, (Chapter III) it is much more difficult to pin point the effects of these policies on the distribution of earnings among the producers and buyers themselves. In particular, it is not at all clear, for many reasons, whether or not the inequality of cocoa earnings within agriculture has been increased as a consequence of the establishment of the board.

Empirical Problems in Determining the Effects of Marketing Board's Policies on the Distribution of Cocoa Earnings Within Agriculture

First, there are no data on the distribution of cocoa earnings among producers and buyers in the years prior to the establishment of the Board. A comparison of the data from this study with what data existed before the operation of the board, is therefore, not possible.

Even if such data were to exist and a comparison were to be made, it would hardly constitute unambiguous proof regarding the effects of marketing board policy, given the possibility that since 1947, structural and technological changes have taken place in the Nigerian economy which might affect income distribution and operate independently of marketing board policies.

Nor can any firm conclusions be drawn one way or the other on a priori grounds. Even though it might be argued that the monopoly/monopsony position of the board and the role of the licensed agents tend to increase concentration of earnings, several counter arguments could be advanced. It could be contended that in much of Latin America and South East Asia where marketing boards do not exist, inequalities of agricultural earnings are no less than that in the cocoa industry of Western Nigeria. Unequal distribution of access to land, capital and new technology which causes unequal distribution of agricultural incomes would still exist in the absence of the marketing board. It is possible, moreover, that if the cocoa producers were to be allowed the full (f.o.b.) prices for their products, greater incentives would have been provided for private business to establish cocoa plantations--a situation which, while increasing export earnings, might have increased the concentration as well as the level of such earnings. With respect to the distribution of earnings among the licensed agents, there is no theoretical basis for presuming that the existence of the board has increased inequality of their earnings. On the contrary, the logic of economic theory would lead to the temptation to conclude that the existence of the board, by considerably increasing the number of cocoa buyers and causing the withdrawal of such companies as John Holt, G. B. Olivant and UAC from the produce trade,

tends to reduce the concentration of earnings among the LBAs.[14]

For all these reasons, the approach in this study is not aimed at establishing whether or not the existence of the marketing board has increased inequality of cocoa earnings among the producers and buyers. Rather, an attempt will be made to answer the question whether the earnings of cocoa producers who also deal with the marketing board is significantly higher than the earnings of other categories of cocoa producers in Ondo Circle.

The types of cocoa producers whose earnings are compared with that of the producer who is also a licensed buying agent are the full time cocoa farmer who has no other job apart from cocoa growing and the raising of a few crops for food, producers engaged mainly as tradesmen, and those who get a higher proportion of their earnings from such non-farm profession as teaching.

From the data presented in Table 23, it is clear that of all the types of cocoa producers, the licensed buying agents get the largest share not only of earnings from cocoa sales, but also from all other sources. Though they make up only 14% of the sample, their share of the earnings are 38.6% and 45.98% respectively.

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[14]Since 1947, the number of LBAs has increased by over 200%. Many LBAs who have been in the cocoa trade since the Second World War sharply criticize this "proliferation" of LBAs and regard it as a major cause of "low" profit margins in the industry.

Table 23: The Distribution of Earnings From Cocoa Sales And From All Sources By Type Of Cocoa Producers, Ondo Circle, Western Nigeria, 1967-1969

Types	Cocoa Producers		Earnings			
			Cocoa Sales		All Sources	
	Number	Per cent	₦	Per cent	₦	Per cent
Full Time Farmers	100	62.50	12000	26.32	12000	13.79
Licensed Buying Agents	23	14.37	17600	38.60	40000	45.98
Traders	19	11.88	6000	13.15	15000	17.25
Nonfarm Professionals	18	11.25	10000	21.93	20000	22.98

The picture becomes clearer when the averages of both the earnings from cocoa sales and the earnings from all other sources are compared as in Table 24 below. The information on this table leaves no doubt as to the performance of those producers who are also licensed buying agents.

Table 24: The Distribution Average Earnings From Cocoa Sales And From All Sources By Type Of Producers, Ondo Circle, Western Nigeria, 1967-1969

Type of Producers	Average Earnings	
	Cocoa Sales	All Sources
	₦	₦
Full Time Farmers	120	120
Licensed Buying Agents	765	1739
Tradesmen	316	789
Nonfarm Professional	555	1111

Their average earnings from cocoa sales is ₵765. This is over six times the earnings of the full time farmer, over twice that of the tradesmen and one and a half times that of the nonfarm professional. When account is taken of earnings from all sources, the performance of the LBAs is even more dramatic. Their average earnings of ₵1739 is over 14 times that of the full time farmer. It seems reasonable therefore, to suggest that the existence of the marketing board is a factor in increasing the share of cocoa earnings which goes to those producers who also buy produce for the board.

The Role of Nonfarm Professionals in the Unequal Distribution of Cocoa Earnings

Among the cocoa farmers, a widely held view is that the benefits of cocoa production go mainly to people who do not spend an appreciably significant proportion of their time as cocoa farmers. These people include lawyers, civil servants and teachers thought to invest in cocoa production for the following reasons: (a) to provide supplementary income; (b) to derive status and prestige associated with ownership of cocoa farms; (c) to provide employment for relatives, and (d) to make use of their own share of family land which would otherwise revert to the village chief or be occupied by other people. Because of their influence in the society and in government and because of their command over capital, they are considered much more able to take

advantage of new technology than those farmers who spend most of their time in the cocoa industry.

According to the data on the survey, 11% of the sample consider themselves nonfarm professionals. Their share of earnings from cocoa sales is 22% and their average earning is ₦555. Compared to the share and average earnings of the LBAs (38.6% and ₦765) the influence of nonfarm professionals is not dominant. But their share and average earnings by far exceed those of the small marginal producers who make up 62.5% of the sample. Hence the uneasiness of this class of producers is understandable. Nevertheless, there are several reasons for doubting the possibility of the nonfarm professionals "taking over" the cocoa industry. Not only is investment in education and building construction more lucrative but, also, many of these professionals are finding openings for their capital in the nonfarm sector where they invest on transportation, real estate and small scale industry. Unlike the situation in the U. S. and Western Europe where agriculture receives favoured treatment by way of tax concessions, cocoa production is subjected to various taxes which drastically reduce earnings and incentives in Nigeria.

CHAPTER VI

EFFECTS OF A LESS UNEQUAL EARNINGS DISTRIBUTION ON FOOD EXPENDITURES

This chapter deals with three related issues. The first is a brief critical discussion of official attitude and the views of some well known economists regarding the interrelationship between income distribution, effective demand and agricultural development in the less developed countries. The second is the relationship between the present distribution of earnings and the food expenditures of the LBAs and the producers, and the third is the impact of three alternative distributions of cash earnings on food expenditures.

The Interrelationship Between Income Distribution, Effective Demand and Agricultural Development

Since the publication of Engel's study showing an inverse relationship between the level of disposable income and proportion of income spent on food, most economists have agreed that more equal distributions of income have considerable potential for increasing aggregate expenditures on food and other items consumed mainly by the relatively poor. Among farmers capable of producing their own food, this may also imply production of more food. J. M. Keynes, using the

concept of the marginal propensity to consume,[1] suggested, among other measures, more equal distributions of incomes to increase aggregate demand and employment in the advanced industrial economies. Hansen,[2] writing in a period of declining population growth in the industrial countries, and unable to foresee the tremendous technological advance which is now taken for granted, urged that stagnation be averted by raising the consumption function through a more equitable distribution of income. Further, among development economists, there is little disagreement regarding the relatively high income demand elasticities characteristic of the poor in the less developed countries. This implies that measures which not only raise the GNP in these countries but also distribute it more equitably are capable of generating considerable increase in effective demand. Yet, planners and policy makers in the LDCs have displayed little awareness of the dynamic interrelationship which exists between income distribution, the demand for food and urban consumer goods, the production of food and the process of agricultural development. While the lack of data on income distribution may be a possible explanation, it is suggested that other considerations are more important.

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[1] John M. Keynes, The General Theory of Employment, Interest and Money (New York, 1936).

[2] A. H. Hansen, "Economic Progress and Declining Population Growth," American Economic Review, Vol. XXIX, No. 1, Part 1, March, 1939, pp. 1-15.

The dominance of the South East Asian "model," with its corollary of food shortage due to population explosion, fosters the belief that the problem of agricultural development is the problem of producing more food and reducing the growth rate of the population. Once the supply problem is solved, so the argument runs, demand will automatically be equated with supply. Whether or not this equation of demand with supply takes place at remunerative prices does not appear to have been seriously considered by the protagonists of the model because they were mainly concerned with the problem of increasing food production to satisfy the demand of a rapidly growing population. But this model does not apply to some African countries such as Nigeria where the race between food supply and population growth is not as close as in South East Asian countries.

Secondly, the role of agriculture as a source of capital and cheap food for the urban areas probably contributes to the policy makers' relative unawareness of the dynamic interraction between income distribution and economic development. Because of the emphasis on this role, agricultural incomes are transferred to the urban sector through various devices, leaving the purchasing power of agriculture low. At the same time, some governments have displayed a tendency to favor the concentration of resource ownership since it is considered administratively easier to mobilize capital from a few large estates than from a multiplicity of small proprietors. The consequence of

these two policies is often a considerable dampening down of demand for both agricultural and industrial goods -- a circumstance which can be hypothesized to weaken the linkage between agriculture and the rest of the economy.

Third, there were several influential economists, who, while in fundamental agreement with the Keynesian economic model, yet questioned the relevance of this model to an underdeveloped economy.[3] According to these economists, a more even distribution of incomes in the LDCs is unlikely to have the dynamic effect based on the Keynesian multiplier model because of the following reasons: (a) the heavily subsistence character of an underdeveloped country which implies that increased incomes to the lower income group will not be spent on food purchase; (b) the belief that the demand for agricultural products has been saturated in many LDCs; (c) the belief that the supply function of an underdeveloped agriculture is so inelastic as to prevent expansion of output even if demand were to increase as a consequence of a more equal income, and (d) the alleged perverse reaction of peasant families who would rather curtail output than expand it in the face of rising demand and prices. For all these

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[3](a) Negreponti-Delivanis: "Income Distribution in Underdeveloped Countries", Part II of the Distribution of National Income, J. Marchel and Ducnos, Editors.

(b) V. K. Roa, "Investment, Income and Multiplier in an Underdeveloped Economy," The Economics of Underdevelopment, Agawala and Singh, Editors, (Oxford University Press) pp. 205-218.

reasons, Negroponti-Delivanis asserts that "the first need of the underdeveloped countries is for structural changes to eliminate the factors which impede all progress and prevent the multiplier from coming into play. A change in income distribution takes second place."[4]

The reasons given above are largely unsupported by empirical evidence. Farmers in the export sector are often considerably dependent on the market for food as the case of the cocoa producers illustrates. It is not true that in underdeveloped economies, demand for food is saturated unless one assumes zero growth rates in GNP and population. In most of these countries, the income demand elasticities for protective foods such as milk, meat, fruit, and fish are well above unitary.[5] Even if the income elasticities were less than one, food demand would still increase appreciably if there were growth and redistribution of income. As for the picture of a peasant farmer as one incapable of response to high prices and demand, numerous studies in Asia and Africa have exposed its complete falsity.[6]

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[4] Ibid.

[5] T. Thomas Poleman, "The Food Economies of Urban Middle Africa: The Case of Ghana," Food Research Institute Studies, Vol. 11, May, 1961, pp. 143 and 154.

[6] J. R. Berhman, Supply Response in Underdeveloped Agriculture, Contribution to Economics Analysis, No. 55 (North Holland Publishing Co., Amsterdam). This book contains a large number of references to studies the findings of which lend strong support to the hypothesis of positive price response by farmers in underdeveloped areas.

In recent years several influential economists have shown an appreciable awareness of the interrelationship between more equitable income distribution and effective demand. The dramatic increase in food production under the impact of technology in Asian countries, the problems posed for the marketing and distribution of the increased food, the observed coexistence of malnutrition and hunger with self-sufficiency in food production in a number of developing countries, and the narrowness of domestic markets due to lack of effective demand for consumer goods all point to income redistribution as an essential strategy of stimulating agricultural as well as industrial development of the LDCs.

One of the most explicit and detailed treatments of the issue is a paper[7] read by Professor Glenn Johnson before nutrition experts at San Juan, Puerto Rico. Stressing that the world food and malnutrition crisis is both a supply and demand problem and that the mere attainment of self-sufficiency in food production does not guarantee elimination of malnutrition and hunger, Johnson places great weight on income redistribution as a key policy variable in the fight against hunger. The experience of the advanced industrial countries, he argues, points to the fact that, properly conceived and implemented, income redistribution not only can raise food demand, it can

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[7]Glenn L. Johnson, "Food Supply, Agricultural and Economic Development," Proceeding of Western Hemisphere Nutrition Congress, Chicago, 1969, pp. 51-57.

also lead to remunerative prices which will increase the output as well as the income of farm people. The cumulative effects are increased employment and growth in national income.

In a similar vein, Eicher[8] points out that expanding the rate of agricultural production above the rate of population growth is unlikely to stimulate economic growth because lack of effective demand causes expanded agricultural output to be sold at depressed prices. To overcome the bottleneck of inadequate effective demand, he suggests that income redistribution be regarded as a key component in agricultural planning.

Professor Witt shows an awareness not merely of the uneven distribution of the benefits of Pakistan's "Green Revolution" but, more important, of the need to broaden the base of distribution so as to raise the consumption function for food and national manufactures.[9]

The Relationship Between the Distribution of Earnings and Food Expenditures

This section shows: (1) the relationship of existing pattern of cash earnings with cash expenditures for food;

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[8]Carl Eicher, "Production is Not Sacred," Ceres, FAO Review, Vol. 2, May-June, 1969.

[9]Lawrence Witt, "Relative Price Structure for Food Grains", A Report submitted to the Government of Pakistan under the auspices of the Ford Foundation (Annex 11), August, 1969.

(2) the relationship of "total earnings" with total food expenditures[10]; (3) the degree of self-sufficiency in food consumption and how it is related to cash earnings, and (4) the degree of localization of cash expenditures and how it is related to cash earnings.

Computation of Food Expenditures

In estimating the total food expenditures of each selected producer and LBA, the household was taken as the consumption unit and the number of people wholly dependent on the producer and the LBA (including the respondents) was taken as the size of the consumption unit. From this number, the following were excluded: (a) children in a boarding school;[11] (b) wives who lived in other villages and supported themselves by trading or farming; (c) relatives who were not permanently resident in the household, and (d) hired labor. Each of the producers or buyers was asked how much he spent each week buying food from the market. The weekly expenditure

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[10]"Total earnings" in this context are the sum of cash earnings and the imputed value of household production. Under Nigerian conditions where a large percentage of a farmer's products are not marketed and transformed into cash, "total earnings" as defined is less than total income.

[11]The exclusion of children in boarding schools can be defended on two grounds: (a) most parents do not know what proportion of the lump sum paid as school fees goes for their children's meals; (b) even if they were to know it would not be reasonable to regard such expenditure as a function of income since school and boarding fees, fixed by the school authorities, apply to all parents irrespective of the level of earnings. The expenditure on food for hired labour was excluded because such expenditure is more appropriately regarded as business expense.

was extrapolated to yearly expenditure. It should be pointed out that the food expenditures recorded in this study do not include expenditures on drinks since, in most cases, drinks for the LBAs and large farmers are used to smooth the path of business and its expenditures should be regarded as business expense. Similarly, expenditure on food during the various ceremonies are excluded for the simple reason that they are not related to earnings but are dictated by custom.

Further questions were asked regarding how much the producers or LBAs would have paid for the food which is produced within the household if they were to buy it from the market. From the answers given, the proportion of total food produced in the household was obtained by the use of the expression $\frac{[fh.\ 100]}{[fh + fm]}$ (where fh = food produced in the household; fm = food purchased from the market).

Finally they were asked what fraction of their total cash expenditures on food went for food produced outside their own divisions.

Undoubtedly, the food expenditure data obtained as described above have several limitations.

The most important limitation, in our view, is that the expenditures relate to total food rather than categories of food. Owing to the limitation of funds and the problems of making detailed analysis of the food expenditures of cocoa producers and buyers within the time allocated for the field research, it was not possible to disaggregate further.

A second limitation is that information obtained on income-food expenditure relationship from questionnaires dependent on recall is inferior to that gathered on a day-to-day basis by field assistants residing for a reasonably long period in the villages. While the latter technique is obviously preferable, time and financial limitations prevented it from being adopted.

Third, the earnings used in the study include taxes. Because of the difficulties of getting data on the taxes[12] paid by each selected LBA or producer, earnings less tax could not be obtained. The resulting relationship must be looked at with this in mind although allowance for taxes would not greatly change the observed expenditure pattern and earnings—expenditure relationship.

Fourth, the exclusion from the consumption unit of children in boarding schools tends to reduce the food expenditure of large scale farmers and LBAs who, as a rule, have many children and relatives in universities and boarding schools.

Bias is also introduced by the fact that in stating their own weekly cash expenditures on food, those interviewed usually ignored the cash food expenditures of housewives permanently resident in the households. In the cocoa growing

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[12]In view of the tax riots, the memory of which was still fresh during the period of this study, the researcher was strongly advised against ruining any chances of cooperation by including questions about taxes.

areas, information from the current probes [13] as well as conversation with many students and colleagues indicate that housewives shoulder a considerable burden of cash food expenditures. If appropriate allowance had been made for this fact, cash food expenditures would have represented a larger percentage of total earnings than the following tables show. Still, these data are in reasonable accord with the predictions of economic theory.

1. The Relationship between Cash Earnings and Cash Expenditures. -- From the data in Tables 25 and 26, it is clear that the cash earnings-cash expenditures of both the LBAs and the producers conform with the predictions of Engel's Law. In both tables absolute cash expenditures on food rise with the level of cash earnings while relative expenditures sharply decline with increased cash earnings.

2. "Total Earnings" -- Total Food Expenditure Relationship. -- This also conforms well with the predictions of economic theory. In both tables absolute total food expenditures (cash and value of household production) rise with the level of earnings while relative expenditures decline. In this case, however, food expenditures are a larger percentage of earnings than in the case of cash

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[13] Witnesses during the various probes of the assets of public officers were unanimous in claiming that wives were mainly responsible for food expenses which enabled their husbands to accumulate savings out of proportion with their earnings. While the stories at the probes may, on the whole, be taken with a grain of salt, they point unmistakably to the role of housewives in financing food expenditures.

Table 25: Earnings-Food Expenditure Pattern of LBAs, Ondo Circle, Western Nigeria, 1970

Average Yearly Earnings		Average Yearly Food Expenditures			
Cash	Total	Cash		Cash and Household Production	
Ь	Ь	Ь	Per cent of cash earnings	Ь	Per cent of total earnings*
200	342.8	116.0	58.0	258.8	75.0
860	1,090.7	283.8	33.0	514.5	47.0
1,330	1,516.0	279.3	21.0	465.0	31.0
1,725	1,911.9	345.0	20.0	531.9	28.0
2,280	2,475.0	456.0	20.0	651.0	26.0
2,815	2,984.0	506.0	18.0	675.0	23.0
3,500	3,687.0	560.0	16.0	747.0	20.0
4,000	4,257.0	600.0	15.0	857.0	20.0
4,300	4,450.0	602.0	14.0	752.0	17.0
4,850	4.900.0	533.0	11.0	711.0	15.0
5,100	5,217.0	661.0	13.0	778.0	15.0
5,700	5,894.7	670.0	11.0	864.7	15.0
6,350	6,428.6	708.0	11.0	786.6	12.0
6,600	6,726.7	718.0	10.9	844.7	12.0
15,200	15,392.2	769.0	5.0	961.2	6.0

*Total Earnings here refers to total cash earnings plus the value of household production.

Table 26: Earnings-Food Expenditure Pattern of Cocoa Producers, Ondo Circle, Western Nigeria, 1970

Average Yearly Earnings		Average Yearly Food Expenditures			
Cash	Total	Cash		Cash and Household Production	
₦	₦	₦	Per cent of cash earnings	₦	Per cent of total earnings*
59	91.0	31	53	63.0	70.0
143	188.2	49	34	94.2	50.0
235	277.0	63	27	105.0	38.0
348	400.2	89	25	141.2	35.0
454	512.0	91	20	149.0	29.0
526	582.0	99	18	155.0	27.0
622	611.0	110	17	169.0	25.0
766	822.0	120	16	176.0	20.0
887	938.0	126	14	177.0	19.0
935	978.0	128	14	171.0	18.0
1,042	1,086.0	132	13	176.0	16.0
1,165	1,229.0	136	11	200.0	16.0
1,238	1,347.0	134	10	243.0	18.0
3,379	3,454.0	140	4	215.0	6.0

*Total earnings here refers to total cash earnings plus the value of household production. In the Nigerian context, it is probably less than total real income of the sample.

expenditures. In addition, the relative expenditures decline less sharply with the increase of "total" earnings.

3. The Level of Cash Earnings and the Degree of Self-Sufficiency in Food Consumption.--For the purpose of this study, the degree of self-sufficiency is defined as the percentage of total food expenditures accounted for by expenditures imputed for the food produced within the LBAs and the producers' households.

Tables 27 and 28 show this degree of self-sufficiency. As one might expect, there is an inverse relationship between

the level of cash earnings and the degree of self-sufficiency. As the level of cash earnings goes up, the degree of self-sufficiency goes down. With respect to Table 27, the LBAs in the lowest earnings bracket produce 55% of their food within the households against 20% for those in the top earnings bracket. In the case of the producers (Table 28) the decline in the proportion of food produced within the households is less sharp as can be seen from the fact that household production which accounts for 51% of total food for the producers in the lowest earnings bracket also accounts for 35% of total food for those in the highest earnings bracket. The tables indicate a surprisingly heavy dependence on food produced within the households by people in the very top earnings bracket. This is due to several factors.

According to Okurume[14], the cocoa farmers of Ife, Gbongon and Ondo are able to combine increased production of cocoa with considerable expansion of food crops such as yams and cassava which are not in direct competition with cocoa for land.

Another explanation for the relatively heavy dependence on household production was suggested to us in the course of the interviews with the LBAs and the producers. As a rule, some large scale cocoa farmers who employ hired labor grow most of the plantains, yams and cassava on which

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[14] Ibid., pp. 84-85.

Table 27: The Relationship Between The Cash Earnings Of LBAs And The Percentage Of Total Food Produced Within The Household, Ondo Circle, Western Nigeria, 1970

Average Yearly Cash Earnings	Household Production As Percentage of Total Food
₦	Per cent
200	55
860	45
1,330	40
1,725	35
2,280	30
2,815	25
3,500	25
4,000	30
4,300	20
4,850	25
5,100	15
5,700	12
6,350	10
6,600	15
1,520	20

Table 28: The Relationship Between The Cash Earnings Of Producers And The Percentage Of Food Produced Within The Household, Ondo Circle, Western Nigeria, 1970

Average Yearly Cash Earnings	Household Production As Percentage of Total Food
₦	Per cent
59	51
143	48
235	40
348	37
454	39
526	36
622	35
766	32
887	29
935	25
1,042	25
1,165	32
1,238	45
3,379	35

the hired labor subsists. By making these crops freely available to such labor, the employers keep down the level of money wages.

Thirdly, in recent years, the Ministry of Agriculture and Natural Resources has encouraged the production of maize in the off cocoa season as a means of raising farmers' income and ensuring full employment of the farmers all the year around. Given the lack of effective demand[15] and the difficulties of storage, it is reasonable to assume that a substantial proportion of this maize is used by the household--a circumstance which increases the proportion of household production in the total food basket.

Fourth, we must remember that the rural income earner has a very high propensity to spend on the education of children and the building of modern houses--an index of success as a farmer. In order to save enough cash for these projects, the practice is to cut down on food purchase by growing a substantial proportion of the food consumed so long as land is available.

Finally, for both the small and the large cocoa farmer, or buyer, a considerable dependence on household production is probably an insurance against the risk and the uncertainty inherent in cocoa business because of unpredictable price and yield fluctuations.

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[15]Kidd reports that although the maize scheme was well known and had some adopters, it encountered lack of effective demand for the product. See David W. Kidd, Factors Affecting Farmers Response to Extension in Western Nigeria, CSNRD-30.

Table 29: The Relationship Between The Cash Earnings Of Sampled LBAs And The Percentage Of Food Budget Spent On Food Produced Outside "Own" Divisions, Ondo Circle, Western Nigeria, 1970

Average Yearly Earnings	Cash Expenditure on Food From Other Divisions as Percentage of Total Cash Expenditure
£	Percent
200	24
860	32
1,330	43
1,725	47
2,280	56
2,815	73
3,500	75
4,000	80
4,300	70
4,850	78
5,100	90
5,700	75
6,300	75
6,600	80
15,200	85

Correlation Coefficient from this data is 0.70.

(4) The level of cash earnings and the degree of localization of food expenditures. -- The degree of localization of food expenditures is measured as the percentage of total cash expenditures for food brought in from the divisions other than those in which the selected farmer or buyer is permanently resident. A knowledge of this gives a broad indication regarding the effects of cocoa production and marketing on the demand for food from the non-cocoa sections

Table 30: The Relationship Between The Cash Earnings Of Cocoa Producers And The Percentage of Food Budget Spent On Food Produced Outside "Own" Division, Ondo Circle, Western Nigeria, 1970

Average Yearly Earnings	Cash Expenditure on Food From Other Divisions as Percent of Total Cash Expenditure
₦	Percent
59	28
143	33
235	42
348	35
454	49
526	39
622	62
766	50
887	76
935	75
1,042	75
1,165	75
1,238	75
3,379	86

The Correlation Coefficient is 0.87.

of Nigeria, the volume and direction of interstate and inter-division trade in foodstuffs and the transportation associated with it.

Evidence from the study shows that the higher the level of earnings, the greater the percentage of the food budget spent on the food items produced from the divisions and states other than those in which the LBAs and the producers are permanently resident. (Tables 29 and 30). The

correlation coefficients based on the data in Tables 29 and 30 are 0.70 and 0.87 respectively. Several explanations are suggested for this.

First, it is not unlikely that despite the heavy burden of extended family, the relatively rich farmers and buyers spend a high proportion of their food budget on meat, fish, chickens and rice which are brought into the cocoa areas from the Northern, Eastern and the Midwestern states, as well as from the non-cocoa areas of the Western state itself.

Second, most of the relatively rich farmers and buyers have permanent residence in the towns and the divisional headquarters to which products from various parts of the country are brought for sale. This predisposes this group to spend a high proportion of their food budget on these products in contrast to the small farmers or buyers who live in the villages or semi-urban areas and are less open to products from other parts of the country or state.

Thirdly, the fact that the larger farmers and buyers have transportation and are located near tarred roads places them in a better position to buy food from distant areas against the smaller producers who are mainly in villages largely inaccessible to most farmers.

Fourth, given a high degree of dependence even by large producers and buyers on the food produced within the household,(Tables 27 and 28), it is reasonable to suggest that when they do buy food from the market places, the

tendency is to concentrate purchase on those food items which, for various reasons, cannot be produced on the farms within their divisions.

Effects of Changes in Cash Earnings and Alternative Distributions on Food Expenditures

The purpose of this section is to demonstrate that, properly conveived and implemented, policies which make the distribution of cash earnings less uneven have considerable potential for increasing food expenditures as well as greater dependence on the market. In addition, such policies can generate considerable secondary benefits by way of increased employment and income for the non-cocoa farmers in the Western State in particular and the northern states in general. This is especially likely where aggregate earnings of the cocoa producers are increased and then more evenly distributed than at present.

Estimating the Changes in Food Expenditures

The technique used in estimating the possible effects on food expenditures of changes in earnings and of alternative distributions is that introduced by Lubel.[16] Essentially, what the technique does is to adjust the average earnings for each bracket by moving it closer to the mean earnings for the entire distribution. It is thus a technique of redistributing earnings towards the mean while leaving aggregate earnings unchanged. The procedure is as follows:

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[16] Harold Lubel, "Effects of Redistribution of Income on Consumers' Expenditures", American Economic Review, Vol. XXXVII, March, 1947, pp. 157-167.

First, both the means of the entire sample and of each bracket are calculated. For earnings brackets with means less than the sample mean, the bracket means are subtracted from the sample mean. A percentage of the difference is then added to the bracket means. For example, in this study, if the level of redistribution is 10 percent, then 10 percent of the difference is added to the bracket means. For earnings brackets with means higher than the sample mean 10 percent of the difference is subtracted from the bracket means. In this way a new distribution is obtained. To estimate the corresponding changes in food expenditure, the crucial assumption is made to the effect that, after redistribution, the average food expenditure in each earnings bracket will remain constant. Thus, if as a result of redistribution, persons in the 0-100Ƀ bracket now find themselves in the Ƀ101-Ƀ200 bracket, their average food expenditure will be the same as the expenditure of people who had been in the Ƀ101-Ƀ200 bracket before redistribution. Similarly,if those who were in the Ƀ1001-Ƀ1100 bracket are now in the Ƀ800-Ƀ900 bracket, they will spend the same average amount on food as those who, before redistribution, had been in the Ƀ800-Ƀ900 bracket.[17] This assumption, it should be obvious, ignores such variables as changes in taste and savings propensity as well as the

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[17]The numerical illustration of the technique is given in Appendix A.XIII.

ratchet and Friedman effects. In particular, the assumption of reversibility of food expenditures, which underlies the calculation, probably has the effect of underestimating the changes in food expenditures consequent on a less uneven distribution of earnings.

Three alternatives are considered. -- The first, like Lubel's, leaves aggregate earnings unchanged and merely redistributes in favor of the low earnings producers and LBAs at three levels -- 10 percent, 20 percent and 50 percent. The second alternative, on the other hand, raises aggregate producers earnings by 50 percent but involves no redistribution. In the third alternative, producers earnings are not only increased by 50 percent, but the increased earnings are also redistributed at three levels -- 10 percent, 20 percent and 50 percent.[18]

Table 31 clearly demonstrates that significant increases in food expenditures of both the LBAs and the

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[18]The CSNRD Study estimates that if Strategy 11 of its recommendations which emphasize increased prices, subsidies, new inputs, research and production campaigns were adopted, producers' earnings would rise from £29.8 million in 1970 to £55.8 million in 1985, an increase of 87 percent. (See Johnson, G.L., Scoville, O.J., Dike, G.K. and Eicher, C.L., Strategies and Recommendations for Nigerian Rural Development 1969/1985, p. 77, Table VII.2). This indicates that it is possible to achieve a 50 percent rise in producers' earnings in the 1980's given the existence of political will and output increasing measures. The LBAs are excluded from the second and third strategies because it is suggested that they be eliminated from the cocoa marketing system. (See Policy Implications, Chapter VII).

Cash earnings is the basis of our calculation because our main interest is to indicate the impact of changes in the level and distribution of cash earnings on food expenditures.

Table 31 (Alternative I): Effects of Redistributing An Unchanged Aggregate Cash Earnings On The Food Expenditures of LBAs And Producers, Ondo Circle, Western Nigeria, 1970

Levels of Redistribution	LBAs	Producers
	Percent change in food expenditure	
10% towards the mean	+13	+22
20% towards the mean	+18	+29
50% towards the mean	+48	+52

producers can be expected from redistribution of earnings towards the poor. In line with the predictions of economic theory, changes in the food expenditures of the LBAs are smaller than changes in the expenditures of the producers since the former have much higher current earnings than the latter.

However, the first alternative which underlies the calculations from which the data in Table 31 are derived, assumes no increase in aggregate earnings. This would involve a policy as negative as the current one which heavily taxes agriculture and which may not lead to increase in producers earnings in the 1980's.[19]

The Nigerian government's acceptance of the CSNRD report implies a willingness to consider changing the adverse price and tax policies. This means that it is possible to

[19] Ibid

have an increase in aggregate producers earnings in the 1980's. We therefore, turn to the second alternative -- that of raising the earnings of cocoa producers by 50 percent but doing nothing about redistribution.

Table 32 (Alternative II): Effect Of Raising Producers Cash Earnings By 50 Percent On Food Expenditure, Ondo Circle, Western Nigeria, 1970

Percent Change	
Earnings	Food Expenditure
+50	+18

Table 32 shows that if the earnings of cocoa producers were to rise by 50 percent, expenditure on food would rise, on the average, by 18 percent. It is interesting to note that this percent increase in producers food expenditures is less than the percent increase in food expenditures consequent on a 10 percent redistribution of unchanged current earnings in favor of the relatively poor (Table 31). Besides, raising producers earnings without some measure of redistribution is objectionable because this alternative would increase inequality and economic power of the relatively large producers.[20] This is especially probable if

[20]The concentration ratio computed when current producers earnings are raised by 50 percent is 0.85 as against 0.78, the ratio for unchanged current earnings.

the increased earnings is due to high prices and heavy subsidies on inputs such as chemicals, fertilizer and hybrids which, as has been shown, are very unequally distributed. Further, it is very likely that a policy which raises producer earnings by 50 percent would encourage the establishment of plantations which can only increase earnings inequality in the absence of redistributive measures. This suggests that the alternative of raising producers earnings by 50% and redistributing the increased earnings would be more appropriate.

Table 33 (Alternative III): Effects Of Raising By 50 Percent And Redistributing The Earnings Of Producers On Food Expenditure, Ondo Circle, 1970

Levels of Redistribution	Change in Food Expenditure
	Percent
10% towards mean	+35
20% towards mean	+58
50% towards mean	+86

Table 33 indicates that from the point of view of increasing effective demand for food, the third alternative is the best. A 10 percent redistribution towards the low income producers results in a 35 percent increase in food expenditure which is an increase attainable in alternative

II by a 100 percent increase in earnings and in alternative I by a more than 20 percent redistribution. A 58 percent increase in food expenditure could not be expected even if producers earnings were raised by 200 percent in alternative II. Nor would it be possible in II with a 50 percent redistribution. Yet this is what can be achieved in alternative III with a 20 percent redistribution. Besides, a rise in the food expenditure of the magnitude estimated in Table 33 could very well lead to a shift from carbohydrates to meat, milk, eggs, poultry, fish, wheat flour, beans, maize and millet produced mainly in the Northern States. Thus, in assessing this proposal, adequate weight should be given to the possibility of important secondary benefits such as increased interstate trade, increased demand for processed meat, poultry, and fish, expansion of demand for livestock and poultry feed, increased investment of processing plants, transportation, livestock and poultry production all of which might generate considerable growth in income and employment especially in the northern states.[21]

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[21] The data from a recent study indicates the magnitude of the northwest trade in foodstuffs which can be expected from increased production consequent on adoption of feasible modern production techniques in both the Western and Northern states. The linear program shows that the following quantities of foodstuffs from the northern states would enter Western Nigeria: 505 million pounds of beef; 666 million pounds of cowpeas, 77 million pounds of sorghum, and 65 million pounds of groundnuts (See Yaghoobi-Rahmatabadi, H. "The Most Efficient Production Techniques for Providing Nutrition and Income from the Agricultural Sector of Nigeria." Unpublished Ph.D. Thesis, Michigan State University, 1970, Table 12, pp. 97-99). It is our view that if allowance had been made in the program for the possibility of a less uneven distribution of earnings, a much greater volume of north-west trade would have been obtained, with all the externalities involved.

Effects of Cash Earnings Redistribution on the Degree of LBAs and Producers Self-Sufficiency in Food Production

During the field interviews for this study, the possibility was raised that if the earnings of the LBAs and producers were redistributed towards the low earnings group, we might end up increasing the degree of self-sufficiency in food production, an eventuality which, it was emphasized, might counterbalance the possible increase in food expenditures due to a less unequal distribution.

Table 34: Effects[22] Of Cash Earnings Redistribution Under Alternatives I and III On The Proportion Of Total Food Produced Within The LBAs And Producers Households, Ondo Circle, Western Nigeria, 1970

Levels of Redistribution	Change in the Proportion of Household Production		
	Alternative I		Alternative III
	LBAs	Producers	Producers
	-------- Percent		----------
10% towards the mean	-1.0	-1.5	-5.1
20% towards the mean	-1.1	-3.7	-6.7
50% towards the mean	-2.6	-6.3	-10.8

*See Tables 31 and 33.

[22] To estimate the changes in the proportion of food produced within the households as a consequence of redistribution, the assumption is made to the effect that the percentage of household production in each earnings bracket remains unchanged despite redistribution. Thus, if, as a result of redistribution, persons in the o-₦100 earnings bracket move up to the ₦101-₦200 bracket, their households account for the same proportion of total food as that of people who, prior to redistribution, had been in the ₦101-₦200 bracket. Since this assumption is similar to the one previously made when estimating the effects of redistribution on food expenditures, (Tables 31-33), it is subject to the same limitations.

The data in Table 34 indicates that far from increasing the degree of self-sufficiency in food production, redistribution may actually decrease it and lead to greater dependence on the market. Under Alternative I, which merely redistributes unchanged aggregate earnings, the three levels of redistribution result in a reduction in the percentage of total food accounted for by the LBAs and producers households. This reduction is shown to be positively related to the level of redistribution. Under Alternative III in which aggregate producers earnings is increased by 50% and then redistributed, a much greater reduction in self-sufficiency is evident. The explanations for this are not far to seek.

The view that redistribution of unchanged aggregate earnings will increase self-sufficiency in food production rests on the assumption that while the low earnings group will maintain the same level of self-sufficiency despite increased earnings made possible by redistribution, the high earnings group, who suffer a reduction of earnings as a consequence of redistribution, will be compelled to grow more food in order to reduce food expenditure. In actual fact, however, when redistribution increases the earnings of the low income groups, these people find themselves in earnings brackets where the proportion of household produced food is much smaller. Given the fact that these groups make up over 85% of the sample, the reduction in self-sufficiency accounted for by them far outweighs the possible increase due to the larger producers and LBAs who constitute about 15% of the sample.

Moreover, during the calculation, it was observed that for many LBAs and producers with earnings above the sample mean, redistribution brought zero change in the proportion of food produced within the households.

Even under dynamic conditions, there are several reasons for believing that the mere redistribution of earnings is unlikely to increase the self-sufficiency of the LBAs and producers as a whole. First, unless redistribution at the same time increases the supply of land for food crop raising, it is difficult to see how it can lead to increased self-sufficiency in food production. Second, the possibility of a shift from carbohydrates to more protein already indicated means more trade and greater dependence by cocoa producers on the market for food. Even some large farmers, whose earnings will be reduced by redistribution would be better off seeking ways to produce more cash crops in order to raise their earnings than resorting to the production of food for domestic consumption.

Finally, one must emphasize that whether or not redistribution increases self-sufficiency ultimately depends, very critically, on the character or agricultural economic policy. If, in addition to redistributing the increased cocoa earnings, the government steps up the dissemination of new technology, the quality of extension services and of transportation network into the villages where cocoa farms are located, it is unlikely that producers will shift resources into food production. On the contrary, we should

expect considerable reduction in self-sufficiency and greater dependence on food from the market (as Table 34, Alternative III illustrates). If, however, redistribution were to take the form of discriminatory taxes on larger producers, depressed cocoa prices, and be accompanied with high input prices, it is very likely that the production of cocoa would be adversely affected. But even then, the alternative is by no means increased production of food for household consumption. Rather the alternative would seem to lie in the shift to transport business or even small scale processing such as saw milling by the more financially strong larger farmers. Moreover, despite the inverse relationship between the level of earnings and the degree of self-sufficiency, it is important to point out that the degree to which cocoa producers will produce for the export market also depends on the extent to which the system of agricultural production and marketing makes available to them sufficient food of high nutrient content such as cowpeas, potatoes and soybeans grown in the savanah zones. As Professor Smith's study[23] shows, there is considerable potential for producing these foods and making them available to southern export crop farmers so that they may reduce their consumption of home grown food in favor of production for export.

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[23] V. E. Smith, "Optimal Resource Allocation for Income and Nutrition," CSNRD 11, East Lansing, June, 1969, pp. 7-8.

Summary and Conclusions

Despite the widespread recognition of the role of income distribution in increasing aggregate demand, economists and planners in the LDCs have, for many reasons, paid scant attention to the dynamic interrelationship between income distribution, effective demand and agricultural development. In recent years, influential economists from the advanced industrial democracies, who are involved in planning agricultural development of the LDCs, have emphasized the significance of this relationship and urged that income redistribution be included in the strategy of agricultural and economic development. That redistribution has great potential for increasing food expenditure in the LDCs is supported by the findings of this study. Further, the findings indicate that in order to get maximum effect, it is essential to combine redistribution with policies which raise aggregate farm incomes. The findings also cast doubt on the presumption that redistribution will increase self-sufficiency in food production and negate the dynamic effects of increased food expenditures. Far from increasing self-sufficiency, the study shows that redistribution is likely to lead to greater dependence on the market, especially if it is combined with policies which raise aggregate farmers' earnings. Also, there is a strong possibility that redistribution leads to a shift in consumption pattern which might produce secondary benefits such as the production of more food in the

non-cocoa areas, increased inter and intra state trade, increased investment in meat processing and increased employment and income in both the Western state and other parts of Northern Nigeria.

CHAPTER VII

POLICY IMPLICATIONS

The Case for making the Distribution of Earnings Less Unequal

The findings from this study regarding the distribution of earnings among the cocoa producers and buyers in Western Nigeria, the economic, technological and institutional factors which are strongly associated with the distribution of such earnings and the consequences on food demand of less unequal distribution of cash earnings raise questions regarding what strategies should be adopted to deal with the problems involved. It is, of course, possible to reply that policy makers should ignore the problems and concentrate on measures to increase the productive capacity of the economy because reducing earnings inequality is a luxury which only the advanced industrial economies can afford. It can, moreover, be pointed out that redistributive policy is unlikely to succeed, given the current political and organizational weakness of the small producers and the fact that the large scale farmers and bureaucrats who mainly benefit from current projects such as rehabilitation, farm settlements, plantations, extension organization, are unlikely to support a redistributive policy especially if it should entail a reduction of expenditures on these projects. Last but not least is the

expected resistance from powerful groups who stand to benefit from current organizational and pricing policies of the marketing board. However, the policy suggestions which follow are grounded on the belief that, for a number of reasons, redistributive policies cannot and will not be entirely ignored in the Western Nigerian rural development planning. Further, it is our view that the political problems involved can clearly be overcome.

That measures to reduce inequality will not be entirely neglected by the Western State authorities is demonstrated by the government's commitment, in accepting the Ayoola Commission Report,[1] to raising the income of the less-privileged farmers -- a policy declaration which was soon followed by practical demonstration in the abolition of the poll tax notorious for its regressivity on the low income peasants.

Secondly, it seems reasonable to credit policy-makers in Nigeria with the recognition that compared to the cost of grappling with redistributive problems in this decade, the cost of ignoring it may be many times greater. For it is most certain that if the present trend continues, concentration of earnings will increase and, with it, the concentration of the attendant educational and political opportunities and influence. Even now, there are reasons for believing that the current large-scale unemployment among school-leavers, about which so much has been written, affects primarily the children

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[1] The Report of the Sole Commission on Farmer's Tax Riots, Ibadan, 1969.

of the small and poor producers. The large-scale farmers and LBAs on the other hand, by their ability to see their children and relatives through university education, virtually guarantee to them not only lucrative employment in the civil service, the corporations, and the professions, but also political leadership and control of the state. Continuation of the current trend, moreover, is likely to foster polarisation and the existence in much of the cocoa belt of "two nations,"[2] one consisting of the families of the rich, the educated, and the leaders and the other made up of the masses of poor, ignorant and discontented peasants. While the authorities may take comfort from the present weakness and apparent resignation of the masses, the 1968 farmers' riots and the events in West Bengal, India,[3] where the inequitable distribution of the fruits of the "Green Revolution" is a factor in numerous political riots, illustrate that the poor are neither hopelessly powerless nor indefinitely resigned to their fate.

Thirdly, it must be emphasized that positive economic benefits will flow from a less unequal distribution of earnings. As this study shows, a less skewed distribution has food expenditure increasing potential. Increased food expenditure combined with a reduction in self sufficiency in food production will raise effective demand, increase food prices,

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[2]This is a phrase coined by Benjamin Disreali, 19th century Prime Minister of Britain, to describe the wide income and social gulf which, in the early stages of Britain's industrialism, had separated the mass of the working class from the rest of the society.

[3]Wolf Ladejinsky, "Ironies in India's Green Revolution," Foreign Affairs, July, 1970, pp. 758-69.

encourage the production of more food, increased retail trade and transportation. More important, a less skewed distribution, by raising the purchasing power of the low income group, will increase the size of the market for consumer goods produced in the urban areas. Nor are there any reasons to expect a reduction in private sector agricultural investments as a consequence of a less unequal distribution. On the contrary, given the demonstratedly high propensity of the small and medium farmers to invest in education, one must expect an increase of investment in rural human capital. Further, since the policy suggestions will not damage the productive capacity of the large farmers, this group of farmers should not reduce capital formation. If the policy should involve a reduction in public agricultural investments, then such a reduction must be welcome because,as several studies have shown, government direct investments in agriculture are inefficient and entail a very high opportunity cost.

Specific Policy Suggestions

Following the usual procedure in economic analysis, the policy suggestions below are grouped under the long and short runs.

Short Run Suggestions

In the short run, a period of from a year to a decade, it is suggested that determined efforts be made to bring about a considerable increase in the flow of financial resources to the small producers. At the same time, to ensure the continued

availability of funds, the government should increase its revenue sources by introducing land and property taxes, taxing the earnings of the LBA's and ear-marking an appreciable proportion of the marketing board's 'surpluses' and export taxes for use in aiding the flow of financial resources to the small producers.

Step up the flow of funds to the small producers: -- There are many ways in which an increase in the flow of funds to producers can be effected. The most important, and the one which commends itself to farmers and economists, is increased farm prices. With respect to the Nigerian cocoa farmers, the necessity for increased cocoa producer prices is underlined by the fact that since the establishment of the Marketing Board, the farmer has rarely obtained a price above 50 percent of the f.o.b. prices. It is, therefore, easy to see that if cocoa farmers were now to receive something between 70 and 75 percent of the f.o.b. prices for cocoa, availability of funds would be considerably increased in at least two ways: (a) the small producer's revenues would increase, and (b) there would be increased lending by the cooperatives and the LBA's on whom a majority of the small producers currently depend for funds.

However, it must be stressed that as the experiences of the United States and other countries have shown, price policy alone is unlikely to aid the process of income

redistribution in favor of the low income groups.[4] This makes it vitally important for price increase to be combined with policies which directly enhance the resources of the small producers such as outright grants to small producers to buy inputs and improve their cocoa plots and embark on other related enterprises designed to raise their income. The Government should, through the Cooperative and National Banks, make more funds available to the cooperative societies and the Agricultural Credit Corporation. To ensure that these institutions serve the small producers, unrealistic insistence on fool-proof security and registration of titles should be dropped in favor of credit which is tied to government-sponsored advice on farm management.[5] Opportunities for political maneuvering and corruption which work against the small

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[4](a) James T. Bonnen, "The Distribution of Benefits from Selected U.S. Farm Programs" in Rural Poverty in the United States: A Report of the President's Commission on Rural Poverty, May, 1968, pp. 461-505.

(b) David H. Boyne, "Changes in Income Distribution in Agriculture," Journal of Farm Economics, Vol. 47, Dec. 1965, pp. 1213-1224.

(c) Vernon C. McKee and Lee M. Day, "Measuring the Effects of U.S. Department of Agriculture Programs on Income Distribution," Rural Poverty in the United States, A Report by the President's National Advisory Commission on Rural Poverty, May 1968, pp. 506-521.

(d) Solon Barraclough, "Employment Problems Affecting Latin American Agricultural Development," The Monthly Bulletin of Agricultural Economics and Statistics, Vol. 18, Nos. 7/8, July, August, 1969, pp. 1-11.

[5]One of the CSNRD studies points out that too often, excessive weight is placed by the government lending institutions on the possession of physical security rather than the ability of small farmers to repay loans. The result is that agricultural loans tend to go to urban property owners and businessmen with acceptable security thus defeating the primary purpose of using the loans to promote agricultural development. See "A Proposed Agricultural Credit Program for Nigeria," CSNRD-4, August, 1966, p. 25.

producer should be eliminated by having strong and dedicated representatives of the small producers in the boards of all government-controlled credit institutions. Nor should the commercial banks be allowed to continue the present unfortunate practice of refusing loans for cocoa production even when they monopolize the finance of cocoa purchase at great profits. It should be made clear to the banks they must advance production loans to cooperatives as well as individual farmers or withdraw from the finance of cocoa purchase.

Introduce new taxes not only to raise revenue but also to make earnings less uneven: -- Among the sources of revenue which the government can utilize are property and estate taxes. In the past, the argument against these taxes had been the lack of administrative talent. In the Western State of Nigeria today, appropriate allocation of existing administrative manpower, when supplemented with experts from international organizations, should be reasonably adequate for the task. Revenue from such taxes, moreover, will be highly elastic with respect to the growth of income in the process of economic development given the current high propensity of the successful businessmen, farmers, and the professional class to invest in housing construction and the purchase of land. And since property values rise primarily because of government development programs which raise the demand for land and housing, a high rate of property tax should involve no serious equity problems. On the contrary, if the tax revenues should be used to increase the supply of funds to

the small producers, the ends of equity would, undoubtedly, have been served.

Taxes should also be levied on the earnings of the LBAs. Under the present system, most LBAs whose earnings are well above those of University lecturers, pay little income tax partly because of their influence in the local community, partly because of past political position and partly because in the absence of systematic records of their earnings, it has been difficult to assess them equitably. Evidence from this study shows not only that the LBAs have considerable earnings, but also that the higher the earnings bracket the greater the percentage of total earnings derived from such non-cocoa activities as transportation, rent, and general merchandising (Appendix IV).

Long Run Suggestions

In the long run, the authorities should formulate and implement a dual strategy -- one for the commercial large scale farmers and the other for the small marginal producers. Besides, attention should be paid to population control and the reorganization of some of the key institutions which now serve the cocoa industry.

(i) Formulate and implement a dual rural development strategy: -- One of the facts brought out by the present study is that there are, essentially,two classes of cocoa farmers. On the one hand, you have the medium and large farmers (by Nigerian standards at least) with average farm

size above 10 acres, with relatively good access to the formal financial and credit sources, new technology and political position. Like the LBAs this group of cocoa producers, most of whom are traditional rulers, cocoa buyers, traders, and professionals such as teachers, derive a major proportion of their total earnings from non-cocoa activities. It is they who mainly benefit from current programs -- subsidies on inputs, extension services, rehabilitation, replanting, and the public dissemination of new technology. On the other hand, there are the vast majority of cocoa farmers, with farm size less than 5 acres on the average, with total earnings averaging below ₤100, and with a high percentage of these earnings derived from cocoa production. Unlike the former group, this class of cocoa farmers has little access to new technology, formal credit institutions and political position. For all these reasons, it is hard to pretend that they can derive significant and enduring benefits from current programs and projects. Faced with this situation, the authorities should formulate two strategies. With the large and viable cocoa producers in mind, and in view of the need to increase export earnings, the current policy of disseminating new technology and financing the purchase and distribution of inputs should be continued, in addition to increased cocoa prices suggested earlier. For the benefit of the small producers, the government should adopt measures designed to raise their productive capacity and future income streams.

Among the measures to raise the productive capacity and future income streams of the small producers is the education of the children of these producers. In an economy where intra-family income transfers are important, it makes a lot of difference to family incomes whether or not a family is able to see its children through a technical college or a university. Successful education of one child often means a successful education of several other children in the extended family. Moreover, the education of the children of the small producer is the best means of fostering labor mobility and relieving pressure on family holdings in places like Ife and Ilesha. It is, further, the only means of ensuring the future participation of these families in the political and economic leadership of the country. For these reasons, preferential treatment should be given to such families in the award of scholarships both at high school and university levels. The existing practice whereby, for lack of political influence, scholarship awards are weighted in favor of children from families who can pay for their education should be discouraged.

It might be argued that this policy will conflict with the obvious need to tailor scholarship awards to development needs. To this, one must reply that no such conflict will result. For one thing, there is no evidence whatsoever that the distribution of scientific, engineering, managerial and other talents in urgent demand is correlated, in the Nigerian society, with wealth or status. What is suggested here is

that given the ability of wealthy farmers and other groups to finance the education of their children, scholarship boards and universities awarding scholarships for development skills, should give preferential treatment to children from the families of the marginal producers. This preferential treatment should extend to admissions to technical colleges, farm institutes and farm settlements.

Another approach to raise the future earning capacity of the small producers involves measures to reduce their dependence on cocoa production as a source of income. In advanced industrial economies, the low income producers are encouraged to take up employment in the growing urban industries. Sometimes, the governments of these countries offer compensatory rewards to industries which are located with a view to providing employment opportunities to low income rural families. In the Nigerian context, we are well aware that, ultimately, the problem of the low income, small-scale producer can be solved only by policies which increase employment opportunities in both the rural and the urban sectors. We are also aware that in the Western State of Nigeria, the possibility of establishing rural industries has been surveyed[6] and should be supported by any who are interested in providing employment for the many farm families. Nevertheless, the

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[6]During the months of March and April, 1970, a research team from the University of Ife, under the direction of Professor S. A. Aluko, surveyed Ilesha division with a view to studying the possibility of establishing small-scale rural industries.

fact must be faced that, for most of the small producers, employment and income opportunities in the urban industries will, for many years, remain severely limited. Not only is there an army of unemployed school-leavers ready to "swallow up" any employment opportunities in urban industries but, more important, there is no guarantee, for a variety of reasons, that rapid expansion of urban industries will be matched by a corresponding expansion of employment opportunities.[7] Even if the prospects of increased nonfarm job opportunities were bright, the economy would still face the problem of raising the earnings of those small producers who are old, illiterate and, for various reasons, cannot tear themselves from the village environment. This suggests that public policy should not merely seek to provide supplementary sources of earnings off the farm but should, more

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[7]The interested reader is free to consult the following studies which examine the various economic, social, and technological reasons for the failure of industrialization of the less developed countries to be accompanied by rapidly expanding nonfarm employment opportunities:

(a) Frederick Harbison, "The Generation of Employment in Newly-Developing Countries," paper presented at Conference on Education, Employment and Rural Development, Kericho, Kenya, 1966.

(b) W. Baer and M. Herve, "Employment and Industrialization in Developing Countries," Quarterly Journal of Economics, LXXX, February, 1966, p. 91.

(c) G. Lloyd Reynolds, "Wages and Employment in a Labour Surplus Economy, "American Economic Review, Vol. 55, March, 1965, pp. 19-39.

(d) R. S. Eckaus, "The Factor Proportions Problem in Underdeveloped Areas," American Economic Review, Vol. 45, September, 1955, pp. 539-69.

(e) Michael P. Todaro, "An Analysis of Industrialization, Employment, and Unemployment in Less Developed Countries," Yale Economic Essays, Fall, 1968, pp. 329-402.

(f) C. K. Eicher, T. Zalla, J. Kocher and F. Winch, "Employment Generation in African Agriculture," Institute of International Agriculture, Michigan State University, East Lansing, Michigan, July, 1970.

especially, expand farm employment opportunities by making production on plantations, farm settlements and estates less capital intensive, by encouraging feasible enterprise combination among the small producers and by removing those institutional restraints which impede the mobility of labor, capital and managerial talent in the Western Nigerian rural economy.

Get underway an effective family planning program: -- While rapid population growth in the rural areas may not be the most important factor in the poverty and low earnings of the majority of cocoa producers, it certainly increases the magnitude and complexity of the problem. With all the will and determination on the part of the Nigerian authorities, it would be unrealistic to expect long run appreciable improvement in the economic position of many producers as a consequence of the implementation of the measures suggested earlier in this study unless rapid population growth[8] is brought under control through family planning. As Table 11 indicates, there is an inverse relationship between the size of cocoa holdings and population density for the divisions surveyed for this study. In Ondo and Akure where population density is 203 persons per square mile, the size of cocoa holdings averages 12 and 10 acres, respectively. In contrast, Ife and Ilesha divisions with population density of

[8]According to a recent estimate, while the Western State registered an annual population growth rate of 7.4%, Ife and Ilesha divisions showed rates of 8.6 and 7.9%, respectively. Caldwell, J. C. and Okonjo, C., The Population of Tropical Africa, William Clowes and Sons, Ltd., London, 1968, pp. 88-89.

630 and 506 persons per square mile, have cocoa holdings averaging 3.5 and 6 acres, respectively. It is in these two divisions that most of the small producers with low earnings are concentrated. Quite apart from its adverse effect on the size of cocoa holdings, rapid population growth and the resulting increased family size limit the capacity of the small farmers to avail themselves of new technology -- seeds, chemicals and fertilizers since they are compelled to devote their meagre earnings to the maintenance of many children. Besides, in an economy with strictly limited off-farm employment opportunities, it is possible that the present overcommitment[9] of labor to cocoa production (given the current low prices) and the growing unemployment of rural labor are the consequence, partly, of too rapid a population growth. The same is true of malnutrition. All this points to the desirability of including family planning in both the short and the long term strategies for dealing with the problem of low earnings and earnings inequality in the cocoa economy of Western Nigeria. Not only should policy makers become more aware of the connection between rapid population growth and current problems of low income in agriculture, they should also embark on a campaign designed to make the farmers see the connection between large family size and difficulties of

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[9] G. L. Johnson, "Factor Markets and Economic Development," Chapter 6, Economic Development of Tropical Agriculture, W. W. McPherson (edit.) University of Florida Press, 1968.

enhancing their economic position.[10] But since the producers' adoption of family planning measures depends, in part, on the rate of infant mortality in the rural areas, it is essential that improved medical services and clean water supply be made much more accessible to them.

Reorganize the system of produce marketing: -- It is suggested that the existing produce marketing system be reorganized with a view to (i) eliminating the licenses and the monopoly "profits" of the LBAs, (ii) providing for adequate representation of the producers' interest on the marketing board, and (iii) strengthening the competitive position of the marketing cooperatives.

Although the proposal to eliminate the monopoly "profits" of the LBAs may not go down well with some officials and other influential circles, it can be justified on several grounds. First, the elimination of the LBAs' "profits" should substantially raise the earnings of the cocoa producers since the former receive a substantial proportion of the earnings transferred from the producers (Table 3). Second, since political and other non-economic criteria determine who obtains the licenses and hence the

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[10] However, this will be no easy task for two reasons: First, many economists and government officials still consider Western Nigeria as a "land surplus" economy with no population problem. Second, as the controversies surrounding the 1962/63 census bear out, policy makers seem to place more weight on the electoral advantages of a large population than on the possible adverse economic consequences. See Udo, R. K., "Population and Politics in Nigeria," The Population of Tropical Africa, Caldwell and Okonjo, Editors, pp. 97-106.

monopoly "profits,"[11] the procedure for issuing licenses creates a privileged group and a constant source of bitterness and resentment among those who feel discriminated against. All these would disappear with the elimination of the LBA's monopoly "profit." Third, if the LBAs were no longer guaranteed monopoly "profits", some of them would be compelled to seek out alternative avenues for their capital which they should find in transportation, merchandise trade, small scale manufacturing or plantation agriculture which would become profitable. From a development point of view, a strong case can be made for a policy which forces the Nigerian businessman to abandon the easy and certain path of produce marketing for other more risky ventures. Finally, it is most likely that with the elimination of monopoly "gains", the produce buyers will take steps to reduce waste and cost in an effort to break even. This should increase the efficiency of the produce marketing system.

The suggestion that cocoa producers should be adequately represented on the marketing board is consistent with the provisions of the statute under which the marketing boards were set up in Nigeria and other former British West African colonies. Moreover, the current practice of excluding the representatives of the export crop producers from the board is not only inequitable but utterly indefensible

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[11]See Sklar's "Unofficial Dimensions of the Party Structure." Nigerian Political Parties, Princeton University Press, pp. 447-452.

in view of the fact that the pricing and related practices of the marketing board have profound consequences on producers' production decisions, income and employment. Furthermore, it is our belief that the absence of the producers' representatives partly explains why the pricing policies of the board and the allocation of funds by its agencies take so little account of the possible adverse repercussions on the farmers' income situation. This implies that one should not expect an appreciable increase in the prices paid to the export crop producers unless the farmers, through their representatives on the board, exert pressure on the authorities.

With respect to the marketing cooperatives, it is suggested that they concentrate primarily on marketing while leaving other functions to the cooperative credit and other societies. To strengthen the competitive position of the marketing cooperatives, they should be guaranteed bank loans as is the case with the licensed agents. In addition, their managerial and technical staff should be strengthened, partly by retraining and partly by recruitment of relatively skilled talents.

Encourage the formation of a union of small scale producers: -- In suggesting the formation of a union of small producers, we are guided by several considerations. The existing Farmers Union are controlled and manipulated by large-scale farmers and LBAs who use them as a spring board to political power. In the past, the interests of the small producers were rarely considered since the quest for political

office and influence usually compelled those who controlled the Farmers Unions to divide and weaken the organization by aligning with one or more of the existing political parties. Second, the formation of state-wide union of small producers will enable the farmers to press for and obtain representation on the marketing board, the Agricultural Credit Corporation, the Development Corporation and other local institutions whose decisions impinge on the farmers' welfare. Third, such an organization should serve as a signal to those in power that they cannot indefinitely take comfort in the known impotence and lack of organization of the small low income farmers, but must redouble efforts to make these farmers share the fruits of development commensurate with their efforts.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

For most LDCs, an increasingly important aspect of development problems is how to devise a strategy which strikes an appropriate balance between attention to the technical factors geared to increased output and the modification of the institutional framework within which development proceeds to ensure a more equitable distribution of the fruits of development. To help policy makers grapple intelligently with the complex problems involved, a knowledge of the pattern and the factors underlying the distribution of development benefits is vitally necessary. Compared to any other social scientist, the economist is better equipped to provide the information specifying not merely what the pattern of distribution is or what the underlying causes are, but,more important, what alternative policy strategies are called for. The present study is a modest attempt in this regard. It provides information on the pattern of earnings distribution among the cocoa farmers and the LBAs in Western Nigeria and indicates the factors associated with the distribution of the earnings, the consequences of the pattern of earnings distribution on food expenditures, the direct and

secondary effects of making the distribution earnings less unequal and alternative policies for dealing with the problems.

Summary to the Findings:

Analysis of the data obtained during the field work for this study brings out the following facts regarding the distribution of earnings among the cocoa producers and the LBAs in Ondo Circle of Western Nigeria:

(1) The distribution of net cocoa earnings is unequal.

(2) The distribution of earnings from all sources is even more unequal than the distribution of net cocoa earnings. However, the level of earnings attained by most of the relatively wealthy producers remains the goal of many Nigerians.

(3) With respect to both net cocoa earnings and total earnings, inequality of distribution is greater for the producers than for the LBAs.

(4) The distribution of cocoa holdings, expenditures on hybrids, chemical sprays, and the man hours of extension services spent on the producer's cocoa holdings are very unequal and correlate very highly and positively with the distribution of cocoa earnings.

(5) The distribution of political positions is highly correlated with the distribution of cocoa earnings, cocoa holdings, access to new technology and credit. But this does not mean that the distribution of political positions

gives rise to the distribution of these economic, institutional and technological variables in any unambiguous sense.

(6) The small cocoa producers, in contrast with the large farmers and LBAs, have virtually no access to the formal sources of credit -- the banks and the Agricultural Credit Corporation. Consequently, they depend overwhelmingly on informal sources -- produce buyers, money lenders, relatives, and their own savings which are generally too small and incapable of financing long term improvements. Even their apparent considerable dependence on the cooperatives is largely misleading because cooperative loans are, on the average too small (₵6.5, Appendix A.VII) only for a season, increasingly in kind, and weighted in favor of the larger producers.

(7) The LBAs benefit considerably from their role not only as cocoa buyers and creditors to small producers, but also as cocoa producers and distributors of spraying chemicals. Their average earnings exceeds by far the sample average and that of other categories of producers.

(8) There is a high and significant correlation between the size of earnings from cocoa marketing and the percentage of total earnings which the LBAs derive from other occupations. (Appendix A.IV)

(9) A strategy which makes the distribution of earnings less unequal has potential for raising food expenditures and the degree of dependence on the market. Where

aggregate earnings is increased and its distribution made less uneven, the resulting considerable increase in food expenditure is likely to shift the pattern of food consumption from carbohydrates to such protein-rich foodstuffs as meat, milk, wheat, and other cereals produced mainly in the Northern States. Reduction of inequality thus has secondary benefits in terms of increased food production in the northern states, increased demand for poultry and livestock feed and increased volume of north-south trade with considerable employment generating and income increasing potential.

Policy Conclusions:

In the short run, it is suggested that concrete steps be taken to step up considerably the flow of financial resources to cocoa producers by increasing cocoa prices, making outright grants to the small producers, and removing restraints on the producers' access to the sources of loanable funds. In addition, the government should make the earnings less uneven as well as expand its sources of revenue by introducing land and property taxes, and taxing away much of the LBA's monopoly "gains."[1]

In the long run, agricultural policy should evolve along two broad strategies. One strategy should ensure the continued expansion of cocoa production by increased dissemination of new technology, higher prices, adequate

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[1]See Chapter VII for detailed recommendations.

infrastructure and improved extension services. The other strategy, directed towards the small marginal producers, should concentrate on measures designed to increase the productive capacity and employment opportunities of this class of producers. Among the possible measures[2] are discriminatory scholarships to children from the low earnings farm families, improved health services, vocational training for the semi-illiterate farmers, and an effective family planning program. In addition, steps should be taken to expand employment opportunities outside agriculture in general and in agriculture in particular by emphasizing, among other things, techniques and production methods which are labor intensive. Furthermore, given the fact that the existing institutional arrangements for the marketing of cocoa have considerable impact on the level and, to some extent, the distribution of earnings, we propose a reorganization of the system of produce marketing. This reorganization should aim, principally, at the elimination of the LBA's monopoly "profits," the provision for producers' representation on the marketing board and the strengthening of the competitive position of the marketing cooperatives. Finally, we strongly urge the small producers as a group to consider seriously the formation of a statewide union under their control and direction, not only to provide a countervailing power against the large producers and buyers, but also as a means of pressing for representation in the policy making bodies of the various institutional arrangements serving the cocoa industry.

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[2]See Chapter VII for detailed recommendations.

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APPENDICES

Table A.I. Correlation Matrix Of Cocoa Earnings Distribution And The Distribution Of Strategic Economic, Technological And Institutional Variables Among Cocoa Producers, Ondo Circle, Western Nigeria, 1970

	Y	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9
X_1	.94	1.00								
X_2	.93	.80	1.00							
X_3	.97	.95	.94	1.00						
X_4	.85	.80	.78	.91	1.00					
X_5	.82	.95	.90	.77	.73	1.00				
X_6	.76	.87	.86	.89	.90	.74	1.00			
X_7	.96	.95	.94	.93	.97	.95	.83	1.00		
X_8	.85	.96	.88	.92	.95	.97	.80	.96	1.00	
X_9	.88	.70	.78	.80	.75	.89	.85	.75	.81	1.00

Y = Size of Cocoa Earnings (E) in each earnings bracket
X_1 = Percent of producers in each earnings bracket who get extension services
X_2 = Extension man hours per acre in each earnings bracket
X_3 = Average Size of holdings of producers in each earnings bracket
X_4 = Value of Sales per acre in each earnings bracket
X_5 = Percentage of producers in each earnings bracket engaged mainly in jobs other than cocoa farming
X_6 = Percentage of producers in each earnings bracket with political position
X_7 = Average expenditure per acre on chemical sprays in each earnings bracket
X_8 = Average expenditure on hybrids (F_3 Amazon) in each earnings bracket
X_9 = Percentage of producers in each earnings bracket with access to commercial banks, and Agricultural Credit Corporation

Table A. II. The Distribution Of Cocoa Producers By Size Of Cocoa Earnings And Political Position, Ondo Circle, Western Nigeria, 1970

Earnings Bracket (£)	Political Position of Producers						
	Former Legislator	Traditional Ruler	Former Party Official	Former Councillor	Leader of Farmer's Organization	No Political Position	Total In Sample
	Number of Producers						
0-100		2	3	3	3	50	61
101-200	1	7	4	2		26	40
201-300		3	2	3	6	11	25
301-400		2			1	3	6
401-500	1	2				1	4
501-600	1	1					2
601-700					1	1	2
701-800			1		2	3	6
801-900		2					2
901-1000			1				1
1001-1100	1			1			2
1101-1200	1						1
1201-1300		1	1		1	1	4
1301 & over	1	1		1	1		4
Total	6	21	12	10	15	96	160

Table 3.11 Low Distribution of Farms Employing by Size of Farm Employing And Political Position Wise Tabular Datum Digvijay, 2010

Employing Farmer (%)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table A. III. The Distribution Of Cocoa Producers By Size Of Holdings And Political Position, Ondo Circle, Western Nigeria, 1970

Size of Holdings (Acres)	Political Position of Producers						
	Former Legislator	Traditional Ruler	Former Party Official	Former Councillor	Leader of Farmer's Organization	No Political Position	Total In Sample
	Number of Producers						
0-5		4	2		3	53	62
6-10	2	4	3	2	1	26	38
11-15		5	2	3	4	6	20
16-20	1	5	4	1	3	3	17
21-25	1	1		1	1	3	7
26-30				3	1	5	9
31-35	1	1			1		3
35 & over	1	1	1		1		4
Total	6	21	12	10	15	96	160

Table A. IV. The Relationship Between LBA s Yearly Total Earnings And The Percent Derived From Cocoa Marketing, Ondo Circle, Western Nigeria, 1970

Earnings Bracket	Average Earnings	
	Amount	Percent Derived from Cocoa Marketing
₦	₦	Percent
0-500	200	90
600-1000	860	85
1100-1500	1,330	79
1600-2000	1,725	67
2100-2500	2,880	64
2600-3000	2,815	70
3100-3500	3,500	60
3600-4000	4,000	48
4100-4500	4,300	52
4600-5000	4,850	40
5100-5500	5,100	50
5600-6000	5,700	45
6100-6500	6,350	75
6600-7000	6,600	40
7100 & over	15,200	43

Table A. V. Cocoa Marketing Share Of The Three Groups Of Licensed Buying Agents, Western Nigeria, 1955-1968

Year	Groups of Buying Agents			
	Indigenous One Man Firm	Marketing Co-operatives	Expatriate Firm	Total
	Percentage of Total Tonnage			
1955	6	13	81	100
1956	8	16	76	100
1957	11	18	71	100
1958	10	19	71	100
1959	13	18	69	100
1960	17	20	63	100
1961	25	22	53	100
1962	34	21	45	100
1963	45	20	35	100
1964	57	17	26	100
1965	62	18	20	100
1966	68	17	15	100
1967	68	16	16	100
1968	67	18	15	100

Source: Kotun, "Statistical Information on Western Nigeria Controlled Produce, p. 9-11, (Mimeographed Material)

Table A. VI. Fungicides And Insecticides: Government Subsidy As A Percentage Of Retail Price, Western Nigeria, 1959-1968

Year	Gammalin Subsidy		Copper Sulphate Subsidy		Perenox and Cocobre Sandox Subsidy	
	₦/Quart Tin	% of Retail Price	Shillings/lb	% of Retail Price	₦/Tin	% of Retail Price
1959	0.32	39	0.7	46	1.0	33
1960	0.32	39	0.7	46	0.8	29
1961	0.31	38	0.7	46	0.8	29
1962	0.31	38	0.7	46	0.8	24
1963	0.31	44	0.7	46	0.8	29
1964	0.31	44	-	-	-	-
1965	0.31	44	0.7	46	0.8	29
1966	0.27	38	0.7	40	0.8	25
1967	0.27	38	0.9	50	1.2	30
1968	0.27	38	-	-	1.3	30
mean	0.30	40	0.7	46	0.9	28

Source: Computed from H. C. Kriesel, "Cocoa Marketing in Nigeria," CSNRD 21, January, 1969, p. 76.

Table A. VII. Loans Obtained By Members Of Selected Co-operative Societies, Ondo Circle, Western Nigeria, 1968-69 Season

Society*	Loans	Borrowers	Amount/Borrower
	₦	Number	₦
A	1,308	40	32.70
B	319	80	4.00
C	800	40	20.00
D	841	60	14.00
E	280	55	5.10
F	228	40	5.70
G	105	100	1.05
H	98	30	3.26
I	54	50	1.10
J	72	20	2.40
K	75	25	3.00
L	48	30	1.60
M	110	35	3.10
N	114	50	2.30
O	227	40	5.70
P	165	60	2.80
Q	48	16	3.00
R	100	45	2.20
S	541	80	6.80
T	500	50	10.00
U	48	20	2.40

*The alphabets are used in place of names because the data were obtained in confidence.

Table A. VIII. The Distribution Of Borrowers From Agricultural Credit Corporation, By Size Of Loans, Akure, Western Nigeria, 1968-69

Size of Loans (₦)	Borrowers	
₦	Number	Percent
0-50	5	3
51-100	18	12
101-150	53	34
151-200	20	13
201-250	21	13
251-300	37	24
301-350	-	-
351-400	-	-
401-450	-	-
451 and over	-	-

Table A. IX. Percent* Of Producers Indicating The First Three Requirements For Access To Extension Services By Size Of Cocoa Holdings, Ondo Circle, Western Nigeria, 1970

Size of Holdings	Producers	Requirements for Access to Extension Service: Largeness of cocoa plot	Nearness to Demonstration Plots	Familiarity with Officials	Response to New Ideas	Good Maintenance of Farms
Acres	Number	Percent of Producers				
0-5	62	48	15	61	13	13
6-10	38	68	29	65	39	42
11-15	20	45	40	75	70	50
16-20	17	65	35	53	88	65
21-25	7	29	14	57	86	100
26-30	9	89	44	56	44	67
31-35	3	100	33	33	--	67
36 and over	4	--	--	25	75	75

*The percentages refer to those of producers in each holdings bracket who rank the requirements among the first three

This table shows that while small farmers emphasize such factors as largeness of cocoa plots and familiarity with Ministry Officials as the requirements for Access to Extension Service, they play down the important farm management factors -- response to new ideas, good maintenance of cocoa plots and nearness to demonstration plots.

The large producers, in accord with the prediction of farm management theory, emphasize such factors as response to new ideas, good maintenance of cocoa plots and largeness of cocoa holdings. It is, however, possible that their downgrading of familiarity with officials reflects more "diplomacy" than reality.

Table A. X. Percent Of Producers Ranking the First Three Requirements For Access To Extension Service, Ondo Circle, Western Nigeria, 1970

Requirements for Access to Extension Service	Ranks in Descending Order			
	1st	2nd	3rd	Total
	---- Percent of Producers----			
Largeness of Cocoa Plots	29	12	14	55
Familiarity with Officials	33	17	11	61
Nearness to Demonstration Plots	6	6	13	25
Response to New Ideas	11	14	14	39
Good Maintenance of Farms	11	11	17	39

Table A. XI. Percent* Of Cocoa Producers Indicating Their Three Most Pressing Problems By Size Of Holdings, Ondo Circle, Western Nigeria, 1970

Size of Holdings (Acres)	Producers	Pressing Problems Indicated					
		Land Shortage	Management	Inadequate Extension	Shortage of Funds	Lack of Credit	High Interest Charges
		Percent of Producers					
0-5	62	40	24	15	73	65	44
6-10	38	55	26	16	79	63	26
11-15	20	45	35	30	80	75	15
16-20	17	41	39	18	100	75	29
21-25	7	-	57	29	71	71	57
26-30	9	33	44	11	89	56	33
31-35	3	67	33	-	33	67	67
36 and over	4	-	50	25	75	-	-

*The percentage refer to those of producers in each holdings bracket who rank the problems among the first three.

According to the data presented above, shortage of funds, lack of credit and shortage of land constitute the first three problems. But the fact that only 24 and 15% of the small farmers include management and lack of extension advice in their first three pressing problems does not mean that these are unimportant. Rather, it reflects their belief (with some justification) that before they can solve management and extension problems, they must have first adequate funds and land for cocoa growing.

Table A. XII. Percent Of Producers Ranking Their Three Most Pressing Problems, Ondo Circle, Western Nigeria, 1970

Pressing Problems	Rank in Descending Order			
	1st	2nd	3rd	Total
	----- Percent of Producers -----			
Land Shortage	13	9	19	41
Management	18	12	10	30
Lack of Extension Advice	2	6	9	17
Shortage of Funds	50	14	7	71
Lack of Credit	8	33	24	65
High Interest Charges	2	10	21	33

APPENDIX A XIII

Computing the Effects of Alternative Distributions of Cash Earnings on Producers' Food Expenditures

(1) Compute the means of the entire sample and those of the earnings brackets. In this example, the mean cash earnings is ₵502. The means for the bottom and top brackets are ₵59 and ₵3379 respectively.

(2) Move the means in the two brackets towards the sample mean by 20%. In the case of the bottom bracket with the mean less than that of the sample, subtract ₵59 from ₵502 and add 20% of the difference to ₵59 to obtain ₵148 approximately. In the case of the top bracket with the mean above that of the sample, you first subtract ₵502 from ₵3379 and then subtract 20% of the difference from ₵3379 to obtain ₵2804.

(3) Put the new means, ₵148 and ₵2804, in their appropriate brackets. ₵148 is in the "₵101-₵200" bracket while ₵2804 is still within the "₵1301 and over", the same bracket as ₵3379 (Table 7).

(4) Using the information in Table 26, compare the food expenditures of the two brackets before and after the 20% movement towards the sample mean. The table shows that before the movement towards the sample mean, the food expenditures of the bottom bracket averaged ₵31 as against ₵49, the expenditure after the movement

towards the mean which now places the bottom group in the ₦101-₦200 bracket. This results in a 42% increase in food expenditure for the producers in the bottom bracket. Turning to the top bracket, we find that there is a zero change in food expenditure. This is because both ₦2804 and ₦3379 are within the same bracket where the food expenditure averages ₦140.

(5) Follow the same steps for all the earning brackets and compute the weighted average of the changes in food expenditures.

APPENDIX B-1

QUESTIONNAIRE: LICENSED BUYING AGENTS

Division _____

Town/Village _____

Buyer's Number _____

(1) a. How much cocoa did you sell to the Marketing Board?

	Tons	:Cwt	; Lbs.
(1) Last Year		:	:
(2) 1967-68 Season		:	:
(3) 1966-67 Season		:	:

b. How much other export crops did you sell to the Board?

(1) Last Year		:	:
(2) 1967-68 Season		:	:
(3) 1966-67 Season		:	:

c. Apart from the Marketing of export crops, what are your other jobs?

	YES	NO
(1) Cocoa Farming		
(2) Food Crop FArming		
(3) Transportation		
(4) Trading		
(5) Contracting		
(6) Others, (Specify)		

_____

_____

_____

APPENDIX B-1

QUESTIONNAIRE: LICENSED BUYING AGENTS

Division _____

Town Village _____

Buyer's Number _____

1. How much cocoa did you sell to
the Marketing Board?
(1) Last Year
(2) Half-way Season
(3) Start-of Season

2. How much of the marketing board
did you sell to the farmer?

1. Last Year
2. Half-way Season
3. Start-of Season

3. Please fill the distance to
nearest large main road
where lorry
can reach

1. Cocoa Farming
2. Food Crop Farming
3. Livestock
4. Transport
5. Difficulty
6. Other (Specify)

(2) Prior to becoming a Licensed Agent, what was your occupation?

	YES	NO
(1) Cocoa Farming	_____	_____
(2) Trading	_____	_____
(3) Clerical Assistant	_____	_____
(4) Teaching	_____	_____
(5) Others, please specify	_____	_____

(3) How much, on the average, does it cost you to market a ton of cocoa?*

(4) What fraction of your total earnings in a year comes from the marketing of cocoa?

(5) What are your main sources of funds for buying cocoa?

(1) The Commercial Banks
(2) Co-operative Banks
(3) Individual Savings
(4) Sale or Pledging of Land

PART II

(1) Are you married?_____Yes _____No
(2) How many children do you have?_____
(3) How many children are actually living with you?_____
(4) How much a week do you spend on the food bought from the market places?

(a) 10/-
(b) 15/-
(c) 20/-
(d) 50/-
(e) Other amount (please specify)

(5) What fraction of the food you consume is actually being produced from the family farm?

(a) None at all
(b) 1/4
(c) 1/2
(d) 3/4
(e) All the food

(6) If you were to buy from the market all the food you obtain each week from the farm, how much would you pay for it?

(a) 10/-
(b) 15/-

---

*The data on this question were obtained directly from the LBAs' own records with the help of their clerical assistants.

(c) 20/-
(d) 50/-
(e) other amount (please specify)

(7) What fraction of your food expenditure goes for food produced in your village or villages close to yours?

(a) None
(b) 1/4
(c) 1/2
(d) 3/4
(e) All

(8) How much money do you spend each week on the food items bought from other divisions in the state and other areas in the country such as cow meat, rice, etc.

(a) 5/-
(b) 10/-
(c) 15/-
(d) 20/-
(e) 50/-
(f) Other amount (please specify)

QUESTIONNAIRE: COCOA PRODUCERS

Division_____

Village/Town_____

Producer's Number

(1) Are you currently engaged in cocoa production?____Yes___No

(2) How many plots of cocoa do you have?

(a)_____Acres
(b)_____Heaps } *
(c)_____Shillings }

(3) Of the plots in question (No. 2) how many are?

(a) Individual acquisitions_____
(b) Family land which is inherited_____
(c) Rented_____
(d) Pledged_____
(e) Gifts_____

*The Ministry of Agriculture extension officials have a formula for converting heaps and monetary units into acres. Fortunately, this conversion was found unnecessary because the farmers interviewed are familiar with acres.

(4) How much cocoa did you sell

	Tons	Cwt	Lbs
(a) Last Year			
(b) 1967-68 Season			
(c) 1966-67 Season			

(5) How much other crops did you sell?

	£	S	D
(a) Palm Kernels			
(b) Kola			
(c) Rubber			
(d) Oranges			
(e) Yams			
(f) Maize			
(g) Cocoa Yams			

(6) What fraction of your total yearly earnings came from cocoa?

Last Year_____
1967-68 Season_____
1966-67 Season_____

(7) How much, on the average, do you spend each year on

	£	S	D
(a) Hired Labor			
(b) Interest			
(c) Rent			
(d) Pods F_3 Amazon)			
(e) Spraying Chemicals			
(f) Fertilizer			

(8) How many visits a year does an extension agent make to your plot?_____

What help do you receive from such visits?

(a) New seeds
(b) Demonstration
(c) Price information
(d) Spraying
(e) No help at all

(9) What are the 3 most important requirements for obtaining extension advice. (Rank in order of descending importance).

(1) Largeness of Cocoa Plots
(2) Close relation with Ministry Officials
(3) Nearness to Demonstration Plots
(4) Demonstrated response to new ideas
(5) Good Management of Cocoa farms

(10) Rank in descending order of importance, 3 conditions for obtaining government loans.

(1) Largeness of Cocoa Plots
(2) Possession of Acceptable security
(3) Possession of Political Status
(4) Familiarity with the executives of the lending institutions.
(5) Relation with Important Personality in the Government
(6) Good Management of Cocoa Farms

(11) Apart from farming are you also

	YES	NO
(a) A cocoa buyer (LBA)	_____	_____
(b) Commission Buyer	_____	_____
(c) A trader in non-farm products	_____	_____
(d) A teacher	_____	_____
(e) A doctor	_____	_____
(f) A lawyer	_____	_____
(g) A government official	_____	_____

(12) Do the cocoa plots on which you work belong to

(a) A doctor	_____	_____
(b) A lawyer/judge	_____	_____
(c) A contractor	_____	_____
(d) A government official	_____	_____
(e) A Licensed Buying Agent	_____	_____
(f) A teacher, Lecturer, Professor	_____	_____
(g) A legislator	_____	_____

(13) Have you ever been

(a) A legislator	_____	_____
(b) A Member of Farmer's Organization	_____	_____
(c) A traditional ruler	_____	_____
(d) A party official	_____	_____
(e) A councillor	_____	_____

(14) a. To which of the following organizations do you belong?

(a) Nigeria Farmer's Union	_____	_____
(b) Co-operatives	_____	_____
(c) Others (please specify)	_____	_____

b. What benefits do you derive from memberships in any of these organizations?

(a) Easy Credit	_____	_____
(b) Higher Cocoa prices	_____	_____

	YES	NO
(c) Quicker Sales	_____	_____
(d) Access to seedlings, spraying materials	_____	_____
(e) No benefits	_____	_____

(15) Which of the following are your single most important source of funds?

(a) Commercial Banks	_____	_____
(b) Co-operatives	_____	_____
(c) Buying Agents	_____	_____
(d) Money Lender	_____	_____
(e) Individual Savings/Relatives	_____	_____
(f) The Agricultural Credit Corporation	_____	_____

PART II

1. Are you married?_____Yes_____No

2. How many wives and children?_____wives_____children

3. How many are actually living with you?_____

4. How much a week do you spend on food bought from the market?

   (a) No money at all

   (b) 5/-

   (c) 10/-

   (d) 20/-

   (e) 40/-

   (f) Other amount (specify)

5. What fraction of the food you consume each week is actually being produced by your family?

   (a) None at all

   (b) 1/4

   (c) 1/2

   (d) 3/4

   (e) All the food

6. If you were to pay for the food you consume from your farm every week, how much would it be?_____Ł_____S_____D

7. What fraction of the amount you spent on food goes for food produced in your village or surrounding villages?